MANCHESTER CITY COUNCIL

Lead Local Flood Authority

Section 19

Formal Flood Investigation Report

New Year 2025

Version	Date of Issue	Approved By	Amendments
1.0	20/06/2025	C Kenyon	First draft for issue to RMAs
2.0	01/08/2025	C Kenyon	Updated based on RMAs and internal consultation
3.0	11/08/2025	C Kenyon	Final Draft
4.0	19/09/2025	J Mitchell	Accessibility
5.0	11/11/2025	C Kenyon	Minor figure corrections in Section 2.

Contents

1. Executive Summary

Over New Year's Eve (31/12/2024) and New Year's Day (01/01/2025) heavy rainfall resulted in widespread flooding across Manchester. Rainfall totals were above average for the UK throughout December, meaning that rain at New Year fell onto already saturated catchments. Between 14:30 on 31st December 2024 and 08:00 on 1st January 2025, a total of 81.4mm of rainfall was recorded by the Environment Agency rainfall gauge at Denton. Provisional rainfall analysis conducted by JBA Consulting concluded that the magnitude of the New Year 2025 event has a 1% - 2% probability of occurring in a given year.

Internal flooding was reported at a total of 60 residential properties and 29 commercial properties in Manchester during the New Year 2025 event. External only property flooding was reported at an additional 53 residential properties and 9 commercial properties.

43.5% of public consultation respondents stated that they had experienced impacts on mental health as a result of the New Year 2025 event, while 17.6% stated that they had experienced impacts on physical health. 40.5% stated that they had experienced financial loss, including damage to property and associated recovery, closure of businesses, loss of vehicles, and increased insurance premiums. Many people were not directly affected by flooding of their own properties but were impacted through loss of access and egress or loss of power and utilities.

The majority of these properties were flooded directly from main rivers, including the River Mersey in Didsbury and Northenden, the River Irk in Harpurhey and Crumpsall, the River Medlock in Deansgate, and the Baguley Brook in Brooklands. Elsewhere, significant numbers of properties were affected by flooding from ordinary watercourses, including the Brownley Brook in Wythenshawe, the Fog Lane Brook and Ball Brook in East Didsbury, and the Orchard Road Drain in Northenden. Limited reports of properties flooding directly from surface water or sewer flooding were received. Exceptional river levels likely surcharged sewer systems and highway drainage. Highway drainage and sewer systems are not designed to carry fluvial flood water from watercourses.

Exceptionally high river levels were recorded during the New Year 2025 event. For the Baguley Brook (at Northern Moor) and the River Mersey (at Northenden, Brinksway, and Didsbury) the peak level recorded during the New Year 2025 event exceeded the previous record-high levels at these locations. A series of breaches of the River Mersey embankments resulted in uncontrolled flows into the Didsbury Flood Storage Reservoir. This resulted in peak levels reaching a higher level than the normal maximum level within the Flood Storage Reservoir, impacting properties within the Flood Storage Reservoir and overtopping the flood gate at Stenner Lane.

Of the 89 properties where internal property flooding was reported, 67 were located within Environment Agency flood warning areas. In several areas, the Environment Agency (EA) flood warning system provided little warning ahead of property flooding occurring. In these locations, the Environment Agency have revised the thresholds for

these warnings to provide more time for people to prepare. Multi-agency flood plans have been updated to reflect this. Risk Management Authorities and other stakeholders have already taken actions in response to the New Year 2025 event, as detailed within Section 7.

A list of recommendations (see Section 9) has been developed alongside the relevant Risk Management Authorities, with the aim of reducing the impacts of future flooding and increasing preparedness for flooding. Manchester City Council, as Lead Local Flood Authority (LLFA), continues to work in partnership with all other relevant Risk Management Authorities. Some of the identified future recommendations include:

- Completion of the EA's long-term Flood Risk Management Strategy for the River Mersey.
- Further reviews of flood warning thresholds and areas, and the introduction of the new national flood warning service.
- Improved communication with businesses within Didsbury Flood Storage reservoir.
- The EA to engage with Peel/Bridgewater Canal Company to discuss interaction between the River Medlock and Bridgewater Canal and any flood risk management options.
- Greater Manchester Resilience Forum to implement improvements to flood response protocols based on recommendations identified from the New Year 2025 flooding event.
- The LLFA to explore opportunities for funding applications for flood risk management schemes/projects in the affected areas.
- The Local Highways Authority to conclude its lessons learned exercise into the New Year 2025 flooding event and implement recommendations.

The public consultation identified that people were generally not well prepared for flooding, were often unaware of the level of risk of flooding at their property, and many properties were not adequately insured against flooding. The risk of flooding cannot entirely be removed and, with the challenges posed by climate change and increases in rainfall intensity, it is vital that people and businesses are better prepared for flooding in the future.

2. Introduction

Heavy rainfall from 31/12/2024 into 01/01/2025 resulted in widespread flooding which affected communities across the UK, with the North-West and Greater Manchester particularly impacted. A total of 89 internal property flooding reports were received by Manchester City Council, and a further 62 reports of external property flooding.

Section 19 of the Flood and Water Management Act 2010 requires the City Council, as a Lead Local Flood Authority, to investigate flooding incidences as stated below.

2.1 Flood and Water Management Act (2010)

The Flood and Water Management Act (FWMA, 2010) defined a range of new duties for authorities in planning for and delivering effective flood risk management. FWMA (2010) established Manchester City Council as a Lead Local Flood Authority, with a range of clearly defined duties and responsibilities.

One of these duties is set out by Section 19 of the FWMA (2010), which states:

(1) On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers it necessary or appropriate, investigate -

a) which risk management authorities have relevant flood risk management functions, and
b) whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.

(2) Where an authority carries out an investigation under subsection (1) it must –

a) publish the results of its investigation, and
b) notify any relevant risk management authorities.

2.2 Section 19 Requirements

Manchester City Council and the Association of Greater Manchester Authorities (AGMA – now superseded by the Greater Manchester Combined Authority) collaborated on a list of criteria to consider when flooding requires formal investigation under Section 19 of the FWMA. These criteria are:

- Internal property flooding - residential/commercial
- Economic disruption
- Risk to life or public health
- Critical services, infrastructure or installations being affected
- Flood defence measures being deployed.
- Recurring flooding incidents

The flood event at New Year 2025 has triggered a Section 19 report to be published, as the impacts satisfied multiple of these criteria.

3. Flood Risk Management Authorities & Stakeholders

Section 6 (13) of the FWMA (2010) defined Risk Management Authorities (RMAs) in England and Wales. Each of these RMAs has specific roles and functions in terms of flood risk management, as detailed in the following section. FWMA (2010) emphasised the importance of partnership working, as there is seldom one single organisation responsible for an instance of flood risk management.

The Civil Contingencies Act (2004) established a legislative framework for civil protection in the United Kingdom. It imposed clear roles and responsibilities for organisations with a role to play in preparing for and responding to emergencies, such as flooding. Category 1 are organisations at the core of the response to most emergencies (the emergency services, local authorities, NHS bodies). Category 2 organisations (such as the Health and Safety Executive, transport and utility companies) are 'co-operating bodies' who are less likely to be centrally involved in planning work but will be significantly involved in incidents that affect their own sector. Category 1 and 2 organisations come together to form 'local resilience forums' (based on police areas) which aim to help co-ordination and co-operation between responders to incidents.

3.1 Manchester City Council

Local Authorities are 'Category 1 responders' under the Civil Contingencies Act. They must have plans in place to respond to emergencies and control or reduce the impact of emergencies, including flooding. During a flood event, the emergency services lead the response, with support from the local authority and other category 1 responders.

3.1.1 Lead Local Flood Authority

Manchester City Council is the Lead Local Flood Authority (LLFA) for the Unitary Authority of Manchester. It is responsible for coordinating the management of local flood risk, defined as surface water, ground water and ordinary watercourses. The LLFA promotes partnership working between RMAs in their area to manage flood risk.

The LLFA's responsibilities include to:

- develop and apply the Local Flood Risk Management Strategy;
- develop and maintain the Asset Register and Record;
- regulate the management of ordinary watercourses;
- be statutory consultee for major planning applications;
- investigate significant flooding incidences, including Section 19 formal flood investigations.

The LLFA team is not an emergency responder during flooding incidents and does not go to site to assist during periods of bad weather. The LLFA does not own any assets which require a response to during a flood incident.

3.1.2 Local Highways Authority

Manchester City Council is the Local Highway Authority for the City of Manchester and is responsible for the maintenance of all adopted highways and associated infrastructure within its area, including gullies and drains. It does not include unadopted or privately owned roads. Manchester City Council is responsible for the installation, operation, and maintenance of Highway drainage infrastructure, which falls within the adopted highway.

3.2 Environment Agency

The Environment Agency (EA) has a national strategic oversight role for all forms of flood risk and a local operational role with regard to flood and coastal erosion risk management. The EA develops the flood and coastal erosion risk management (FCERM) strategy.

The EA's role includes leading on flood risk management from main rivers, the sea and large reservoirs as well as involvement with emergency planning. Further roles of the EA include to:

- deliver the Flood Warning Service to communities and areas at flood risk from rivers and the sea;
- produce and update publicly available flood risk maps and information for main rivers, surface water, reservoir and groundwater flooding;
- develop and deliver flood risk management projects to protect properties
- act as a statutory consultee on planning and development applications;
- regulate flood risk activity on main rivers and the coast.

The below table summarises the EA's Flood Warning Service. Flood alerts and warnings are usually issued during waking hours where possible, and the EA usually issues flood alerts and warnings between 2 and 12 hours before flooding.

Type	What?	Where from?	What is at risk?
Flood Alert 	Flooding is possible so you should prepare now.	- Rivers - High tides, surges or strong winds at sea	- fields, recreational land and carparks - minor roads - farmland - coastal areas affected by spray or waves overtopping.
Flood Warning 	Flooding is expected so you should act now.	- Rivers - heavy rain that will cause rivers to flash flood - high tides and surges coupled with strong winds at sea	- homes and businesses - railway lines and infrastructure - roads - coastal areas affected by spray or waves overtopping

			- flood plains, including caravan parks and campsites - major tourist and leisure attractions
Severe Flood Warning 	Flooding could cause danger to life and significant disruption to communities. You must act now.	- Rivers - heavy rain that will cause rivers to flash flood - high tides and surges coupled with strong winds at sea	- homes and businesses - railway lines and infrastructure - roads - coastal areas affected by spray or waves overtopping - flood plains, including caravan parks and campsites - major tourist and leisure attractions

3.2.1 Flood Forecasting Centre

The Flood Forecasting Centre (FFC) is a working partnership between the Environment Agency and Met Office[1]. The FFC provides a number of services to support the Environment Agency and category 1 and 2 responders in planning for flood response. The FFC and the EA produce a daily Flood Guidance Statement (FGS) which provides a summary of flood risk for the next 5 days, which is used by other RMAs to prepare. The FFC forecasts all natural forms of flooding, including main river, ordinary watercourse, surface water, groundwater, and the sea.

3.3 United Utilities

United Utilities (UU) is the regional water and sewerage company for the North West. UU is responsible for the public sewerage system in the North-West. UU is able to undertake improvements to sewerage infrastructure, which forms part of the overall drainage infrastructure for an area. As part of this, UU can:

- Respond to flooding incidents involving their assets;
- Investigate reports of flooding incidents;
- Maintain a register of properties that have flooded as a result of hydraulic inadequacy of the sewer network;
- Undertake capacity improvements to alleviate sewer flooding on the DG5 register (subject to Ofwat agreeing the appropriate funding).

3.4 National Highways

National Highways is responsible for operating, maintaining and improving the strategic road network in England. National Highways is responsible for the drainage of these routes and must also ensure that road projects do not increase local flood risk or

[1] About us - Flood Forecasting Centre - GOV.UK

adversely affect local water bodies. Within its Environmental Sustainability Strategy[2], National Highways sets out its plans to manage flood risk and improve flood resilience across its network.

3.5 Other Stakeholders

There are several stakeholders who are not designated as RMAs under Section 6 (13) of the FWMA (2010) but nonetheless may have important flood risk management roles.

3.5.1 Navigation Authorities

The Canal & River Trust (CRT) is a charity and navigation authority which was set up in 2012 with guardianship of 2,000 miles of navigable canals and navigable rivers in England and Wales. The Trust does not have any specific statutory responsibilities with regards to flood risk management and is not a Category 1 or 2 responder under the Civil Contingencies Act (2004). The Trust:

- Maintains and operates the water control structures within its ownership primarily to meet its statutory obligation to maintain navigation. This generally has benefits for flood risk management.
- Is a statutory consultee under Schedule 3 of the FWMA (2010) in relation to SuDS approving bodies.
- Maintains watercourse culverts under canals where these fall under the ownership of the Trust.
- Maintains canals and associated bridges, locks, tunnels, towpaths, aqueducts, docks and reservoirs for navigation where these fall under the ownership of the Trust.

The Bridgewater Canal and Manchester Ship Canal are both owned and operated by divisions of The Peel Group, the other navigation authority in Manchester. The Bridgewater Canal Company Limited (part of The Peel Group) is a statutory body holding the same responsibilities as the CRT regarding the navigation and maintenance of the Bridgewater Canal.

3.5.2 Infrastructure Providers

Other infrastructure providers, such as Network Rail, Transport for Greater Manchester (TfGM), Manchester Airport Group, National Grid Gas and Electric, and Electricity North West, whilst not RMAs, may have assets that are of considerable importance with regard to planning for flood events. It is important that essential infrastructure is made resilient to flooding and that flood risk management issues are factored into investment plans to ensure continuity of service in an emergency.

3.5.3 Emergency Services

Emergency services are the first to arrive at the scene of an incident and have specialised training to provide assistance during emergency situations. Greater Manchester Police

[2] Environmental Sustainability Strategy - National Highways

(GMP), Greater Manchester Fire and Rescue Service (GMFRS), and North West Ambulance Service (NWAS) coordinate the emergency response to major flooding events, alongside other category 1 and 2 responders under the Civil Contingencies Act 2004. This includes assisting with the evacuation of people from their homes or businesses where necessary.

3.5.4 The Public

Landowners, householders or businesses whose property is adjacent to an ordinary watercourse are likely to be riparian owners with associated responsibilities. These responsibilities are fully explained within the Environment Agency document 'Living on the Edge'[3], including:

- They must maintain the bed and banks of the watercourse, and also the trees and shrubs growing on the banks. They must also clear any debris, even if it did not originate from their land.
- They must maintain the bed and banks of their watercourse, including the trees and shrubs growing on the banks.
- They must keep any structures that they own clear of debris. These structures include culverts, trash screens, weirs and mill gates.

Property owners and residents also have their own responsibilities regarding flood risk, as the risk of flooding cannot be entirely removed. It is vital that the public is aware of their own level of flood risk, ensure that they are sufficiently prepared to respond to flooding incidents, signs up for Environment Agency flood warnings where available, and ensures that they have an appropriate level of insurance cover. The Flood Re Scheme[4] aims to make flood insurance more affordable for householders whose homes are at high risk of flooding. The Build Back Better scheme[5] enables householders to install property flood resilience measures when repairing their properties after a flood through insurance providers who participate in the scheme. Property flood resilience measures should be considered by any householders whose properties are at risk of flooding, whether these have previously experienced flooding or not.

4. Report Methodology

The majority of the information supporting this report is based on first-hand accounts and flood survey information provided by affected residents. It is likely that additional properties were flooded during this event but were not reported to the City Council or other RMAs. This report has therefore been compiled using the data available to the City Council at the time of publishing.

[3] Owning a watercourse - GOV.UK
[4] Flood Re - A flood re-insurance scheme
[5] Build Back Better - Flood Re

Internal property flooding has been defined within this report in line with the national government's non-statutory guidance for Section 19 formal flood investigations[6]. While this definition is based on homes, it also includes businesses and public buildings where water has entered the fabric of the buildings. This is defined as where water has entered the property, which includes:

- basements and below ground level floors
- garages that are in the fabric of the building
- occupied caravans and park homes

It does not include:

- tents
- garages adjacent or separate from the main building.

Manchester City Council has collaborated with other RMAs, such as the Environment Agency and United Utilities and others listed in Section 3, to better understand the mechanisms and impacts of the event. The City Council has also utilised weather reports from the Met Office and other weather forecasters and recorders.

Manchester City Council also directly engaged with residents and businesses to gather data on the flooding impacts and sources. This included outreach by Neighbourhoods teams in the recovery phase after the flooding event. Manchester City Council attended two multi-agency public drop-in sessions in Northenden (26/02/2025) and Didsbury (27/02/2025), arranged by the Environment Agency. These sessions were designed to provide information and advice on the New Year flooding and to provide an opportunity for residents to report flooding and to speak to organisations involved in managing flood risk. The Section 19 formal flood investigation report was promoted at these events.

A public consultation exercise was undertaken to gather data from the public on the event. Initial consultation zones were defined based on the location of internal property flooding reports received by Manchester City Council, the Environment Agency, United Utilities. The extents of these consultation zones were defined based on national flood risk mapping, using expected fluvial and/or surface water flood extents. LiDAR data and photographs of flooding extents were also used to refine the public consultation zones. The public consultation zones were reviewed alongside Neighbourhood officers, the Environment Agency, and elected members for each of the identified wards. Briefing sessions were held with the elected members of affected wards ahead of the consultation to provide information and allow the consultation to be promoted via member surgeries and newsletters.

An Equalities Impact Assessment was prepared to inform the public consultation exercise to identify potential barriers to any groups or communities which may prevent their participation in the consultation. This included mitigation measures which were built into the public consultation documents.

[6] Investigating a flood: guidance for lead local flood authorities - GOV.UK

A cover letter and questionnaire were sent to all residential and commercial addresses within the public consultation zones, inviting responses to detail experiences of flooding during the event. The exercise also included a webform version of the public consultation, open to the wider public in Manchester to ensure that anyone affected by flooding in other areas could be accounted for. The webform consultation was advertised using a targeted social media campaign. Targeted engagement was also used in the Deansgate area, with the consultation circulated via the South Deansgate Network, the Castlefield Forum, and CityCo. The public consultation period ran from 12/05/2025 until 31/05/2025.

A total of 3297 public consultation invitations were sent to residential and commercial addresses within the public consultation zones. This number was elevated due to large numbers of addresses associated with apartment blocks or buildings in affected areas. A total of 57 complete webform responses were received, in addition to 35 partial or incomplete responses. A total of 131 responses were received via the postal version of the consultation. Of these, 55 responses were provided from properties affected by flooding, to varying extents.

An initial desktop study of the affected areas was undertaken to review the Risk of Flooding from Surface Water maps and the Risk of Flooding from Rivers and the Sea maps, produced by the Environment Agency and publicly available online[7]. Copies of flood risk mapping for areas impacted (as identified in Section 6) during the New Year 2025 are included in Appendix I.

5. Event Details

5.1 Before the event

Rainfall totals were above average for the UK throughout December, provisionally recording 139.4mm of rainfall, 110% of the long-term average. Earlier in the month, Storm Darragh brought high winds and significant rainfall to all parts of the UK late on the 6th December, and through to the 8th. A more settled period followed in mid-December, before changeable weather returned as frontal systems resulted in showers across the UK as well as fog, wind and wintry showers on high ground in northern England, which persisted through to the 22nd December. Between 1st December 2024 and 31st December 2024, a total of 103.6mm of rainfall was recorded at the Environment Agency rainfall gauge at Denton[8].

A graphical summary of the Flood Guidance Statements (FGS) issued in late December 2024 is included within Appendix V. The FGS is issued daily at 10:30 and shows the forecast level of flood risk for the next 5 days for surface water, river, groundwater and coastal flooding. The FGS is used by RMAs and other responders to plan for flooding response. The first indication of flood risk in the FGS affecting the Manchester area came

[7] Check the long term flood risk for an area in England - GOV.UK
[8] Hydrology Data Explorer - Denton

on 30th December, which showed a forecast of 'Low flood risk' (yellow) for the 31st December and 1st January. The FGS issued at 10:30 on 30th December 2024 stated: "*Significant inland flooding impacts are possible in parts of Wales and possible but not expected in parts of England on Tuesday and Wednesday, with river risk continuing into Thursday. The overall flood risk is LOW*". For the area including Manchester, the FGS forecast the potential impact level as 'Significant' but the likelihood as 'Very Low'.

A yellow severe weather warning for rain covering Greater Manchester was issued by the Met Office at 10:57 on 30th December 2024, covering the period between 18:00 on 31st December 2024 and 18:00 on 1st January 2025. This stated that 30-50mm rainfall was expected widely, with 60-80 mm across west-facing hills, with a chance that a few locations could see in excess of 100mm rainfall during the event. Earlier yellow severe weather warnings had been issued only for wind or snow. This severe weather warning was updated at 10:36 on 31st December, remaining yellow but with the time brought forward to cover the period between 15:00 on 31st December 2024 and 11:00 on 1st January 2025.

Met Office analysis from 06:00 on 30th December 2024 showed weather fronts across northern Scotland marking the boundary between cold air to the north and much milder air to the south, with these fronts bringing persistent heavy rain to northern, western and central Scotland for the final three days of the year. The Met Office names storms to aid the communication of approaching severe weather through media partners and other government agencies. The Met Office names storms when it considers that they have the potential to cause disruption or damage which could result in an amber or red warning. This is based on their National Severe Weather Warnings service, a combination of both the impact severe weather may have and the likelihood of those impacts occurring. Storms are usually named on the basis of impacts from strong winds, but other weather types are also considered, including rain[9]. The event at New Year 2025 was not designated as a named storm by the Met Office.

5.2 During the event

The FGS issued at 10:30 on 31st December 2024 stated: "*Significant inland flooding impacts are possible in parts of England and Wales today (Tuesday) and Wednesday, with river flooding impacts continuing in some areas until Friday. The overall flood risk is LOW*." For the area including Manchester, the FGS now forecast the potential impact level as 'Significant' but the likelihood as 'Low'. At 12:30 on 31st December, a Flood Advisory Service (FAS) teleconference meeting for Greater Manchester was held. Based on the Flood Guidance Statement, the FAS reported a low likelihood of medium impacts with a rainfall forecast totals suggesting 40-50 mm of rain at the time. At this point, flood basins (Didsbury, Sale, and Salford) were expected to be activated but not to reach capacity. Therefore, at this point no further action was expected to be required from multi-agency partners.

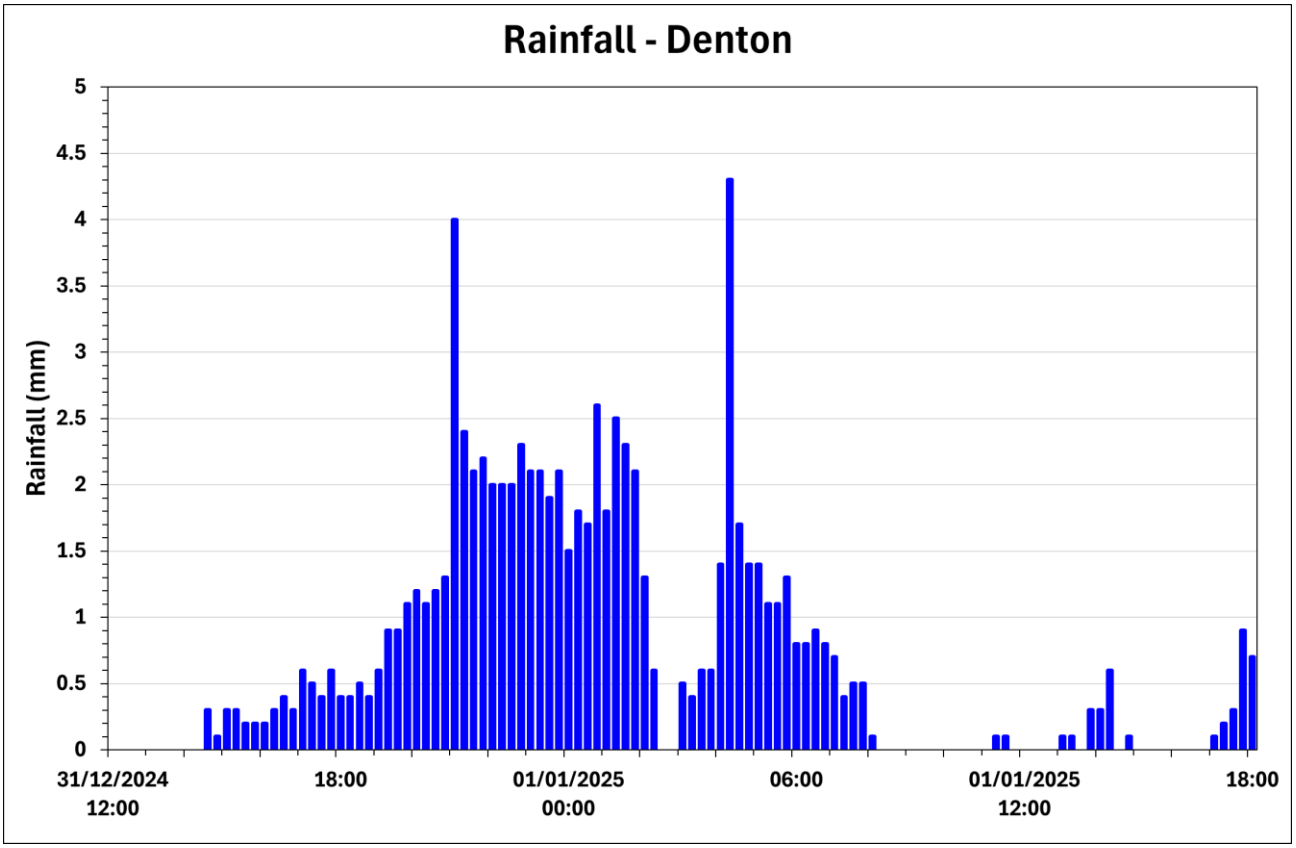
[9] UK Storm Centre - Met Office

Met Office analysis at 18:00 on 31st December 2024 showed an area of low pressure centred across Scotland, with northerly flow of Arctic Maritime air to the north developing, contrasting mild tropical maritime air to the south. The result of this system was strong winds and very heavy rain initially across Scotland, but these weather fronts then moved south into north-west England and north Wales.

The daily FGS forecast remained as 'Low flood risk' (yellow) for the Manchester area and did not reach medium (orange) or red (high). The existing Met Office yellow warning for rain was upgraded to an amber warning for rain at 20:38 on 31st December 2024, covering the period through to 09:00 on 1st January 2025. This resulted in a second Greater Manchester FAS teleconference held at 21:30 on 31st December 2024. At this meeting, an overview was provided on expected flood warnings.

Between 14:30 on 31st December 2024 and 08:00 on 1st January 2025, a total of 81.4mm of rainfall was recorded by the Environment Agency rainfall gauge at Denton. By comparison, the average monthly rainfall (based on the period 1991 – 2020) for the climate district of North-West England and North Wales is approximately 111.5mm[10]. The 31/12/2024 was the second-wettest day on record for the climate district of North-West England and North Wales[11]. This was the result of a slow-moving band of heavy rain becoming anchored across northern Wales and northwestern England later on New Years

Figure 1. Rainfall observed at the Denton Rainfall Gauge, recorded in mm per 15-minute period.



[10] Mat Office Location-specific long-term averages
[11] Met Office Past Weather Events - 29 December 2024 to 5 January 2025

Eve[12].The total rainfall recorded during the New Year event is displayed in Figure 1. The Met Office did not name the storm event at New Year 2025 and stated that this was because the event was "comparatively localised when compared to other named storm events". The National Severe Weather Warnings service indicated that the event was expected to have a lower impact than other named storm events, although this was not intended to downplay the severity of the event itself which warranted an amber weather warning.

Table 1 contains the maximum water levels recorded at the EA river level gauges during the New Year 2025 storm event (measured in metres above stage datum, mASD), compared to the maximum water level previously recorded at each of these gauges. Several of these gauges recorded maximum water levels which exceeded the maximum previous water level on record, while most other gauges recorded water levels similar to maximum historic levels. Hydrographs showing the recorded river levels during the event are included in Appendix II.

Table 1. Maximum river levels recorded at EA gauges during the January 2025 flood event.

Watercourse Gauge Station	Maximum Recorded Level (January 2025)	Previous Highest Recorded Level	Start of record
London Road (River Medlock)	1.802mASD	1.866mASD (01/06/1992)	01/03/1975
Gurney Street (River Medlock)	3.218mASD	3.365mASD (28/07/2019)	15/10/2009
Collyhurst Weir (River Irk)	1.484mASD	1.629mASD (30/09/2024)	27/04/1995
Manchester Racecourse (River Irwell)	4.746mASD	5.668mASD (26/12/2015)	01/08/1976
Northern Moor (Baguley Brook)	1.514mASD	1.45mASD (31/07/2019)	27/10/2006
Northenden (River Mersey)	3.763mASD	3.316mASD (21/02/2022)	29/08/2001
Brinksway, Stockport (River Mersey)	5.011mASD	4.342mASD (20/02/2022)	01/01/1974
Didsbury Gates (River Mersey)	7.686mASD	7.229mASD (20/02/2022)	16/02/2001
Didsbury Basin (Flood Storage Area)	4.148mASD	3.901mASD (02/12/2021)	10/07/2003
Sale Water Park (Flood Storage Area)	2.396mASD	4.967mAD (21/09/2022)	10/07/2003

Unprecedented high river levels were recorded for the Baguley Brook (at Northern Moor) and for the River Mersey (at Northenden, Brinksway, and Didsbury) during the New Year event. The river level of the River Medlock during the New Year event reached just under the previous highest recorded level at London Road (under by 0.062m) and Gurney Street (under by 0.147m).

[12] Met Office - Monthly, seasonal and annual summaries 2024

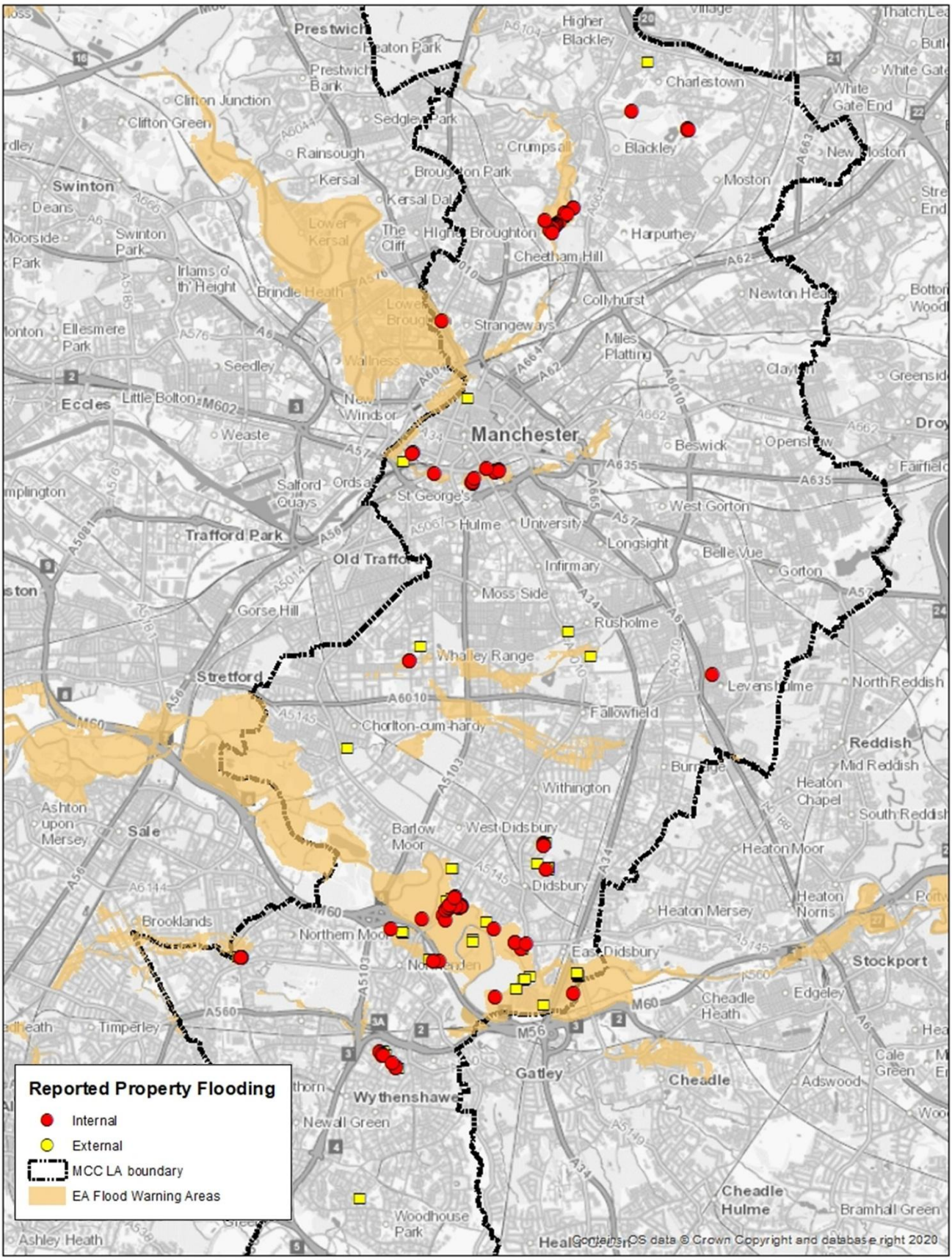
Table 2. Maximum river flow recorded at EA gauges during the January 2025 flood event.

Watercourse Gauge Station	Daily Maximum Recorded Flow (January 2025)	Previous Daily Highest Recorded Flow	Start of record
London Road (River Medlock)	51.844 m^3/s	49.10 m^3/s (28/07/2019)	01/03/1975
Collyhurst Weir (River Irk)	53.988 m^3/s	52.50 m^3/s (16/03/2019)	27/04/1995
Adelphi Weir Upstream (River Irwell)	604.359 m^3/s	903.000 m^3/s (26/12/2015)	01/02/1975
Brinksway, Stockport (River Mersey)	345.83 m^3/s	273.000 m^3/s (20/02/2022)	01/01/1974

JBA Consulting conducted rainfall analysis on the New Year 2025 event on behalf of the Environment Agency. This analysed rainfall data observed at 12 rain gauges across the Greater Manchester area. This provisional rainfall analysis concluded that the annual exceedance probability (AEP) of the New Year 2025 rainfall event was between 1% - 2%. This means that, in any given year, there is considered to be a 1% - 2% probability of an event of this magnitude occurring.

6. Flooding Sites - Sources & Impacts

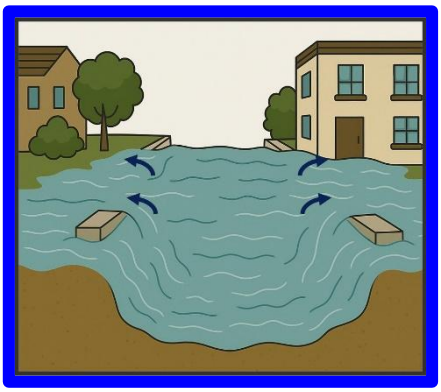
Figure 2. Summary map of reported internal and external property within the Manchester City Council boundary during the New Year 2025 event.



6.1 Flooding Sources

The following section illustrates the types of flooding that were identified during the New Year 2025 event.

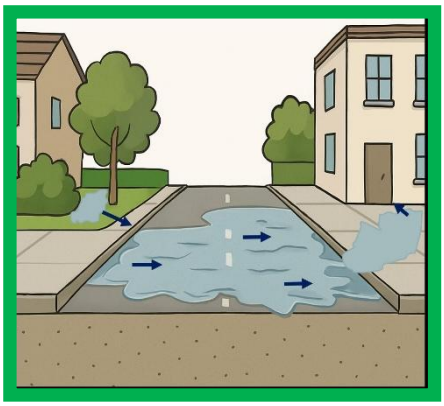
Main River/Ordinary Watercourse



In most storm events, watercourses are able to convey flows within their channel. However, during extreme events, the volume of water may exceed the channel capacity and overtop the banks. This often occurs when:

- A prolonged period of rainfall and the river levels have risen due to surface water runoff and inflows.
- A prolonged period of rainfall whereby permeable surface are saturated and surface water runoff rates increases, with water reaching the river faster.
- Heavy rainfall on impermeable surfaces conveys water to the river quickly.
- High flows within the river become restricted by structures (e.g. bridges and culverts) which results in water levels upstream rising.
- Sediment or debris builds up in the river channel and reduces the capacity of the river channel.

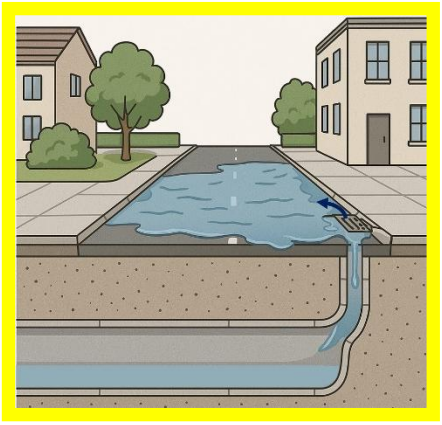
Surface Water Flooding



Rainwater which is on the surface of the ground and has been unable to drain away through drainage systems or soak into the land and instead flows over the land. This often occurs when:

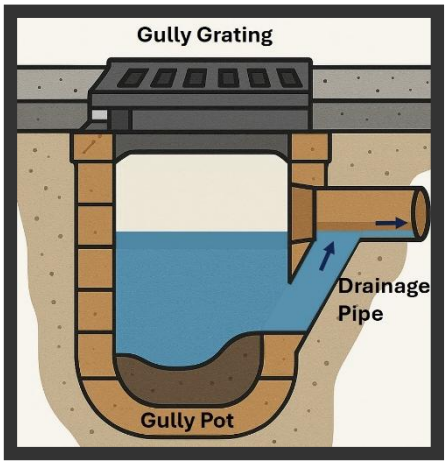
- a prolonged period of rainfall results in permeable surfaces becoming saturated.
- rainfall intensity is very high and falls faster than it can infiltrate into the ground.
- a prolonged warm dry period hardens the surface and reduces infiltration.
- heavy rainfall on extensive impermeable surfaces where surface water is unable to enter the drainage system.

Highway Drainage Flooding



Consists of gullies, drainage channels and other features which collect and drain rainfall away from the highway. They connect to an underground highway drainage system which generally connects to the public sewer downstream. This often occurs when:

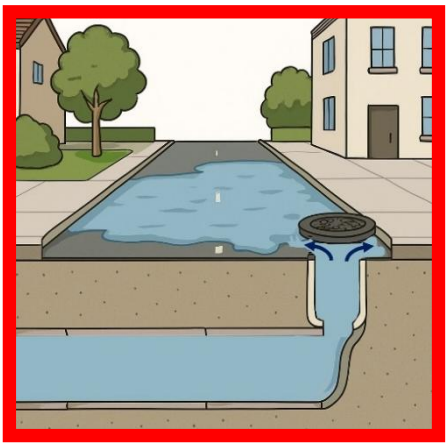
- Localised blockages/surface debris in the vicinity of a gully, or a blocked/collapsed gully drainage pipe.
- Period of heavy &/or prolonged rainfall, whereby the volume of rainfall falling onto the highway overwhelms the highway drainage.
- Downstream sewer/culvert/watercourse to which the highway drainage is connected is at full capacity, so the highway drainage is unable to drain effectively.



A highways gully pot is pot is designed to collect silt, before it discharges via the outlet drainage pipe. Water sits in the gully pot up to the outlet level. The drainage pipe leads to the main drain or public sewer.

During dry periods, the water will evaporate away. Following periods of wet weather, it is normal for some water to sit in the gully pot. The normal functioning of a gully is often mistaken as a blockage.

Sewer Flooding



Surface water sewers carry rainfall and surface water away from properties. Combined Sewers drain both wastewater and surface water runoff. This often occurs when:

- A blockage within the sewer or the sewer itself collapses, which restricts/prevents flow within the sewer network.
- A period of heavy and/or prolonged rainfall, which results in significant flows that exceed the capacity of the sewer network.
- Downstream culvert/watercourse to which the sewer is connected is at full capacity, so the sewer is unable to drain effectively.

6.2 East & West Didsbury

Watercourses & Hydrology

The River Mersey begins in Stockport, at the confluence of the River Tame and River Goyt, flowing westwards towards the south of Manchester. At the boundary with the Manchester City administrative area, the River Mersey flows westwards through the Parrs Wood area in the south of East Didsbury, before meandering in a north-western direction between West Didsbury to the north and Northenden to the south.

Further north in East Didsbury, a number of culverted ordinary watercourses flow beneath residential areas. The route, condition and dimensions of many of these culverted watercourses are uncertain and the watercourses have been historically developed over, restricting visibility and access. The following details on two of these watercourses are therefore based on the limited available records.

The Fog Lane Brook culvert begins at the outlet of the pond at Heaton Moor Golf Club, flowing towards the south-west before turning west and discharging into an open channel section in the southern corner of Fog Lane Park. The Fog Lane Brook flows through the park to the west, through a small trash screen and into a short culverted section which briefly becomes open channel behind Brooklawn Drive. The Fog Lane Brook is then culverted for approximately 1km before joining the culverted Red Lion Brook just south of Withington. The Ball Brook culvert is believed to begin south of Lane End Road in Burnage, flowing to the south and west beneath large residential areas, the A34 and the railway. Two tributary culverts join the Ball Brook in the School Lane area of Didsbury, while the Ball Brook continues as a culvert beneath residential areas towards Fog Lane. The Ball Brook opens into two very short open channel sections behind Fairfax Avenue, before joining the Fog Lane Brook culvert.

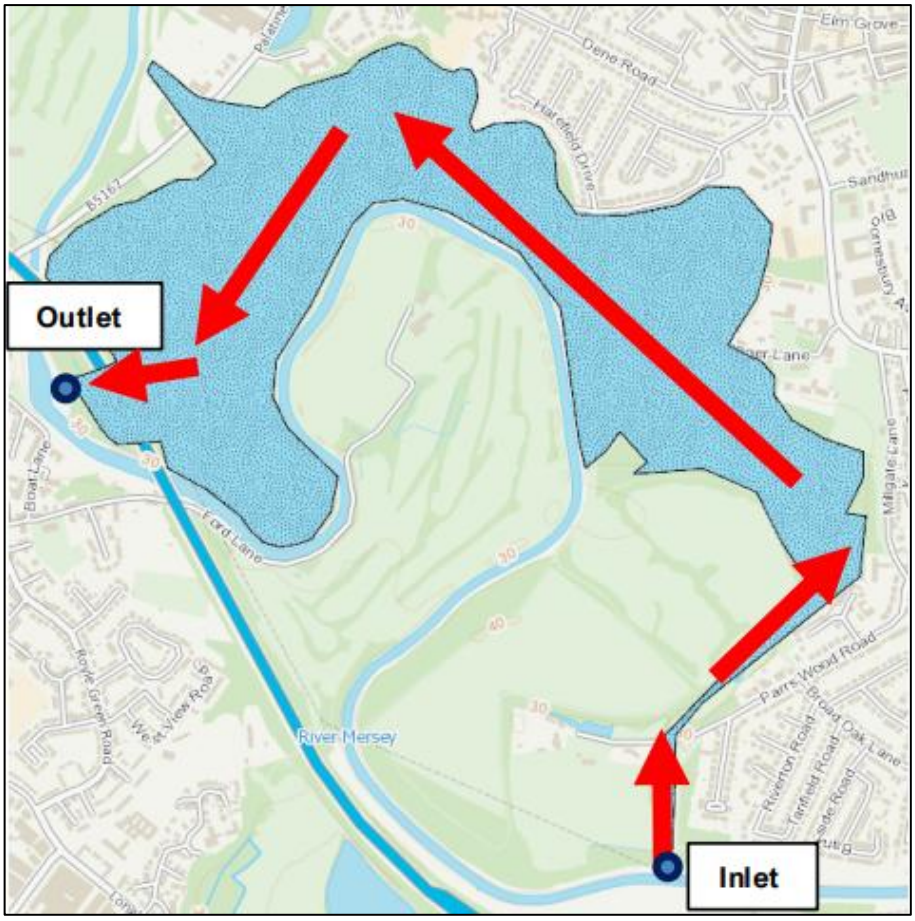
Flood Defences

The Environment Agency maintains and operates two Flood Storage Reservoirs on the River Mersey, the Didsbury Basin (capacity of 778,000m^3) and at Sale Ees Basin further downstream (capacity of 1,585,000m^3). Both Flood Storage Reservoirs have been operated since 1978 with the aim of managing the flow in the River Mersey, balancing the river level to reduce flooding to nearby areas and enable the River Mersey to flow more easily through Barfoot bridge downstream of Sale. When the River Mersey reaches the ‘trigger’ level of 6.9mASD, water is diverted through sluice gates, firstly into the Sale Ees Flood Storage Reservoir, with the Didsbury Storage Reservoir opening shortly after. Prior to operation, all pedestrian access points are closed to prevent public access, reducing any danger to life.

Sale Sluice Station is located off Rifle Road in Sale, M33 2LX. This Sluice Station has two large steel sluice gates which are operated at 150mm intervals. Didsbury Flood Storage Reservoir is located off Millgate Lane, Didsbury, M20 5QX. The sluice station has one large sluice gate which is operated at 150mm intervals. At Sale, excessive water sluiced out of

the River Mersey flows down the inlet channel and into the lake of Sale Water Park, which raises the water level in the lake.

Figure 3. The flow direction during the operation of Didsbury Basin as per its design, figure provided by the EA.



At Didsbury, excessive water which has been sluiced out of the River Mersey flows down the inlet channel and into the Fletcher Moss Park area across the Rugby fields across Ford Lane and onto Withington Golf Course. The Environment Agency aim to balance the River Mersey at 6.85mASD at Didsbury; bank full overtopping for the Didsbury Reservoir occurs above 7.2mASD. A Flood Gate is situated at the end of Stenner Lane, which is closed prior to opening the sluice gates to prevent flooding to the cottages and block pedestrian and vehicle access. The Didsbury Flood Storage Reservoir is emptied via two sluices, one on the River Mersey right bank at the end of Stenner Lane and the other on the right bank downstream of the Tatton footbridge, Northenden. Fielden Park Brook is also used to drain the flood basins. Figure 3 illustrates the designed operation of the Flood Storage Reservoir.

In response to Storm Christoph (January 2021) and Storm Franklin (February 2022) flood events, the EA reviewed the flood warning areas for Didsbury and Northenden. The three original flood warning areas were divided into five smaller areas, with the aim of allowing more targeted warning of specific properties.

New Year 2025 – Sources & Impacts

Table 3 contains a summary of the timings of each of the EA flood warnings in Didsbury issued during the New Year 2025 event. These were issued between 23:24 on 31st December 2024 and 03:00 on 1st January 2025. Property flooding was first reported from around 02:00 on 1st January 2025 in the Millgate Lane area of East Didsbury, 03:00 in the area of Bradley Fold allotments and Didsbury Sports Ground. Property flooding reportedly occurred in the West Didsbury and East Didsbury areas in the subsequent three to six hours.

Table 3. Summary of EA Flood Warnings in Didsbury issued during the New Year 2025 event.

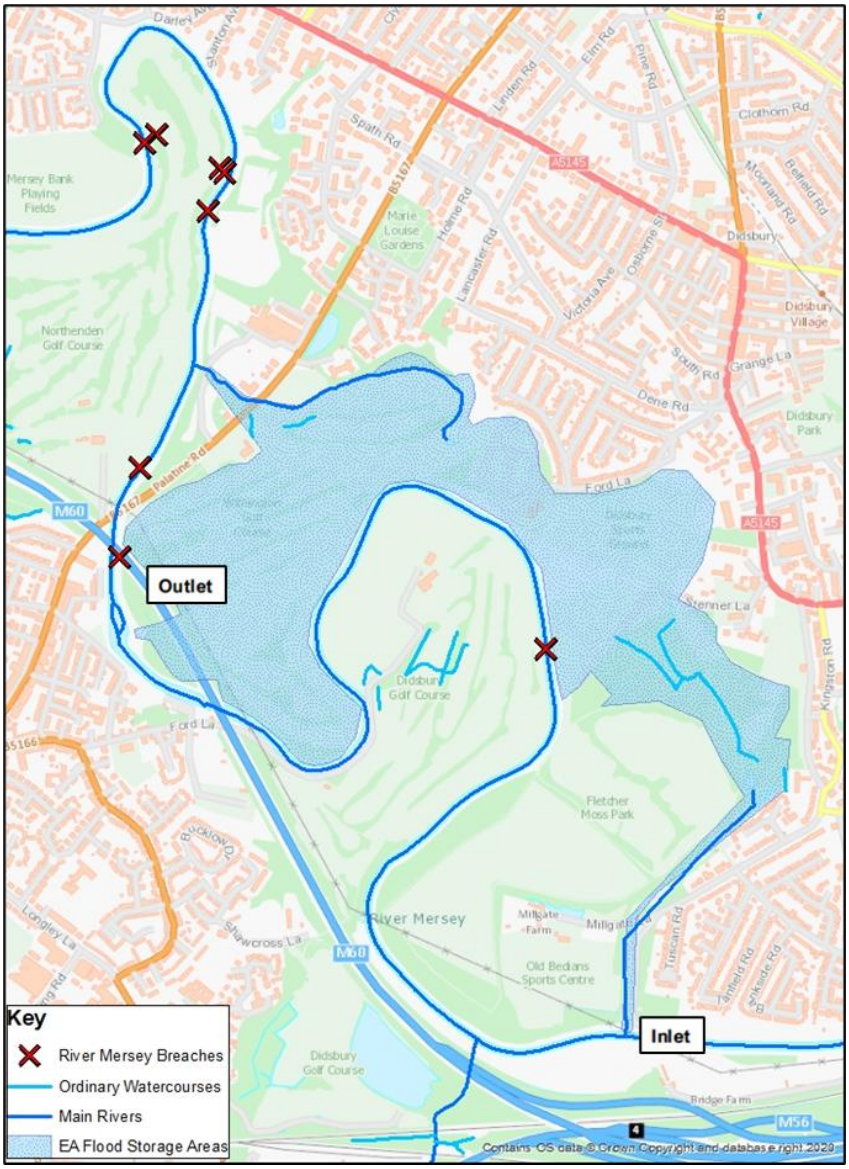
EA Flood Warning Area	Flood Warning Threshold (mASD)	Time of Flood Warning Issued
River Mersey at Cheadle Wood and Ford Lane	6.4	31/12/2024 at 23:24
River Mersey at Fletcher Moss and Withington Golf Course.	6.9	31/12/2024 at 23:25
River Mersey at East Didsbury, Millgate Lane and Stenner Lane areas.	7.4	01/01/2025 at 00:55
River Mersey at West Didsbury, Northenden Golf Club and Palatine Road.	3.3	01/01/2025 at 02:58
River Mersey at West Didsbury, Mersey Bank Playing Fields and surrounding areas.	3.5	01/01/2025 at 03:00

The EA flood warning thresholds for the 'River Mersey at East Didsbury, from Tuscan Road to Wilmslow Road' and the 'River Mersey at Northenden' flood warning areas were not reached during the New Year 2025 event.

At approximately 22:15 on 31st December 2025, water levels in Didsbury Flood Storage Reservoir were observed to be rising at the Golf Course level gauge. This was considered by the EA to be due to rainfall and surface water runoff. The EA operated the Sale Ees Flood Storage Reservoir at 02:45 on 1st January 2025. At 03:05 on 1st January 2025, the Didsbury Flood Storage Reservoir was operated. By 04:14 the inlet gates at Didsbury were 50% open, before being fully open by 05:00. At approximately 06:00 on 1st January 2025, a breach on the River Mersey embankment at Ford Lane resulted in uncontrolled inflows into the Didsbury Flood Storage Reservoir. This breach was approximately 40m in length and was the largest breach that occurred during this event. Multiple other embankment breaches occurred along the length of the River Mersey, illustrated in Figure 4. River levels recorded at Northenden and (to a lesser extent) Didsbury dropped slightly as water flowed into Didsbury Flood Storage Reservoir through the breach at Ford Lane, which can be seen in Appendix II. At approximately 08:30 the Mersey riverbank behind the Britannia Hotel breached as a result of floodwater pushing back into the River Mersey.

Once levels had balanced, river levels at Northenden and Didsbury rose again until reaching a peak at around 11:00. The fact that river levels dropped slightly supports the conclusion that the embankment breaches were unlikely to have exacerbated flooding in the wider area during the New Year 2025 event. However, the uncontrolled flows into the Didsbury Flood Storage Reservoir did result in peak levels reaching a higher level than the normal maximum level, resulting in internal property flooding at several businesses within the flood storage reservoir and also resulting in an overtopping of the gate at Stenner Lane.

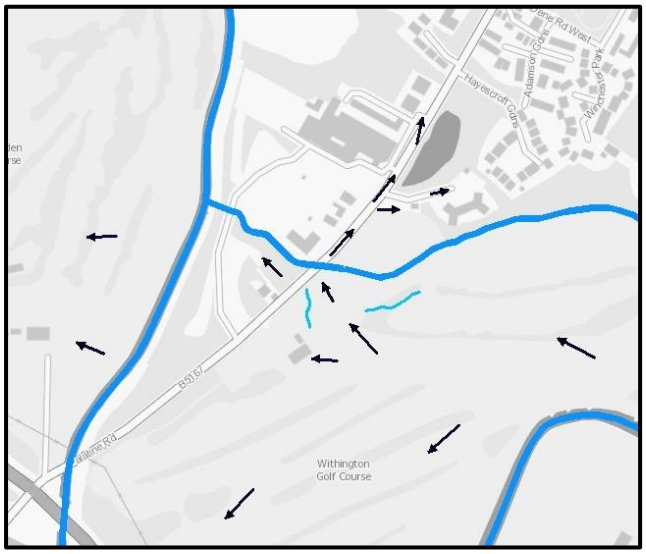
Figure 4. Locations of the breaches on the River Mersey which occurred during the New Year 2025 event.



Flood water from the River Mersey flowed northwards through Didsbury Sports Ground, the allotments, through Withington Golf Club and onto Palatine Road. The grounds and facilities at Didsbury Sports ground were flooded, causing damage to the changing rooms, storage areas, clubhouse, and playing fields. Flood water and debris damaged the

walls of buildings, with internal flooding reported at depths over 1m. The ground provides a football, rugby, running, and cricket clubs, as well as Didsbury Park Run and fitness clubs/classes. The loss of these facilities will have affected up to 1000 people who use these on a weekly basis.

In the Palatine Road area, internal property flooding was reported at 27 residential properties in addition to internal property flooding at Withington Golf Club. External property flooding was reported at a further 6 residential properties. Property flooding in the Palatine Road area was reported from approximately 08:00 onwards on 1st January 2025. A number of apartment buildings and complexes along Palatine Road were affected. Many ground floor apartments were directly impacted by flooding, while upper levels were affected by a loss of power and access to or from the property. Affected residents reported being without power for up to 36 hours. Additionally, 445 people were evacuated from the Britannia Hotel in Didsbury after flooding cut off power and water supplies. Approximately 50 further properties were evacuated in the afternoon and evening of New Year's Day in the rest of Didsbury.



<u>Location</u>:

West Didsbury (Palatine Road area)

<u>Number of Properties Flooded</u>:

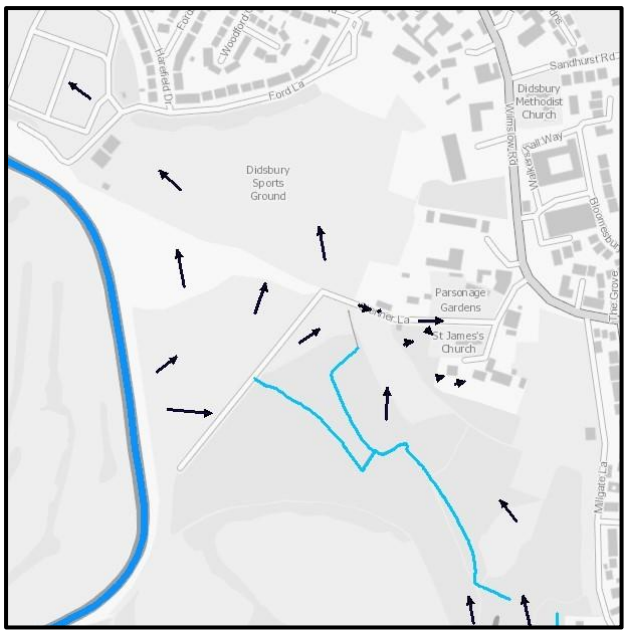
Internal – 27

External - 6

<u>Identified Flooding Source(s)</u>:

Main River (River Mersey)

In the East Didsbury area, floodwater from the River Mersey overtopped the flood gate at Stenner Lane, resulting in internal flooding reported at 3 residential properties and one business (a pub), in addition to external property flooding at the church and one further residential property. Internal flooding of one of these residential properties was reported at a depth exceeding 1m, while flooding of the cellar/basement at the pub was reportedly to ankle height. Internal property flooding was reported to have occurred between the early hours and 10am on the 1st January 2025.



Location:

East Didsbury (Stenner Lane area)

Number of Properties Flooded:

Internal – 3

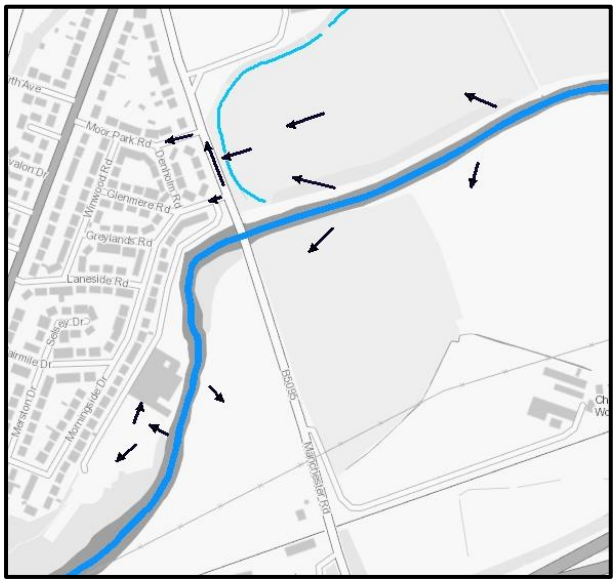
External - 2

Identified Flooding Source(s):

Main River (River Mersey)

The River Mersey flowed into the playing fields both north and south of Cheadle Bridge at Parrs Wood, before overtopping the embankment running alongside Wilmslow Road. Fluvial floodwater flowed towards the Parrs Wood residential area over the embankment alongside Wilmslow Road, resulting in external flooding reported at 4 residential properties which narrowly avoided breaching building thresholds. The Parrs Wood residential area is included within the 'River Mersey at East Didsbury, from Tuscan Road to Wilmslow Road' EA flood warning area. However, the warning threshold was not triggered, despite external property flooding being reported at residential properties in this area.

The River Mersey also overtopped the embankment which lies behind Broad Oak Lane, resulting in internal flooding at the hotel and leisure club. Numerous cars were submerged in the hotel car park, and rooms were evacuated during the night. Internal flooding of the fitness centre left these areas out of operation into February 2025, with some facilities unavailable into March 2025.



Location:

East Didsbury (Parrs Wood area)

Number of Properties Flooded:

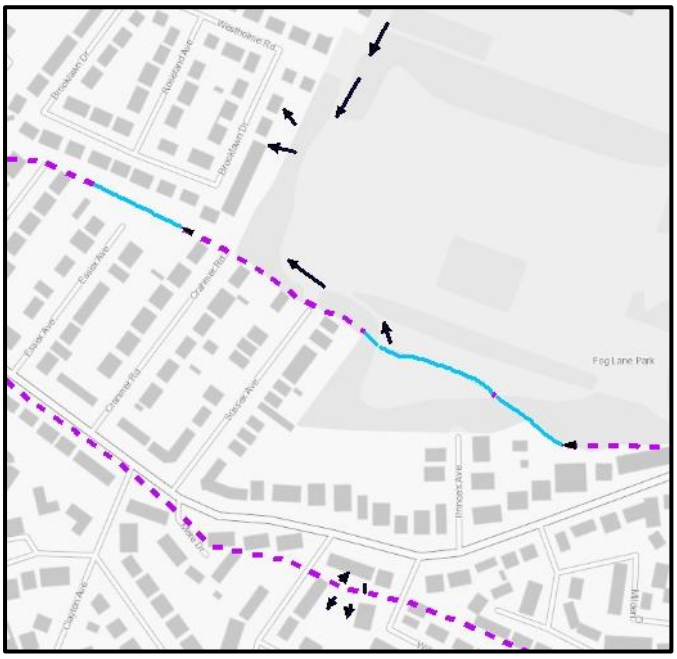
Internal – 1

External - 4

Identified Flooding Source(s):

Main River (River Mersey)

The capacity of the Fog Lane Brook was exceeded as a result of the intense rainfall, flooding out of the open channel sections into Fog Lane Park. Drainage within the park was also overwhelmed, resulting in surface water accumulating in the park and on pathways. Flood water flowed towards residential properties in the Brooklawn Drive and Westholme Road area. Internal flooding was reported at three residential properties and external property flooding (rear gardens) was reported at a further two properties. Flooding onto the highway on Fog Lane from an upstream manhole on the culverted watercourse was also reported.



Location:

East Didsbury (Fog Lane Park areas)

Number of Properties Flooded:

Internal – 4

External - 12

Identified Flooding Source(s):

Ordinary Watercourse (Fog Lane Brook, Ball Brook)

Surface Water

Flooding was also reported along the route of the culverted Ball Brook, south of Fog Lane. Flood water was witnessed emerging from the ground, resulting in external property flooding (gardens) which was reported at up to 10 residential properties. Internal (basement/cellar) flooding was reported at one residential property, requiring a pump to remove floodwater. Property flooding was reported between midnight and early afternoon on 1st January 2025, reported at depths ranging between ankle-high to knee-high. Anecdotal reports indicated that the foundations of a household extension installed several years prior to the event may have damaged and blocked the culvert in this area, resulting in surcharging during this extreme rainfall event.

6.3 Northenden

Watercourses & Hydrology

The River Mersey begins in Stockport, at the confluence of the River Tame and River Goyt, flowing westwards towards the south of Manchester. At the boundary with the Manchester City administrative area, the River Mersey flows westwards through the Parrs Wood area in the south of East Didsbury, before meandering in a north-western direction between West Didsbury to the north and Northenden to the south.

The Orchard Road Drain is an ordinary watercourse which runs as an open channel to the north of Orchard Road West in Northenden. Based on the available records, the Orchard Road Drain flows into a culvert beneath the M60 before flowing into the open channel of the River Mersey.

The Brownley Brook is an ordinary watercourse which begins as a culvert north-east of Manchester Airport in the Shadowmoss Road area, flowing northwards through Wythenshawe in a series of open channel and culverted sections. From Brownley Road in Wythenshawe/Sharston, the Brownley Brook flows predominantly as an open channel in a north-westward direction through the southern area of Northenden. A series of short culverted sections run beneath roads surrounding Royalthorn Road. The Brownley Brook flows through a trash screen into a culvert beneath Royalthorn Road at the northern extent of Brookfield Park. The Brownley Brook continues as an open channel, briefly culverted beneath Crossgate Avenue, before finally discharging into a culvert inlet at Boothfield Road which joins the Baguley Brook to the north-west.

Flood Defences

The Flood Storage Reservoirs on the River Mersey at Didsbury Basin and Sale Ees Basin (as detailed in Section 6.1) are also used to manage flood risk in Northenden from the River Mersey.

Northenden Weir is used to provide Flood Warnings and Alerts to communities in Northenden, Didsbury, and others downstream on the River Mersey. The weir provides a consistent water level for the Northenden River Level Gauge upstream, with this regulated level also used to ensure that the river embankments and walls remain stable. Northenden Weir became damaged during high river levels following storm events in 2023/24. Work began on 18th November 2024 consisting of the EA dewatering the weir to enable them to inspect the damage and understand what they need to do to repair it. As a result of storms during November and early December (including Storm Bert) the EA was unable to undertake the full repair work due to river levels rising.

The large green open spaces immediately south of the River Mersey within Northenden are within Flood Zone 3 or 3b, including Northenden Golf Club and Didsbury Golf Club. A small area of Flood Zone 3 exists around Riverside Residential Park on Ford Lane, with the extent of Flood Zone 2 extending to the north-west including from the Mill Lane area towards Kenworthy Lane. Flood warning areas therefore cover the Didsbury Golf Club, Ford Lane/Riverside Residential Park, and Mill Lane to Kenworthy Lane areas.

Areas bordering the Brownley Brook in the Royalthorn Road area are shown to be within Flood Zone 3, and a wider area within Flood Zone 2. However, the area is not covered by an Environment Agency flood warning area, given that the direct flood risk in the area is from an ordinary watercourse (the Brownley Brook).

New Year 2025 – Sources & Impacts

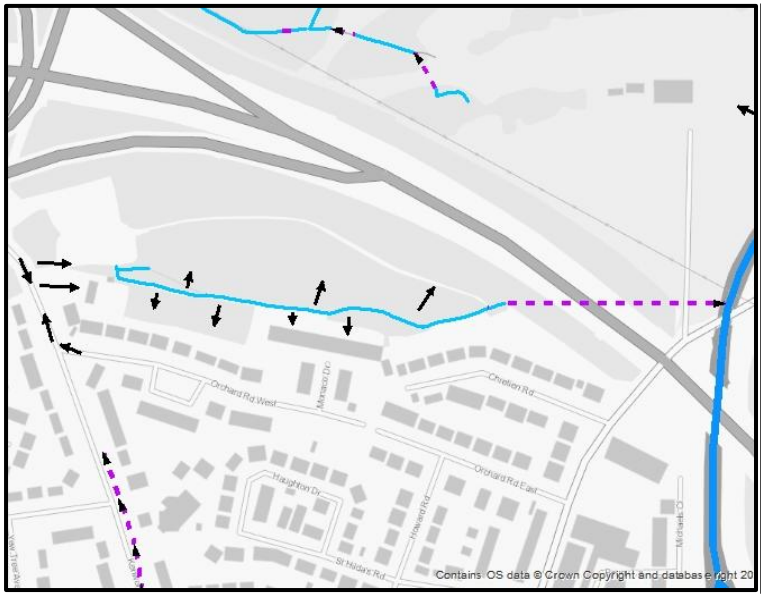
Table 3 contains a summary of the timings of each of the EA flood warnings in Didsbury and Northenden issued during the New Year 2025 event. The EA flood warning thresholds

for the 'River Mersey at East Didsbury, from Tuscan Road to Wilmslow Road' and the 'River Mersey at Northenden' flood warning areas were not reached during the New Year 2025 event.

At approximately 22:15 on 31st December 2025, water levels in Didsbury Flood Storage Reservoir were observed to be rising at the Golf Course level gauge. This was considered by the EA to be due to rainfall and surface water runoff. The EA operated the Sale Ees Flood Storage Reservoir at 02:45 on 1st January 2025. At 03:05 on 1st January 2025, the Didsbury Flood Storage Reservoir was operated. By 04:14 the inlet gates at Didsbury were 50% open, before being fully open by 05:00. At approximately 06:00 on 1st January 2025, a breach on the River Mersey embankment at Ford Lane resulted in uncontrolled inflows into the Didsbury Flood Storage Reservoir. River levels recorded at Northenden and (to a lesser extent) Didsbury dropped slightly as water flowed into Didsbury Flood Storage Reservoir through the breach at Ford Lane, which can be seen in Appendix II. At approximately 08:30 the Mersey riverbank behind the Britannia Hotel breached as a result of floodwater pushing back into the River Mersey.

Once levels had balanced, river levels at Northenden and Didsbury rose again until reaching a peak at around 11:00. In addition to damage to the golf course at Northenden and Withington Golf Clubs, staff accommodation was flooded internally, including offices, changing and showering facilities and machinery storage. The clubhouse was flooded internally, reportedly to a depth of over 2m, causing extensive damage to the bar, locker rooms, office and storage areas. Sections of the clubhouse were closed until March 2025, while the golf course was unable to reopen until April 2025.

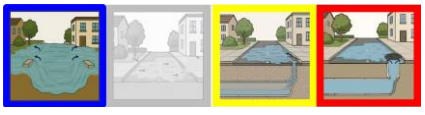
The fact that river levels dropped slightly supports the conclusion that the embankment breaches were unlikely to have exacerbated flooding in the wider area during the New Year 2025 event. However, the uncontrolled flows into the Didsbury Flood Storage Reservoir did result in peak levels reaching a higher level than the normal maximum level, resulting in severe internal property flooding at several businesses within the flood storage reservoir.



Location:
Northenden (Orchard Road Drain area)

Number of Properties Flooded:
Internal – 1
External – 3

Identified Flooding Source(s):
Ordinary Watercourse (Orchard Road Drain)
Sewer
Highway Drainage



It was reported that the Orchard Road Drain exceeded its capacity along the open channel section north of Orchard Road West, with the level rising far enough to flood the rear garden of several properties in the Monaco Drive and Orchard Road West area. The outfall of the culverted section of the Orchard Road Drain on the River Mersey would likely have been surcharged by the exceptional levels in the River Mersey, further exacerbating levels upstream of the culvert. A surcharging manhole was also observed on Kenworthy Lane, likely to be a surface water sewer or the culverted Green Park Drain which is believed to run nearby beneath Kenworthy Lane. Surcharging gullies were also observed at the junction with Orchard Road West. This suggests that any highway drainage or surface water sewers which outfall to the Orchard Road Drain became surcharged by rising levels in the Orchard Road Drain.

The area bordering the Orchard Road Drain and the Riverside Residential Park area are both included within the 'River Mersey at Northenden' EA flood warning area. However, the threshold for a flood warning was not met in this area during the New Year 2025 event. Internal property flooding from the River Mersey was reported at two residences at Riverside Residential Park, in addition to external flooding of other plots and at Northenden allotments. The onset of property flooding at Riverside Residential Park reportedly began between 04:00 and 06:00 on 1st January 2025. Internal property flooding was reported at one residence upstream of the Orchard Road Drain, with garden flooding reported at three other properties. The Orchard Road Drain is an ordinary watercourse but was likely affected by the elevated level of the River Mersey immediately downstream.

Property flooding from the Brownley Brook was reported in the Royalthorn Road area of Wythenshawe. The capacity of the open channel of the Brownley Brook was reportedly exceeded in several sections; between Shayfield Road and Olney Avenue, upstream of Hollycroft Avenue, and between Royalthorn Road and Crossgate Avenue. Water from the Brownley Brook was routed towards residential properties through rear gardens bordering the watercourse. Internal flooding was reported at 7 residential properties in the area, with external only flooding reported at two further residential properties. Internal flood depths were reported as between ankle-high and knee-high. It was reported that the threshold of several of these properties sit below the highway level, increasing their vulnerability to accumulating surface water or fluvial flood water. This also prevented floodwater from draining away from the front of these properties.

Several sections of the Brownley Brook run through private land behind private properties, making these sections inaccessible. Anecdotal reports stated that sections of the Brownley Brook were in poor condition due to debris, trees or vegetation and fly-tipping, and that this may have contributed to the flooding experienced at New Year 2025. Manchester City Council is not responsible for maintaining watercourses other than those within its own land. It is important that riparian landowners maintain their sections of watercourse and that the wider public do not cause blockages by fly-tipping in watercourses. Other factors also likely contributed to flooding from the Brownley Brook,

including possible backing up of flow from the outfall to the Baguley Brook and flows exceeding the capacity of culverted sections of the Brownley Brook.

Location:

Wythenshawe (Royalthorn Road area)

Number of Properties Flooded:

Internal – 7

External - 2

Identified Flooding Source(s):

Ordinary Watercourse (Brownley Brook)

Wythenshawe Community Housing Group (WCHG) own land containing several stretches of the Brownley Brook in the Royalthorn Road area, including Brookfield Park. WCHG stated that they have an inspection regime for the Brownley Brook which becomes more frequent from Autumn. In addition, during periods of heavy rainfall, WCHG stated that they conduct daily inspections and raise works to clear trash screens on the culverts and remove debris. WCHG confirmed that they conducted daily inspections over the New Year 2025 event and that they spend 72 hours of labour via in-house resources and contractors who were on site out-of-hours.

6.4 Harpurhey & Crumpsall

Watercourses & Hydrology

The River Irk flows from north to south through the west of Harpurhey, passing beneath the bridge at Harpurhey Road before flowing between the Hendham Vale Industrial Park and Lancaster Works. Harpurhey Reservoirs are located South of Harpurhey Road and Harpurhey Ponds are located North of Harpurhey Road, adjacent to the River Irk. These are former mill ponds, used previously by the factories as a source of water. The reservoirs and ponds are now used as a haven for wildlife and are not formal flood defences or flood storage reservoirs.

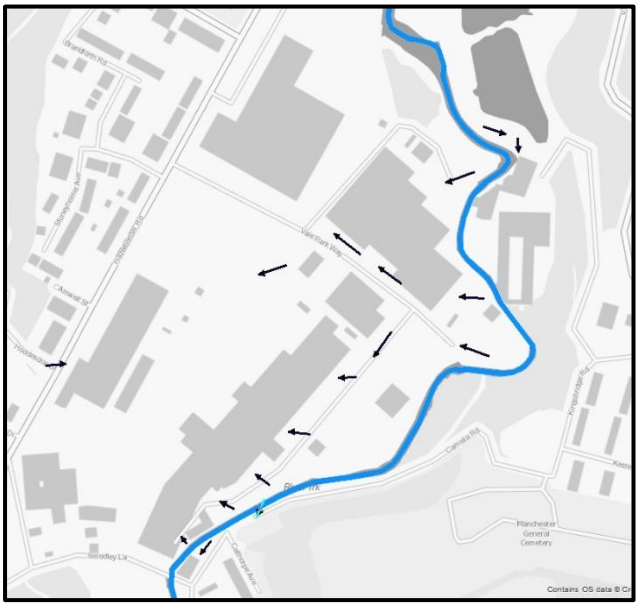
The large industrial and commercial areas off Hazelbottom Road are within Flood Zones 2 and 3. The Environment Agency flood warning system includes a warning area for the Vale Park Industrial Estate area. The warnings are triggered from the level gauge on the River Irk at Collyhurst Weir, which is approximately 2km further downstream. Prior to the New Year event, the warning threshold level was set at 1.50mASD.

New Year 2025 – Sources & Impacts

A flood warning was issued by the Environment Agency at 05:04 on 1st January 2025 for the 'River Irk at Vale Park Industrial Estate' area. However, businesses at Hendham Vale and Vale Park Industrial Estates first reported internal property flooding from around 00:00-01:00 on 1st January 2025.

The level of the River Irk rose in response to the intense rainfall during the New Year 2025 event. Internal property flooding was reported at up to 10 industrial units at Hendham Vale and Vale Park Industrial Estates, with external property flooding report at one further unit. The depth of flooding was reported in the range of 0.3 – 0.6m. It was reported that a retaining wall on the River Irk collapsed, directing fluvial floodwater towards the industrial properties. One industrial property reported that its flood barriers were overtopped. One business estimated that machinery and materials damaged by flooding resulted in a loss of approximately £180,000. Another business avoided internal flooding but were unable to operate for two days due to a power outage, resulting in an estimated loss of £8,000.

At Lancaster Works in Harpurhey, approximately 100 people who had been attending a New Year's Eve event became stranded due to rising floodwaters from the River Irk[13]. Internal property flooding of two industrial units was reported at Lancaster Works, at a reported depth exceeding 1m. The business occupying these units estimated that approximately £30,000 worth of damage occurred.



Location:

Harpurhey/Crumpsall

Number of Properties Flooded:

Internal – 10

External - 1

Identified Flooding Source(s):

Main River (River Irk)

The industrial areas on both the western and eastern sides of the River Irk sit at significantly lower elevations than surrounding residential areas. On the eastern side, the industrial area lies within a narrow band of land alongside the River Irk, bordered by a steep slope up towards residential areas at Harpurhey Road and Kingsbridge Road. On the western side, the industrial area sits at a lower level than Hazelbottom Road. This

[13] Flooding response moves from rescue to recovery as major incident stood down - Greater Manchester Fire Rescue Service

makes the industrial estates especially vulnerable to fluvial flood water from the River Irk. It was also reported that surface water from Hazelbottom Road ran off into the industrial area at Hendham Vale and Vale Park Industrial Estates. It is likely that highway drainage and sewer system were overwhelmed by the heavy rainfall, while outfalls to the River Irk were also likely submerged. Combined with fluvial flood water from the River Irk, private drainage within the industrial estates would have been overwhelmed.

6.5 Brooklands

Watercourses & Hydrology

The Baguley Brook flows from the north-west of Wythenshawe and through Wythenshawe Park, entering a culvert at the western boundary of the park. This culvert runs for approximately 0.5km through Brooklands, emerging north of Wythenshawe Road into an open channel. The Environment Agency-owned river level gauge 'Baguley Brook - Northern Moor' is located at this outlet, with a river level record running from 27th October 2006.

The Baguley Brook flows beneath a bridge at Bordley Walk, through a trash screen and culvert which were constructed by Transport for Greater Manchester in 2011 to allow the Metrolink Airport Line to cross Baguley Brook near the Wythenshawe Park Metrolink station. This culvert replaced an existing culvert and section of open channel. At the time of its design in 2010, the culvert capacity was designed for "*a 1 in 100-year storm return period and 7.0 hours storm duration*". A 1 in 100-year event is better expressed as a 1% annual exceedance probability (AEP). The Baguley Brook then flows westwards towards the confluence with the Fairywell Brook, where these tributaries form the Sinderland Brook.

Areas along the Baguley Brook between Wythenshawe Road and the downstream confluence with the Fairywell Brook are shown to be within Flood Zones 2 and 3. The EA flood warning system therefore includes the 'Baguley and Fairywell Brooks at Timperley, Brooklands and Northern Moor' area which is triggered based on the level gauge at Northern Moor.

New Year 2025 – Sources & Impacts

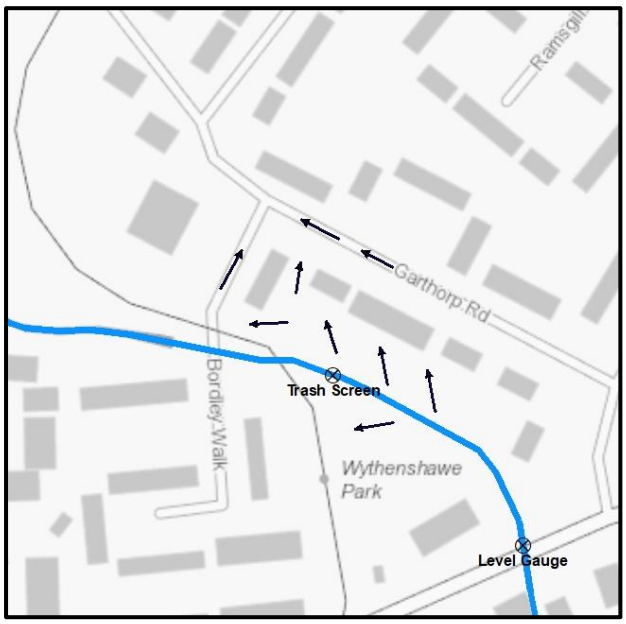
A hydrograph of the Baguley Brook river levels observed during the New Year event is included within Appendix II. The maximum river level recorded during the New Year event was 1.514mASD at 06:30 on 1st January 2025, which exceeded the previous highest recorded river level of 1.450mASD.

No flood alert was issued for 'Baguley and Fairywell Brooks at Timperley, Brooklands and Northern Moor'. A flood warning was issued by the Environment Agency at 08:41 on 1st January 2025; however, residents reported internal property flooding between 05:00 and 07:00 on 1st January 2025, several hours before the flood warning was issued.

The level of the Baguley Brook rose in response to the intense rainfall during the New Year 2025 event. The Baguley Brook exceeded the capacity of the open channel upstream of

Bordley Walk, with fluvial flood water flowing towards properties in the Garthorp Road and Bordley Walk residential areas. Internal property flooding was reported at four properties and external (garden/driveway) property flooding at two further properties. The depth of internal flooding at these properties was reported as ranging between covering the surface up to knee-deep.

Residents reported that the trash screen on the inlet to the culvert beneath Bordley Walk was blinded with debris and had not been maintained in recent years. The bridge (with culvert and trash screen) at Bordley Walk were installed by TfGM and Metrolink in 2011 and its ongoing ownership and maintenance is contracted to Keolis Amey Metrolink. Anecdotal reports stated that residents entered the Baguley Brook to clear debris from the trash screen themselves and that this improved the rate of flow into the culvert.



Location:

Northern Moor (Garthorp Road/Bordley Walk)

Number of Properties Flooded:

Internal – 4

External - 2

Identified Flooding Source(s):

Main River (Baguley Brook)

Prior to maintenance being contracted to Keolis Amey Metrolink, the culvert had been on a 2-yearly visual inspection regime, and 6-yearly detailed inspection regime. Based on Keolis Amey Metrolink records, during the handover of maintenance responsibilities, the culvert was incorrectly coded as 'Barrow Brook Culvert' on the asset management system. This resulted in confusion over maintenance records for the Baguley Brook culvert at Bordley Walk, and planned preventative maintenance was therefore not generated on the asset management system. Residents also reported that, when they reported that the screen was blocked during the New Year 2025 event to Metrolink, contractors were dispatched to the incorrect culvert.

In February 2020, Keolis Amey Metrolink undertook a site investigation on the culvert due to concerns over silt level within the culvert. A principal inspection was carried out on the culvert by Keolis Amey Metrolink in May 2024, which concluded the culvert was in 'fair condition' and recommended the removal of silt through the culvert and debris on the trash screen. Keolis Amey Metrolink stated that the debris was subsequently removed by the Network Presentation and Facilities team. Based on the available records, no further screen maintenance was undertaken prior to the New Year 2025 event.

At the time of its design in 2010, the Baguley Brook culvert at Bordley Walk was designed to have sufficient capacity for a 1% AEP event. Initial rainfall analysis of the New Year 2025 rainfall event by JBA Consulting indicated that the AEP of the New Year 2025 event was between 1% - 2%. This suggests that the magnitude of the New Year 2025 event may have been sufficient to reach the full capacity of the Baguley Brook culvert, even if the trash screen had been clear ahead of event. However, proactive maintenance of trash screens ahead of severe weather events can reduce the risk of flooding by ensuring culverts are able to run at full capacity.

6.6 Deansgate, City Centre

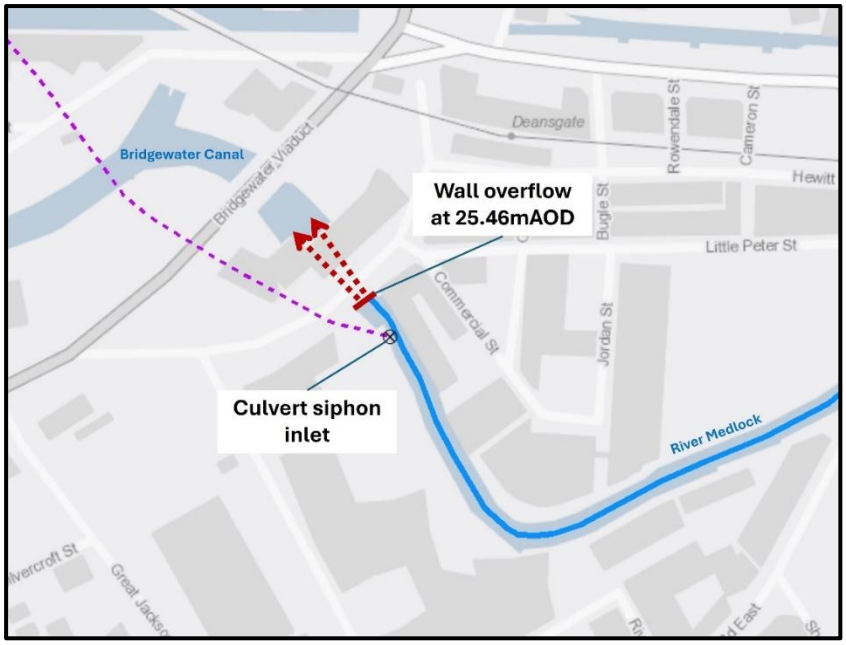
Watercourses & Hydrology

The source of the River Medlock originates east of Oldham, flowing south and west towards Manchester. The River Medlock is culverted for approximately 0.5km north of the Etihad Campus, before emerging as an open channel and flowing through the Ancoats and Beswick and Picadilly areas. The River Medlock is culverted from the A6 in Piccadilly and under the former University of Manchester Institute of Science & Technology campus, emerging as an open channel upstream of the Princess Road bridge. The River Medlock turns northwards, flowing beneath Charles Street and the railway line, meandering again before passing under Oxford Road though a bridge. The bridge opening beneath Oxford Road is shown in Figure 5. Due to the historic nature of the bridge, this structure acts as a restriction during extreme events, causing the river level to surcharge upstream.

Figure 5. View looking downstream along the River Medlock towards the bridge opening beneath Oxford Road.

The River Medlock enters a culvert at Hulme Street which emerges on the eastern side of Gloucester Street, flowing beneath Gloucester Street/Cambridge Street bridge and into another culvert which emerges on the western side of Albion Street.

Figure 6. Summary of the junction between the River Medlock and the Bridgewater Canal at the former site of Knott Mill.



Just upstream of Deansgate and the A56, the River Medlock approaches the Bridgewater Canal at the former site of Knott Mill, as illustrated in Figure 6. A wall spans the width of the opening beneath Knott Mill Bridge (beneath Deansgate) which separates the River Medlock from the Bridgewater Canal. A series of sluice gates used to feed water to the Bridgewater Canal here. The creation of the Bridgewater Canal in the 18th Century converted a section of the previous open channel of the River Medlock. The River Medlock now turns to the left and is carried under the Bridgewater Canal and Castlefield Basin via a culvert, before emerging at Potato Wharf and joining the River Irwell. The culvert beneath the Bridgewater Canal and Castlefield Basin is an inverted siphon and this was constructed in the late 18th Century. The culvert was therefore constructed at a time when Manchester was a smaller city, so the culvert was not sized to account for future urban expansion and the onset of climate change. This culvert is therefore susceptible to blockage and may act as a restriction to flow. The culvert and downstream open channel section is owned and controlled by the Bridgewater Canal Company.

Flood Defences

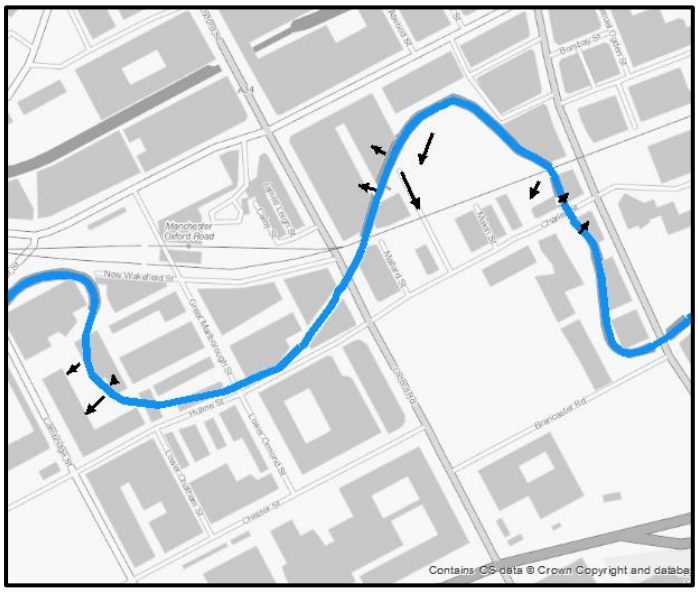
During extreme rainfall events, when the culvert beneath Castlefield Basin reaches capacity and surcharges, levels in the upstream River Medlock rise. Upon reaching 25.46mAOD at Knott Mill Bridge, the River Medlock overtops the wall and discharges flows into the Bridgewater Canal. The Bridgewater Canal Company monitors river and canal levels ahead of such events, and sluices are opened to lower the level of the canal in anticipation of overflows from the River Medlock. Paddles at Pomona can also be opened if the level of the canal continues to rise despite all sluices being open. The canal system is not designed to manage these flows from the River Medlock and, once overtopping has occurred, there is limited potential for canal assets to manage these flows.

There are a number of engineered spills designed to allow water in the Bridgewater Canal to spill back into the River Medlock either into or downstream of the inverted siphon. The most significant of these is a large circular spill on the northern limit of the canal basin. This allows flow from the canal to enter the River Medlock downstream of the siphon via a separate culvert. However, these spills discharge directly to the River Medlock which, during severe weather events such as New Year 2025, is likely to already be at a high level.

A large area along the River Medlock in Deansgate is shown to be within Flood Zone 3, including the area from Princess Street through Charles Street and York Street up to the Oxford Road bridge. Areas of Flood Zone 3 are also shown downstream of Oxford Road, including the areas surrounding Hulme Street and Cambridge Street. The next extent of Flood Zone 3 is shown west of Medlock Street, including the area south of Deansgate station to Bridgewater Viaduct. A small section downstream of Bridgewater Viaduct is shown to be within Flood Zone 3, with a larger area to the north (between Liverpool Road, Castlefield Basin and Potato Wharf) shown to be within Flood Zone 2. The EA flood warning system therefore includes 'River Medlock at Manchester City Centre' which covers the extents of Flood Zone 3 from Princess Street/Charles Street to just west of Castle Street at the Bridgewater Canal. The area between Liverpool Road, Potato Wharf, and the Castlefield Basin is not within the flood warning area, as EA modelling indicated that risk was primarily from the canal rather than directly from the River Medlock.

New Year 2025 – Sources & Impacts

A hydrograph of the River Medlock levels observed at Gurney Street and London Road during the New Year event is included within Appendix II. The level of the River Medlock rose in response to the intense rainfall during the New Year 2025 event. The maximum river level recorded at New Year 2025 reached just under the previous highest recorded level at London Road (under by 0.062m) and Gurney Street (under by 0.147m).



Location:
Deansgate (Cambridge St, Charles St, Princess St area)

Number of Properties Flooded:

Internal – 10

External - 0

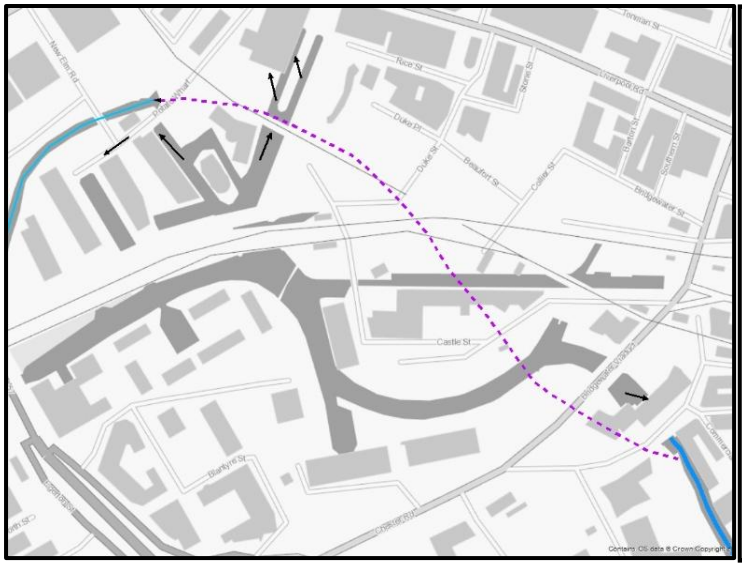
Identified Flooding Source(s):

Main River (River Medlock)
Sewer

The capacity of the River Medlock was exceeded along the section between Charles Street and Oxford Road. The volume of flow from upstream likely overwhelmed the capacity of the bridge beneath Oxford Road, resulting in the level of the River Medlock

rising further along this section. At Charles Street and Princess Street, basement/cellar flooding was reported at two nightclubs, two pubs, and a restaurant. It was reported that the river level rose before entering buildings via air vents or other openings. Two properties reported that floodwater also surcharged up through toilets, likely caused by the River Medlock breaching sewer overflow outfalls and surcharging up through the sewers. The nightclubs were forced to make a full evacuation at approximately 01:15 on 1st January 2025. One club estimated that they had spent £40,000 on repairs as a result, in addition to a lost revenue of around £80,000 including the night itself and the subsequent weeks of closure.

Fluvial floodwater from the River Medlock flowed out onto York Street and submerged the car park. A hotel was internally flooded, including 12 basement or road-level rooms which required evacuation during the night, a ballroom and a kitchen. The river level overtopped existing property flood resistance measures at the hotel, resulting in internal property flooding reported at a depth of up to 2m. It was also reported that manhole covers lifted within the building, with flood water from surcharging sewers adding to internal flooding. Internal flooding at this location reportedly occurred from around 02:00 on 1st January 2025. The hotel estimated costs of approximately £28,000 to remove all damaged material, and estimated total costs (including repairs, upgrading of property flood resilience measures, additional insurance premium) to be in the region £3.5million.



Location:

Deansgate (Liverpool Road/Castlefield Basin area)

Number of Properties Flooded:

Internal – 3
External - 1

Identified Flooding Source(s):

Main River (River Medlock) & Bridgewater Canal

At the downstream end of the Hulme Street culvert, flooding from the River Medlock was also reported at Cambridge Street. Internal property flooding was reported at a large multi-unit residential block on Cambridge Street. The basement-level car park was reportedly flooded to knee-depth, submerging a large number of vehicles. Apartments and businesses located at these lower levels were also internally flooded, reportedly up to knee-high in depth. Cellar/basement flooding to ankle-height was also reported at a second apartment complex around River Street/Lower Chatham Street. While apartments above ground floors did not directly flood, flooding of lifts affected their access and egress, and many of these addresses were affected by a loss of power or utilities as a result of flooding at lower levels.

Further downstream, the River Medlock exceeded its capacity upstream of the culvert beneath Castlefield Basin. This resulted in an overflow into the Bridgewater Canal at Castlefield Basin. The canal subsequently overflowed onto the towpath, with floodwater then routing into the lower sections of nearby buildings. The Bridgewater Canal is maintained at a statutory water level (25.26mAOD) to provide navigation for boats. Dredging of the canal would therefore not reduce the water level within the canal, as the level is required to be maintained at this statutory level.

Internal flooding was reported at two businesses (hotel and a gym/leisure club) at Castlefield Basin, in addition to flooding along a private road and residential car park at Potato Wharf. A basement level of the hotel reportedly flooded to a depth of over 1.5m, while the entire ground floor of the gym/leisure club was flooded.

A flood warning for the 'River Medlock at Manchester City Centre' was issued by the EA at 01:50 on 1st January 2025. However, the nightclubs at Charles Street and Princess Street evacuated from around 01:15 on 1st January due to the onset of basement/cellar flooding, while properties around Cambridge Street reported flooding at around 02:00. The hotel at Castlefield Basin reported that property flooding occurred from approximately 00:30 on 1st January 2025. Therefore, the configuration of the existing flood warning system for the River Medlock provided little or no warning in the Deansgate area.

6.7 Highways & Transport

Flooding from highway infrastructure may occur for several reasons, most commonly when:

- A specific localised blockage or build-up of debris around a gully prevents or restricts highway runoff from entering gullies and subsequent highway drainage. A blocked/collapsed gully drainage pipe may prevent water being discharged from the gully pot.
- A period of heavy and/or prolonged rainfall, where the volume of rainfall falling onto the highway overwhelms the highway drainage system. Surface water flows are then conveyed along or contained within the highway, until water levels recede or overtop kerbs and flow towards properties.
- Downstream sewers or watercourses (to which the highway drainage discharges to) are at full capacity and therefore this backs up flow into the highway drainage system.

Elsewhere, flooding from other sources (such as main rivers or ordinary watercourses) flows onto the highway. Highway drainage infrastructure is designed to drain rainfall that falls onto the highway itself; it is not designed to collect and drain flood water from watercourses.

Across the wider Manchester City region, flooding caused wide-ranging disruption to highways, motorways and transport services. Table 4 provides a summary of adopted highway flooding impacts, while Tables 5 and 6 summarise reported disruption to the public transport network.

Table 4. Summary of highway flooding impacts in Manchester reported by MCC Highways, between 31/12/2024 and 02/01/2025.

Ward	Highway(s) Flooding	Details
Ancoats & Beswick	ANCOATS GROVE	Flooding on the highway
Baguley	GREENBROW ROAD	Blocked gully or drain
Brooklands	GARTHORP ROAD WYTHENSHAWE ROAD	Flooding on the highway Flooding on the highway
Burnage	ERRWOOD ROAD ROSEVALE AVENUE WHITETHORN AVENUE BROADHILL ROAD KINGSWAY EALING PLACE	Flooding on the highway Flooding on the highway Flooding on the highway Flooding on the highway Flooding on the highway Flooding on Ealing Place - people cannot go outside or get to their cars.
Charlestown	GIFFORD AVENUE	Flooding on the highway
Crumpsall	WATERLOO STREET CHIME BANK HODDESDON STREET CAMELIA ROAD SMEDLEY LANE	Flooding on the highway
Deansgate	YORK STREET	Flooding on the highway
Didsbury East	FOG LANE FOG LANE WILMSLOW ROAD	Blocked gully or drain Flooding on the highway
Didsbury West	DARLEY AVENUE	Blocked gully or drain
Fallowfield	BOWDON AVENUE ASTON AVENUE	Blocked gully or drain
Harpurhey	HARPURHEY ROAD SLACK ROAD	Flooding on the highway
Hulme	GREENHEYS LANE	Flooding on the highway
Levenshulme	KINGSWAY	Flooding on the highway
Northenden	OLNEY AVENUE KENWORTHY LANE ALDERUE AVENUE ORCHARD ROAD WEST PALATINE ROAD	Flooding on the highway. Flooding along Palatine Road (full stretch) with closure signs put out by GMP.
Piccadilly	STORE STREET	Flooding on the highway
Rusholme	BRIGHTON GROVE BIRCH HALL LANE	Flooding on the highway
Sharston	PEEL HALL ROAD LONGLEY LANE	Large amount of flooding on highways. Water approximately 1ft high, near St Richard of Chichester Parish Church. The junction of Longley Lane and Altrincham Road. Flooded road.
Whalley Range	STANLEY ROAD	Flooding on the highway
Withington	MAULDETH ROAD	Flooding on the highway
Woodhouse Park	SHADOWMOSS ROAD COTEFIELD ROAD PAINSWICK ROAD SUMMERFIELD ROAD STYAL ROAD	Flooding on the highway. Flooding along A555 (full stretch) with closure signs put out by GMP.

Table 5. Summary of flooding impacts in Manchester reported by TfGM on 31/12/2024 and 01/01/2025.

Date	Location of Flooding	Impact
31/12/2024	M60 (J25-24 Anti-Clockwise)	Flooding - lane closure and congestion
31/12/2024	Crossley Road, Heaton Chapel	Flooding - closure
31/12/2024	M62 ACW J22 exit	Flooding - closure
01/01/2025	M62 WB J19-18	Flooding - lane closures
01/01/2025	Whitecarr Lane, Wythenshawe	Road closed - full length
01/01/2025	A34 Kingsway, Burnage	Road closed - Mauldeth Road to Green End Road
01/01/2025	A34 Handforth Bypass at Turves Road Bridge	Road closed in both directions
01/01/2025	M56 J6 - J8	3 lanes closed
01/01/2025	A555	Road closed - Ringway Road East to Styal Road, and Poynton Relief Road to Wilmslow Handforth Bypass Road
01/01/2025	Glazebrook, Chat Moss (Chat Moss Railway Line).	Trains unable to run between Manchester Oxford Road and Warrington Central in both directions
01/01/2025	Trafford Bar Intersection Bridge (Metrolink)	Metrolink service change - no trams between Trafford Bar and Firswood
01/01/2025	Gorton and Belle Vue (Hope Valley/Glossop Railway Lines)	Trains unable to run between Manchester Piccadilly and Rose Hill Marple/New Mills Central in both directions
01/01/2025	M60 (J8 - J7 Anti-Clockwise)	Exit slip road closed due to flooding.
01/01/2025	Gatley/Heald Green South Junction	Trains unable to run between Manchester Piccadilly and Manchester Airport
01/01/2025	Multiple Weather-related Disruptions on the Rail Network.	Do not travel/no replacement transport on multiple routes. CSL2 declared. Speed restrictions on numerous lines also.
01/01/2025	Shadowmoss (Metrolink)	Metrolink service change - no trams from Manchester Airport towards Wythenshawe Town Centre
01/01/2025	Britannia Hotel, Palatine Road junction of Barlow Moor Rd	Road closed by GMP and hotel evacuated. Bus services on diversion.
01/01/2025	Waterloo Street, Manchester	Road closed, bus services diverted
01/01/2025	Store Street, Manchester	Road closed.

Network Rail reported an approximate total cost of £760,000 related to the January 2025 flooding across its North-West England routes. This figure includes costs associated with delays to services, as well as the cost of repairing the railway line at Mobberley which was partially washed away.

Table 6. Summary of flooding impacts in Manchester reported by Network Rail on 31/12/2024 and 01/01/2025.

Date	Location of Flooding	Delay (mins)	Delay Costs (£)	Line Closed Duration (hours)
31/12/2024	Slade Lane Jn to Heald Green	448	122,573	15
31/12/2024	Marsden to Diggle Jn	376	192,830	15
31/12/2024	Stalybridge to Ashburys	137	9,471	10
01/01/2025	Wilmslow to Manchester Airport	180	4,959	23
01/01/2025	Hyde Jn	15	415	10
01/01/2025	Stockport to Altrincham	646	34,681	279
01/01/2025	Glazebrook East Jn & SDGS to Deansgate	390	71,141	27
01/01/2025	Mobberley	85	25,924	24
01/01/2025	Furness Vale to Buxton	89	20,791	8
01/01/2025	Hyde Jn to Hadfield	27	17,810	9
01/01/2025	Glazebrook East Jn & SDGS	897	74,564	20
01/01/2025	Rose Hill Marple	10	4,410	7
01/01/2025	Manchester Victoria to Stalybridge	552	35,482	23
01/01/2025	Stockport - Edgeley	243	29,335	12
01/01/2025	Ashburys to Hyde Jn	58	897	2
01/01/2025	Crow Nest Jn to Salford Crescent	328	4,760	10
01/01/2025	Ashburys to Hyde Jn	183	18,397	61
01/01/2025	Macclesfield	192	22,069	1

National Highways reported two flooding incidents within the Manchester City area on the 31st December 2024 and 1st January 2025. The first occurred on the slip road at the M60 junction 19 anticlockwise entrance. The second incident occurred on the M56 westbound between junction 6 and 7, where surface water from third party land reportedly flowed onto the motorway resulting in the closure of the westbound carriageway.

6.8 Public Consultation Analysis

For the purpose of this report, a total of 131 complete responses have been analysed from the public consultation exercise, including webform responses and postal returns. These are the responses which indicated that their properties had been affected by flooding at New Year 2025, to varying extents.

Flooding Impacts

The following impacts were reported by respondents to the public consultation, as a result of the New Year 2025 flooding event:

- 40.5% experienced financial loss.

- 42.7% experienced material loss.
- 17.6% experienced impacts on physical health.
- 43.5% experienced impacts on mental health.
- 29.8% experienced a loss of power.
- 26.0% experienced a loss of utilities.
- 39.7% experienced a loss of access/egress.

40 responses stated that they had been required to evacuate or leave their property as a result of flooding at New Year 2025. Of these, 14 stated that they had not yet been able to return, as of 31st May 2025.

Level of Preparedness

- 61.1% were 'Not at all' prepared for flooding ahead of the New Year 2025 event.
- 6.9% were 'Well prepared' for flooding ahead of the New Year 2025 event.
- 49.6% had not checked their flood risk online.
- 50.4% had not signed up for EA flood warnings (although these are not necessarily provided for all of these properties).
- 86.3% did not have a household emergency kit/plan.
- 83.2% had not installed property flood resilience measures.
- Of the people who stated that they were aware of previous flooding at their property, 20.4% stated that they had installed property level resilience measures.

Insurance

- 22.9% were either uninsured, or their insurance did not cover flooding.
- 42.9% did not know whether their insurance covered flooding.
- Of the people who stated that they were aware of previous flooding at their property, 38.8% stated that they were insured against flooding.

6.8 Parks & Open Spaces

Parks and open spaces were impacted by flooding across Manchester during the New Year 2025 event. Table 7 summarises the high-impact flooding issues at park sites. Additional medium-impact flooding was reported at: Birchfields Park, Blackley Forest, Blackley Vale, Bowker Vale/Dinorwic Close, Chorlton Ees, Chorlton Water Park, Cringle Park, Debdale, Gorton Park, Hardy Farm, Harpurhey Ponds/Lower Crumpsall, Hough End Clough, Ivy Green, Lower Medlock Valley, Millgate Lane, Platt Fields Park, Riverside Park, Sunnybrow Park, and Broadhurst Clough.

Table 7. Summary of high-impact flooding in Manchester reported by MCC Parks during the New Year 2025 event.

Site	Impact	Actions
Clayton Vale	Extensive damage to banks on both sides of the River Medlock, approximately 30m each side.	Safety fencing in the first instance. Re-allocating associated grant money for short-medium term repair, planned start September 2025.

Site	Impact	Actions
Fletcher Moss Park	Flood Basin activated. EA staff on site implemented barriers and locked gate. Everything is in place and regularly monitor until EA leave site. Cafe area accessible. Park Run Cancelled, wooden benches uprooted and some damage to wooden walkway. Full assessment to be carried out once site has been pumped out by EA. Lots of sludge along paths near boundary with Fletcher Moss. Some large trees are blocking the way.	Park monitored daily. 13/01/25 pumping of water out of the park due to commence over the next couple of days. 12/02/24 Redgate to start work on scraping paths in Fletcher Moss & Stenner Woods and have requested path on Stenner Lane be made accessible to. Pathway from the board walk to Fletcher Moss pond & pathway into the woods from Fletcher Moss (mid-point of Fletcher Moss) will require remedial work.
Fog Lane Park	Several houses flooded due to excessive amounts of rain. Many paths flooded and some barriers placed or taped off. Drains in working order, but volume of water will need to subside before assessing damage. Trench inspected and half full with water draining off through pipe.	Staff cleared residual water from the trench on 07/01/25, sandbags were delivered to houses affected by flooding. Monitored daily 04/01/2025 – 14/01/2025 to assess flooding, replace signage, ensure that gullies were jetted and paths swept. 07/01/2025 – Site meeting with neighbourhood officer and NIRF team to discuss progressing drainage issues resolution. 08/01/2025 – Staff onsite with contractor to quote for works as per agreed discussion with NIRF team and Neighbourhoods.
James Saxon Open Space	Flooding to residential properties from park site - flooded gardens and floor spaces.	Continued to monitor through resident communications. Work is progressing to agree an approach with United Utilities and design and deliver a solution through NIRF.
Wythenshawe Park	Path & bank erosion from flooding. Pathway subsiding into brook, banking at the bridge eroded and loose. Issue has reduced the width to an essential path leading to the Bideford Metrolink. Pathway is an essential route for the park travel plan & concerts. Internal flooding of Wythenshawe Hall (cellar), horse stables and stables office. Flooding of main car park and drive.	Cone & hazard taped corners of the bridge & banking. Monitored by park staff. Cones & tape replaced as & when needed. Capital works to stabilise the banking being assessed, with a contractor due on site in April.

7. Actions Taken by RMAs

During any major flooding incident, a multi-agency response is required. Multiple Greater Manchester Resilience Forum plans were enacted during the New Year 2025 flooding event. These include the Greater Manchester Generic Response Plan, which details the protocols for activation, command, communication and organisational roles and responsibilities for multi-agency emergency responses. A number of other plans were enacted, including the Manchester Multi-Agency Flood Plan (borough level), the Manchester Multi-Agency Evacuation Guidance, and the Manchester Multi-Agency Sheltering Evacuees (Reception Centre) Plan.

A multi-agency flood advisory service teleconference was convened by the Environment Agency at 12:30 on 31st December 2024. The amber severe weather warning for rain triggered an additional multi-agency flood advisory service teleconference at 21:30 on 31st December 2024, where the Environment Agency shared their predictions regarding possible flooding as generated by their river modelling service. During this meeting, the Met Office explained that the forecast for Greater Manchester had not significantly changed, but that the original yellow warning had progressed to amber in some Greater Manchester areas. The EA raised concerns regarding the Didsbury basin potentially overtopping, although modelling was unable to determine the number of properties/houses at risk at the time. The Met Office were notified of the developing flooding issues at Didsbury this information was also relayed to the Flood Forecasting Centre.

This led to multi-agency command and control structures being established by 01:00 on 1st January 2025 via an initial Tactical Coordinating Group (TCG) meeting at 01:00 on 1st January 2025. An additional TCG was held at 04:00 on 1st January 2025 to reassess the situation given the escalating number of property flooding reports. Following the Tactical Co-ordinating Group at 04:00 on Wednesday 1st January 2025, a major incident was declared in Greater Manchester. An additional TCG was held at 08:00 and a Strategic Coordinating Group (SCG) at 10:00. Numerous Strategic and Tactical Co-ordinating Group meetings between the Category 1 and 2 responding organisations were convened throughout the 1st and 2nd of January.

The nature of many of the actions undertaken before, during, and after the New Year 2025 flood event involved multiple agencies working together. However, the following section includes details of additional actions undertaken by the relevant Risk Management Authorities.

Actions regarding the emergency response to the New Year 2025 flooding event are being assessed separately by the Local Resilience Forum. The Greater Manchester Resilience Forum commissioned a multi-agency structured debrief which was held on 27th January 2025 with representatives from 20 different partner organisations. A debrief report was published and signed off through the Local Resilience Forum's governance structure and details recommendations that will be taken forward to improve future emergency response.

7.1 Manchester City Council

Manchester City Council as Local Highway Authority responded to highway flooding reports as they were received, focusing on responding to reports of blocked gullies and emergency reports. Manchester City Council was also asked to reinforce road closures on Palatine Road, Ford Lane and the A555, once these roads had been closed by emergency services.

MCC Neighbourhoods officers visited affected areas to advice on clean up and insurance claims. Skips were provided in areas including Didsbury, Northenden, and Wythenshawe for residents to dispose of flood-damaged items. Vulnerable residents were contacted and supported/ encouraged to find alternative suitable accommodation. People from the Britannia Hotel in Didsbury were successfully re-housed into alternative accommodation managed by Serco on behalf of the Home Office. Everyone was subsequently moved back once renovation works had been completed on the hotel. A Rest Centre was stood up at Didsbury Mosque, where 13 people were supported by social care. Across the wider Manchester area, 12 further households were re-located to hotels. None of these properties needed to make a homeless application.

An emergency response was convened on the evening of 5th January 2025, due to thawing snowmelt and concern that further flooding might have occurred. A Recovery Coordination Group was established for the New Year flooding event in Manchester, with the first session chaired on 6th January 2025. The Recovery Coordination Group included MCC, the EA, Electricity North West, and the Greater Manchester Resilience Unit, with the aim of identifying and meeting the recovery needs of the areas, communities and infrastructure affected by the New Year flooding. A Community Impact Assessment was undertaken to understand the impact of the incident and the needs of the surrounding communities. This enabled a co-ordinated recovery action plan to be developed involving all agencies, alongside a communications plan for the recovery phase. The action plan included:

- Leaflets were delivered by Neighbourhoods officers on 8th January 2025 to affected addresses and conversations were held with residents.
- Assistance was provided for residents who have disabilities to help transporting items they cannot move themselves to skips.
- Alternative specialist contractors were brought in to provide support and deal with contaminated waste.
- Highways gully machines cleaned gullies in affected areas and surrounding areas.
- Highway gully machines were also used to clear other infrastructure and actively clear trash screens in watercourses where litter and debris had accumulated.
- Skips were provided in some locations for flooded allotment sites.
- Liaison with Environmental Health for options to put in place if contaminated soil required testing at allotment sites.
- Pathways in parks were jet-washed.
- Updates were provided to ward elected members.

Manchester City Council accessed funding from the 'Forever Manchester Disaster Relief Fund'. A grant of up to £200 was made available to contribute to the costs of clean up and replacement of essential household items, decorations, replacement clothing, deep cleaning or food that had to be discarded due to flood waters. This funding was available to individuals and families where the main living area of their home was affected by flooding.

Parks teams inspected and continued to monitor the extents and impacts of flooding affecting its sites. In the immediate response to the New Year 2025 event, sites were inspected, and hazardous areas were sealed off using barriers or taping. Parks staff continued to monitor sites daily to assess flooding, and ensure that paths were reinstated when safe, including any required cleansing. Where debris was found within watercourses, this was reported to the relevant body. Parks staff worked alongside the EA to monitor Fletcher Moss Park during the EA's operation of Didsbury Flood Storage Reservoir. Capital schemes have been planned for remedial works at the high-impact flooding sites of Clayton Vale Park, Fletcher Moss Park, Fog Lane Park, James Saxon Open Space, and Wythenshawe Park. Capital works at a number of other parks have also been proposed, ranging from relaying or reinstating pathways or fencing to undertaking drainage improvements and stabilising watercourse banks.

7.2 Environment Agency

The Environment Agency operated the Sale Ees Flood Storage Reservoir at 02:45 on 1st January 2025. At 03:05 on 1st January 2025, the Didsbury Flood Storage Reservoir was operated. By 04:14 the inlet gates at Didsbury were 50% open, before being fully open by 05:00. At approximately 06:00 on 1st January 2025, a breach on the River Mersey embankment at Ford Lane resulted in uncontrolled inflows into the Didsbury Flood Storage Reservoir.

Figure 7. Drone photograph of the River Mersey embankment breach at Ford Lane, taken 03/01/2025.

Across Greater Manchester and Cheshire, all 7 of the Environment Agency's flood storage reservoirs were operated, which includes Leigh, two at Salford, and two at Chester, in addition to Didsbury and Sale. The Environment Agency estimated that 10,454 properties across Greater Manchester were protected from flooding by its flood defences and debris screen clearances.

In the immediate response after the event, the Environment Agency gathered data on the flooding, including photos and videos from communities, with Community Information Officers (CIOs) sent on site into affected communities.

In Didsbury, flood water from the Didsbury Flood Storage Reservoir was pumped back into the River Mersey. Rapid inspections of flood banks and flood risk assets were conducted, to fully understand what repair works were required. This included visual inspections as well as aerial surveys using drones. The River Mersey flood warning thresholds were reviewed as a result of the embankment failures.

From Monday 6th January 2025, the EA pumped water from Didsbury Flood Storage Reservoir, Didsbury Sports Ground and other nearby floodplains. Visual checks were undertaken of the damage to river banks to make preparations to repair these once water levels had receded. From Tuesday 21st January 2025, the EA began emergency works on the River Mersey to provide a temporary fix to sections of flood embankments which collapsed on New Year's Day. This included reinstating the storage capacity of the Didsbury Flood Storage Reservoir to maintain flood protection for the short-term. Saturated ground conditions required the use of a helicopter to place 1.4-tonne bags to provide the main part of the temporary repair structures. From 20th February 2025, the EA were working on repairs to both banks of the River Mersey. This required the closure of footpaths where Hollies Path meets Mersey Path (southbound) and at the back of Stenner Woods or an initial estimate of 6 months.

The EA has prepared plans for permanent repairs to the collapsed sections of banks along the River Mersey. In the Didsbury and Northenden areas, the programme for these repairs has been set to commence in Spring 2025 and be completed in Autumn 2025. The main 40m breach at Didsbury Sports Ground will be repaired using engineered earth, keyed into the existing structure. The gradient of the dry side-slope will be reduced, making the riverbank wider to provide greater strength against high flows. This will be extended upstream for approximately 400m to provide repairs to other scoured areas. A programme of repairs to the breach near to the Britannia Hotel in Didsbury was planned to commence in June 2025 and to be completed by September 2025. The EA tendered out a contract for embankment repairs at Northenden Golf Club and Rugby Club. Work started on the repairs to two sections of embankment at Northenden Golf Club in June 2025. Work to prepare the site compound at the rear of Didsbury Sports Ground also began in June 2025, with subsequent vegetation clearance along the embankment in mid-June. Repair works were scheduled in for July 2025, once the vegetation had been cleared and an access track had been established.

The work to fix the middle section of Northenden Weir was completed in late March 2025, and a further repair to another part of the weir that became damaged during the New Year 2025 event was completed in early April 2025. The temporary rock bags were removed and the Environment Agency continued to monitor the weir over the subsequent months.

The EA estimated that a total of 10,454 properties across Greater Manchester, Merseyside and Cheshire were protected from flooding by existing flood defences and by debris screen clearances. All of the EA's major flood risk management schemes were operated across Greater Manchester, Merseyside and Cheshire, providing flood risk management to over 50 communities.

CIOs visited the River Irk and Hendham Vale Industrial Park at Harpurhey and Crumpsall on 18th January 2025. Officers inspected flood damage and spoke with affected businesses to share guidance and gather information. CIOs attended properties in the Cambridge Street area of Deansgate on 19th January 2025, speaking to flooded businesses to share guidance and gather information.

The Environment Agency reviewed the flood warning thresholds at a number of locations in response to the New Year 2025 event. The river levels which trigger flood warnings to be issued were lowered in the locations shown in Table 8. This action has been undertaken to provide more lead time ahead of flooding, as in some cases the previous thresholds gave little or no warning ahead of property flooding experienced during the New Year 2025 event based on the anecdotal reports from property owners/occupiers. The Manchester Multi-Agency Flood Plan has been updated to reflect these changes to warning thresholds.

Table 8. Environment Agency flood warning thresholds reviewed in response to the New Year 2025 event.

Flood Warning Area Name	Gauge	Previous Threshold	New Threshold
Baguley and Fairywell Brooks at Timperley, Brooklands and Northern Moor	Northern Moor	1.52mASD	1.42mASD
River Irk at Vale Park Industrial Estate	Collyhurst Weir	1.50mASD	1.20mASD
River Medlock at Manchester City Centre	London Road	1.88mASD	1.77mASD

7.3 United Utilities

United Utilities received one reported flooding incident within the Manchester City Council boundary during the New Year event, relating to basement flooding of three commercial properties at Charles Street in Deansgate ward. United Utilities attended the site at approximately 12:00 on 1st January 2025 and conducted a CCTV survey on the main sewer, which identified no serviceability issues. A partial blockage was identified on a lateral drain serving a single property; however, it was concluded that this would not have caused flooding to all three properties.

United Utilities responded to a greater volume of sewer flooding reports in areas including Stockport and Urmston. These areas are outside of the Manchester City Council boundary and are therefore beyond the scope of this report.

7.4 National Highways

During the winter period, National Highways held twice-daily weather conference calls where required. Discussions over Met Office weather warnings were held during these calls in order to prepare. The Met Office issued a yellow warning for rain at 11:09 on 29th December 2024, which prompted National Highways to stand up flood patrols. The flood patrols focused on areas of the network where there were pre-existing issues with surface water and flooding, clearing drains in preparation for the event and attending reported flooding during the event to attempt to clear it.

The Met Office yellow warning for rain was upgraded to an amber warning for rain at 20:38 on 31st December 2024. National Highways reported that the Strategic Road Network in the North-West was already experiencing a significant impact from rainfall by this point and that they were reacting to the event accordingly. National Highways escalated to a 'Regional Response' in the North-West, which included coordinating a number of calls with subject matter experts within National Highways and their contractors to clear areas of flooding which were impacting the network. National Highways attended resilience conference calls where availability allowed.

After the New Year flooding event, National Highways undertook cyclic maintenance of all of its drainage assets on the M60 between junctions 18 and 1 from 10th January 2025 until 1st February 2025. National Highways investigated the flooding which occurred at the M60 junction 19 anti-clockwise entrance and have planned in remedial work to be completed in 2025/2026.

7.5 Other Stakeholders

7.5.1 Navigation Authorities

The Canal & River Trust monitored canal levels and lock/bypass flows via their SCADA (Supervisory Control and Data Acquisition) system. This automated system alerts staff at an initial 'High' level to warn that conditions are changing and that levels are rising above navigational limits. No physical action is generally taken at this stage, but additional remote monitoring will begin, and staff may attend site if there are particular concerns. A second 'High High' alarm alerts the team that conditions are continuing to deteriorate, prompting a check that the automated system is working correctly. Teams will then begin to visit site to check for any debris or blockages.

The Canal & River Trust confirmed that no SCADA alarm triggers were reached during the New Year 2025 event, and that the canal network operated by the Trust remained within operating limits throughout the event. The Trust also confirmed that they had not received any reports of damage to their assets.

The Bridgewater Canal Company opened all sluices on the Bridgewater Canal at 08:00 on 31st December 2024 in preparation for rising levels on the River Medlock and potential overflows into the canal. The Bridgewater Canal Company continuously monitored the level of the River Medlock and the canal level at New Year 2025. A sensor is operated at the overflow from the River Medlock to the Bridgewater Canal. An alarm provides approximately 0.625m of warning before overflows occur. This alerted the security firm who monitor the system at 23:00 on 31st December 2024. The alert was passed to the maintenance manager, who had already been monitoring levels and had ordered the opening of sluices to lower levels in the canal in anticipation of the event. The Bridgewater Canal Company subsequently opened all paddles at the lock at Pomona in response to the alert at 23:00 on 31st December 2024.

7.5.2 Infrastructure Providers

Ahead of the event, TfGM Operational Control Centre and Resilience Team received weather warnings from the Met Office and flood alerts/warnings from the EA, which were cascaded down the organisation. These alerts and warnings were shared with the Incident Management Team, which includes operational representatives as well as customer and communications teams, to provide early notification of potential impacts. TfGM uses the mapped flood warning areas to rate and prioritise areas for the potential impact of flooding on transport ahead of severe weather events.

The TfGM Operational Control Centre and the Strategic Manager on Call held communications with GMP at 00:19 on 1st January 2025. Upon the initial declaration of a major incident after 04:00, the Operational Control Room cascaded the message to transport operators (including National Highways, Network Rail, Metrolink and bus operators) in line with the Greater Manchester Multi-Agency Generic Response Plan. This major incident alert was automatically forwarded to the Resilience Team for awareness and to provide support and more detailed advice. During the event, the Operational Control Centre communicated regularly with all local authorities to understand where buses could safely run. The TfGM Incident Management Team was activated to coordinate the response internally and the Strategic Manager on Call attended the Tactical Coordination Group/Strategic Coordinating Group to support the multi-agency response. Modal representatives and the Operational Control Centre dialled into the conference calls held for Rail and Metrolink. Customers were updated via social media and on the TfGM website. Following the incident, TfGM undertook an internal learning session and attended a multi-agency debrief later in January.

In response to the New Year 2025 flooding upstream of the Baguley Brook culvert at Northern Moor, Keolis Amey Metrolink arranged for the Baguley Brook to be maintained, with debris removed and vegetation cut back in April 2025. Keolis Amey Metrolink have now established an enhanced 3-monthly culvert and trash screen monitoring regime. This is in addition to annual detailed structure examinations of the culvert. Keolis Amey Metrolink have been advised to integrate the Environment Agency's flood warnings and the river level gauge for the Baguley Brook at Northern Moor into proactive management of the culvert and screen ahead of severe weather events.

Heavy rainfall throughout New Year's Eve resulted in localised flooding affecting parts the Electricity North West Ltd (ENWL) network, primarily in Greater Manchester. Flood water damaged electricity distribution network assets in Tameside, Stockport, Didsbury and Wigan, resulting in loss of supply to a total of 631 customers. Of these customers, 581 remained off supply for more than 24-hours, as repair crews waited for the flood water to subside and affected sites were declared safe. ENWL stated that all supplies were restored within 48-hours. ENWL conducts flood risk assessments and invests in flood mitigation measures for its assets, including at all Grid and Primary substations. The sites affected by flooding during this event are therefore being assessed as part of this work. Where identified as appropriate, flood mitigation measures will be added to the ongoing and future investment programmes of ENWL.

7.5.3 Emergency Services

Following the Tactical Co-ordinating Group at 04:00 on Wednesday 1st January 2025, a major incident was declared in Greater Manchester. A Strategic Coordinating Group (SCG) was set up, chaired by Greater Manchester Fire and Rescue Service (GMFRS), to co-ordinate the response of Category 1 and 2 responding organisations. A Tactical Co-ordinating Group (TCG) was also set up to support the SCG in co-ordinating the tactical response to the flooding incidents. 445 people were evacuated from the Britannia Hotel in Didsbury after flooding cut off power and water supplies. The flood water was hazardous due to contaminants and its speed of flow, so people were evacuated using powered inflatable boats. Approximately 50 additional properties were evacuated in Didsbury through the course of the afternoon and evening of 1st January 2025. At Lancaster Works in Harpurhey, around 100 people who had been attending a New Year's Eve event became stranded due to rising floodwaters. They were walked to safety by GMFRS once the water had subsided. GMFRS attended over 100 separate incidents during the event across Greater Manchester[14]. Mountain Search and Rescue also supplied additional boats to GMFRS to support the evacuation of flooded premises across Greater Manchester.

[14] Flooding response moves from rescue to recovery as major incident stood down - Greater Manchester Fire Rescue Service

8. Conclusions

Property Flooding

Internal flooding was reported at a total of 60 residential properties and 29 commercial properties in Manchester during the New Year 2025 event. External only property flooding was reported at an additional 53 residential properties and 9 commercial properties. It is likely that additional properties were flooded during this event but were not reported to the City Council or other RMAs.

Hydrological Summary

The river levels recorded at the Baguley Brook (at Northern Moor) and the River Mersey (at Northenden, Brinksway, and Didsbury) during the New Year 2025 event exceeded the previous record high levels. The river level of the River Medlock during the New Year event reached just under the previous highest recorded level at London Road (under by 0.062m) and Gurney Street (under by 0.147m).

Provisional rainfall analysis conducted by JBA Consulting concluded that the magnitude of the New Year 2025 event has a 1% - 2% probability of occurring in a given year.

Flooding Sources

Based on the flooding reports received, the highest numbers of properties affected by flooding were in the Didsbury and Northenden areas, relating to flooding from the River Mersey. Main River flooding also impacted properties in the Northern Moor area (Baguley Brook), Harpurhey and Crumpsall (River Irk), Deansgate (River Medlock). The sources of flooding in the Castlefield Basin area of Deansgate involved overflowing of the River Medlock into the Bridgewater Canal, with the canal then exceeding its capacity and flooding properties.

Ordinary watercourses were the primary source of property flooding in other areas, including:

- The Brownley Brook in the Royalthorn Road area of Wythenshawe.
- The Orchard Road Drain in Northenden.
- The Fog Lane Brook around Fog Lane Park in East Didsbury (in addition to surface water).
- The culverted Ball Brook in East Didsbury.

Limited reports of sewer flooding were received by United Utilities during the New Year 2025 event. Further incidences of sewer flooding may have occurred across the Manchester area, but these may not have been reported.

River Mersey breaches

It is considered unlikely that the River Mersey embankment breaches resulted in exacerbated flooding in the wider Didsbury and Northenden areas outside of the Didsbury Flood Storage Reservoir. However, uncontrolled flows through the breach into

the storage reservoir did result in peak levels reaching a higher level than the normal maximum level within the storage reservoir, impacting properties within the flood storage reservoir and also resulting in an overtopping of the gate at Stenner Lane.

Dredging/de-silting

Dredging and de-silting have historically been undertaken in the UK to drain land, maintain flows to mills, abstract sand or gravel or to improve navigation, in addition to attempt to prevent flooding. However, dredging increases the velocity of water in a particular area and has sometimes resulted in increased flooding and erosion downstream, as water subsequently travels downstream faster and in greater volume. Natural river processes often mean that silt is re-deposited in these areas in a matter of weeks after dredging or de-silting is carried out, meaning that any increase in channel capacity is generally short-lived. The process dislodges and destroys fine gravel and sediment, removing important habitats and releasing settled pollutants. Dredging is therefore becoming an increasingly less appropriate form of river management.

Gullies & Highway Drainage

Blocked gullies and highway drainage are not considered to be a key contributing factor in the New Year 2025 flood event. While blocked gullies may contribute to localised flooding, exceptionally heavy rainfall events (such as the one experience at New Year 2025) will overwhelm the capacity of even a fully clear highway drainage system. Historic highway drainage design may not have accounted for future climate change and the associated increases in rainfall intensity. Highway drainage is not designed to collect and drain flood water from rivers.

Furthermore, exceptionally high water levels within main rivers (including the River Mersey, River Medlock, River Irk, Baguley Brook) and ordinary watercourses likely resulted in surcharging of sewer systems and highway drainage. Where watercourse levels rise above outfalls, this restricts the efficiency of drainage and contributes to surface water accumulating on public highways.

Flood Warning System

Of the 89 properties where internal property flooding was reported, 67 were located within Environment Agency flood warning areas.

In several areas, the existing EA flood warning thresholds did not provide sufficient warning ahead of property flooding occurring. The flood warning issued at ‘Baguley and Fairywell Brooks at Timperley, Brooklands and Northern Moor’ came several hours after reported property flooding from the Baguley Brook. The flood warning issued at ‘River Irk at Vale Park Industrial Estate’ also came several hours after flooding from the River Irk reportedly occurred at several industrial properties.

In the ‘River Mersey at East Didsbury, from Tuscan Road to Wilmslow Road’ and the ‘River Mersey at Northenden’ areas, flood warnings were not triggered during the New Year 2025

event, yet property flooding was reported in these areas. These areas would have received warnings based on the original larger flood warning areas, before they were divided after Storm Christoph (January 2021) and Storm Franklin (February 2022).

Social Impacts

Of the respondents to the public consultation who were affected by flooding, 43.5% stated that they had experienced impacts on mental health as a result of the New Year 2025 event. Where people have been directly impacted, families are often displaced, can be left without work and income, and the process of dealing with insurance companies and loss adjusters is often stressful and disruptive. Even where people may have been able to remain or return to their property, they may be subject to ongoing anxiety and hypervigilance, particularly during subsequent storms and heavy rainfall.

Financial Impacts

It is difficult to accurately represent the total financial implications of a large-scale flood event. Impacts at individual household or business level will have been profound, particularly for properties not insured against flooding. In Didsbury and Northenden, the consequences of flooding and resulting business disruption was estimated to be in excess of £1-2million. One hotel in Deansgate estimated that their total costs (including repairs, upgrading of property flood resilience measures, and insurance increases) would be in the region £3.5million. A Deansgate nightclub estimated a £40,000 cost for repairs and a lost revenue of around £80,000. Two businesses flooded by the River Irk in Harpurhey/Crumpsall estimated a combined total of £218,000 in damage and lost earnings. Network Rail reported an approximate total cost of £760,000 related to the January 2025 flooding across its North-West England routes.

Insurance

22.9% of respondents to the public consultation stated that they were either uninsured or their insurance did not cover flooding, while 42.9% did not know whether their insurance covered flooding. Many businesses impacted in Manchester did not have adequate insurance given their location within or near to Flood Zone 3 or 2, often struggling to get insurance in these high-risk areas. The Flood Re Scheme[15] aims to make flood insurance more affordable for householders, but there is no scheme to help businesses to access insurance. Businesses located within Didsbury Flood Storage Reservoir have often been unable to access any flood insurance.

Level of Preparedness

61.1% of respondents to the public consultation stated that they were 'Not at all' prepared for the flood event at New Year 2025. Of the properties where internal flooding was reported, 74% of these locations were within areas covered by EA flood warning zones. It is vital that people are aware of their own flood risk, sign up to EA flood warnings, prepare household flooding/emergency plans and consider the installation of property flood resilience measures. The frequency of intense rainfall events is likely to continue to

[15] Flood Re - A flood re-insurance scheme

increase and preparedness for flooding is a key tool to improving resilience. RMAs should work together to help people and businesses become better prepared for flooding in the future.

Multi-Agency Flood Response

It was reported that there was confusion between agencies regarding the declaration of a major incident. The progression from warning arrangements into command structures happened rapidly on New Year's Eve, which made the establishment of preparatory structures challenging. Similarly, the daily Flood Guidance Statement (FGS, see Appendix V) forecast remained as 'Low flood risk' (yellow) for the Manchester area and did not reach medium (orange) or red (high) before, during or after the New Year 2025 event. This presented challenges for agencies to effectively prepare for flooding.

The Greater Manchester Resilience Forum commissioned a multi-agency structured debrief, and published an internal report detailing recommendations that will be taken forward to improve future emergency response in Greater Manchester. It is important that the recommendations identified from the New Year 2025 flooding event are embedded into Greater Manchester Resilience Forum protocols ahead of future events.

Riparian Landowners

Watercourses naturally flood in response to periods of heavy rainfall and during extreme events. However, riparian landowners have a vital role in maintaining watercourses, culverts and trash screens to ensure that they are able to flow at full capacity. This may not prevent flooding during events such as New Year 2025 but can reduce the risk. Fly-tipping into watercourses causes obstruction to flow and can increase the risk of flooding. Manchester City Council does not own watercourses, other than those extents which flow through council-owned land. Manchester City Council is therefore only responsible for maintaining watercourses within its own land or assets (such as trash screens) it owns.

It is also important that riparian landowners do not undertake any works on watercourses without prior consent. For main rivers (including culverts), this consent is required from the Environment Agency via a Flood Risk Activity Permit. For ordinary watercourses (including culverts), this consent is required from Manchester City Council as the Lead Local Flood Authority.

9. Recommendations/Proposed Actions

9.1 Manchester City Council

9.1.1 Lead Local Flood Authority

Issue	What we have done up to now	Proposed Actions	Timescale
Flood Risk Management in Manchester and the challenges of Climate Change & increasing rainfall intensity.	▪ Developed, implemented, and monitored a Local Flood Risk Management Strategy (LFRMS), published in 2014. ▪ Gathered data on the locations, impacts and sources of flooding across Manchester at New Year 2025.	▪ Update the LFRMS Action Plan based on findings from the New Year 2025 event. ▪ Explore opportunities for funding applications for flood risk management schemes/projects in Manchester.	July 2026
River Mersey flooding in Didsbury & Northenden	▪ Attended Multi-Agency Community Drop-in sessions in Didsbury & Northenden to provide information and advice, and for residents to speak to organisations involved in managing flood risk.	▪ Continue engagement with the Environment Agency, feeding into the long-term Flood Risk Management Strategy for the River Mersey.	December 2027

Issue	What we have done up to now	Proposed Actions	Timescale
Baguley Brook flooding in Brooklands	▪ Engaged with KAM/Metrolink regarding the maintenance regime for the trash screen/culvert at Northern Moor, and the EA regarding flood warning levels. ▪ KAM/Metrolink undertook maintenance of the Baguley Brook following the New Year 2025 event for 40m upstream and downstream of the Bordley Walk culvert and maintained the trash screen. ▪ KAM/Metrolink have established an enhanced 3-monthly culvert monitoring regime.	▪ To provide feedback on the new maintenance regime & continue engaging with Metrolink to ensure that this is implemented and assess its effectiveness. ▪ To provide recommendations to KAM/Metrolink on improved proactive maintenance of the trash screen ahead of severe weather events, including integrating EA flood alerts/warnings and gauge data into operations.	September 2025
Brownley Brook flooding in Northenden/Wythenshawe	▪ Engaged with the EA to provide flood reporting data and discuss flooding reported in this area. ▪ Engaged with Wythenshawe Community Housing Group regarding the maintenance regime on the Brownley Brook.	▪ Alongside the EA, review the flooding data and the viability of extending existing Flood Warning Area(s) to include the area along the Brownley Brook. This will depend on the mechanism of flooding – whether backing up from the culvert to the downstream, Baguley Brook, or directly from the ordinary watercourse. ▪ Consider engagement with riparian landowners along the Brownley Brook.	January 2026

Issue	What we have done up to now	Proposed Actions	Timescale
		Assess the condition of sections of the watercourse beneath public highways.	
River Irk flooding in Harpurhey & Crumpsall	▪ Engaged with the EA to provide flood reporting data and discuss flooding reported in this area.	▪ Discuss the feasibility and benefits of an additional river level gauge closer to Hendham Vale/Vale Park Industrial Estates and Lancaster Works with the EA.	January 2026
River Medlock/Bridgewater Canal flooding in Deansgate	▪ Engaged with the EA to provide flood reporting data and discuss flooding reported in this area.	▪ Discuss the feasibility of extending the flood warning area to include the Liverpool Road/Potato Wharf area with the EA.	January 2026
Fog Lane Brook flooding at Fog Lane Park	▪ MCC Parks inspected the park daily, placing signage while flooding remained. Residual water was pumped out from the ditch, gullies in the park were jetted and paths swept. ▪ A contractor has been appointed for drainage improvement works in Fog Lane Park, mainly focused on the Brooklawn Road trench.	▪ Support MCC Parks in the delivery of drainage improvement works in Fog Lane Park and monitor the effectiveness of the scheme.	January 2026
Inappropriate development above culverted watercourses.	▪ The LLFA does not accept build-overs on culverted watercourses as part of planning applications. Further investigation requirements and easements are mandated where culverted watercourses exist on site.	▪ Improve internal processes and communication at MCC in preparation for incidences where previously unidentified culverts are uncovered on site, in conjunction with Building Control.	January 2026

Issue	What we have done up to now	Proposed Actions	Timescale
Preparedness for Flooding	▪ Engaged with MCC Highways regarding their lessons learned exercise into the New Year 2025 flooding. ▪ Sought feedback from Customer Service teams who were on duty during the New Year 2025 event. ▪ Gathered data on how prepared people felt ahead of the event, during the public consultation.	▪ Work with MCC Highways, Network Management and Civil Contingencies to identify improvements in communication and warnings to prepare ahead of large-scale events. ▪ Work alongside Comms teams and Customer Service teams to more effectively provide information during flooding events. ▪ Undertake a public awareness campaign to improve people's preparedness for flooding. ▪ Explore the feasibility of funding opportunities for Property Flood Resilience schemes.	July 2026
Vulnerable groups located within Flood Zone 3/3b.	▪ MCC Homelessness & Migration teams have close working relationships with registered providers and assisted with re-housing into alternative accommodation during the New Year 2025 event.	▪ Identify any further vulnerable groups housed in temporary accommodation within Flood Zone 3/3b & discuss these with Serco/Home Office. Provide guidance for flooding preparedness.	January 2026

Issue	What we have done up to now	Proposed Actions	Timescale
Existing and proposed development in areas at high risk of flooding.	▪ Respond to planning applications in line with the National Planning Policy Framework, which aims to avoid inappropriate development in areas at risk of flooding by directing development away from areas at highest risk.	▪ Review the process for assessing planning applications in areas affected by flooding at New Year 2025, alongside the LPA and EA.	January 2026

9.1.2 Local Highways Authority

Issue	What we have done up to now	Proposed Actions	Timescale
Widespread reported flooding on the public highway across Manchester.	▪ Commissioned a lessons learned exercise into the New Year 2025 flooding event to identify any lessons learned or recommendations.	▪ To feedback lessons learned to the LLFA and internally at MCC. ▪ To implement any identified recommendations in the future management of flooding incidents.	Ongoing
Preparedness for Flooding	▪ Commissioned a lessons learned exercise into the New Year 2025 flooding event to identify any lessons learned or recommendations.	▪ Work with the LLFA, Network Management and Civil Contingencies to identify improvements in communication and warnings to prepare ahead of large-scale events.	January 2026
Highway Drainage in Manchester & the challenges of Climate Change & increasing rainfall intensity.	▪ Responded to highway flooding reports as they were received during the New Year 2025 event.	▪ Consider risk-based inspections of highway gullies/drainage in areas frequently affected by flooding.	January 2026

9.2 Environment Agency

Issue	What we have done up to now	Proposed Actions	Timescale
River Mersey flooding in Didsbury & Northenden	▪ Inspected assets & embankments along the River Mersey, surveying all breaches and undertaking emergency/temporary works.	Complete permanent repair works at: ▪ Rugby club (Didsbury sports ground) ▪ Northenden Golf Club ▪ Britannia Hotel	December 2025
River Mersey flooding in Didsbury & Northenden	▪ Initiation, Planning & Procurement stages for a review of the Environment Agency maintained Flood Risk Management assets along the River Mersey.	**Stage 1** ▪ Hydraulic model & hydrology development & update. ▪ Detailed asset assessment. ▪ Environmental Impacts review.	December 2026
River Mersey flooding in Didsbury & Northenden	▪ Stage 1 ongoing until December 2026.	**Stage 2** ▪ Produce a long-term Flood Risk Management Strategy for the River Mersey.	December 2027
River Mersey flooding in Didsbury & Northenden	▪ Arranged Multi-Agency Community Drop-in sessions in Didsbury & Northenden to provide information and advice, and for residents to speak to organisations involved in managing flood risk.	▪ Continue to engage & update the communities in Didsbury & Northenden regarding works on the River Mersey.	Ongoing
River Mersey flooding in Didsbury & Northenden	▪ Investigated the cause (River Mersey embankment breaches) of higher water levels within Didsbury Flood Storage Reservoir which resulted in internal property flooding at several businesses and overtopping of the gate at Stenner Lane.	▪ Improve communication with businesses within the Didsbury Flood Storage Reservoir.	January 2026

Issue	What we have done up to now	Proposed Actions	Timescale
River Mersey flooding in East Didsbury	▪ Reviewed the flood warning areas for Didsbury and Northenden in 2021/2022 and divided these into 5 smaller areas, for more targeted flood warnings.	▪ Review the warning threshold for the 'River Mersey at East Didsbury, from Tuscan Road to Wilmslow Road' area.	January 2026
River Mersey & Orchard Road Drain flooding in Northenden	▪ Reviewed the flood warning areas for Didsbury and Northenden in 2021/2022 and divided these into 5 smaller areas, for more targeted flood warnings.	▪ Review the warning threshold for the 'River Mersey at Northenden' area, including Ford Lane and Orchard Road West areas.	January 2026
Baguley Brook flooding in Brooklands	▪ The flood warning threshold for Northern Moor has been lowered from 1.52mASD to 1.42mASD (effective from 26/03/2025).	▪ Monitor the adjusted flood warning threshold & assess how effective this is.	January 2026
Brownley Brook flooding in Northenden/Wythenshawe	▪ Engaged with the LLFA on flooding reported in this area.	▪ Alongside the LLFA, review the flooding data and the viability of extending existing Flood Warning Area(s) to include the area along the Brownley Brook.	January 2026
River Irk flooding in Harpurhey & Crumpsall	▪ The flood warning threshold for Vale Park Industrial Estate has been lowered from 1.50mASD to 1.20mASD (effective from 26/03/2025).	▪ Monitor the adjusted flood warning threshold & assess how effective this is. ▪ Assess the feasibility and benefits of an additional river level gauge closer to Hendham Vale/Vale Park Industrial Estates and Lancaster Works.	January 2026
River Medlock/Bridgewater Canal flooding in Deansgate	▪ The flood warning threshold has been lowered from 1.88mASD to 1.77mASD (effective from 26/03/2025).	▪ Monitor the adjusted flood warning threshold & assess how effective this is.	January 2026

Issue	What we have done up to now	Proposed Actions	Timescale
	▪ The flood warning area covering the Cambridge Street and Deansgate areas was updated in 2022. This was not extended to the Liverpool Road area, as modelling indicated that risk was primarily from the canal.	▪ Assess the feasibility of extending the flood warning area to include the Liverpool Road/Potato Wharf area. ▪ To engage with Peel/Bridgewater Canal Company to discuss interaction between the River Medlock and Bridgewater Canal and the feasibility of any flood risk management measures.	
Outdated National Flood Warning System	▪ A new flood warning service is being trialled before a wider public launch in late Summer 2025. The current flood warning service for England has run for almost 30 years and provides over 1.6 million people with real-time flood warnings and alerts. ▪ Introduced a new system to issue the flood warnings and a new online interface for people to register in October 2025.	▪ Monitor and continue to promote the uptake of the new Flood Warning System and communicate any changes to the public.	Ongoing
Preparedness for Flooding	▪ Established flood warning areas in Manchester. Previous and ongoing reviews into the effectiveness of warning thresholds and the boundaries of these areas. Promotion of the flood warning system to the public.	▪ To continue to promote the uptake of the new Flood Warning System and communicate any changes to the public. ▪ Undertake a public awareness campaign to improve people's preparedness for flooding.	Ongoing

9.3 United Utilities

Issue	What we have done up to now	Proposed Actions	Timescale
Public sewers in flooded roads potentially requiring remedial action as a result of siltation from fluvial flooding.	▪ Responded to sewer flooding reports received during the New Year 2025 event.	▪ Consider inspecting the condition of public surface water & combined sewers in roads where properties were internally flooded in Manchester.	January 2026
Climate Change & increasing rainfall intensity.	▪ Announced the pilot of the Sustainable Water Fund, to support schemes which reduce the amount of rainwater entering the sewer network (via SuDS or NFM).	▪ To work alongside MCC to identify opportunities for nature-based solutions to improve the city's resilience to flooding from the impacts of climate change.	July 2026
Surcharging of combined sewers from the River Medlock at Charles St/Princess St in Deansgate.	▪ CCTV survey was carried out and no issues were identified on the main sewer. Provisional analysis suggests that a 3.0m rise in the river level would have caused approximately a 0.7m level of surcharge in the main sewer.	▪ Consider surveying the Charles St CSO outfall into the culverted River Medlock and assess the feasibility of any preventative measures.	January 2026

9.4 National Highways

Issue	What we have done up to now	Proposed Actions	Timescale
Flooding of the M60 junction 19 anti-clockwise entrance.	▪ Investigated the flooding which occurred at the M60 junction 19 anti-clockwise entrance.	▪ To undertake remedial works at the M60 junction 19 anti-clockwise entrance.	April 2026
National Highways drainage and the challenges of Climate Change & increasing rainfall intensity.	▪ Published an Environmental Sustainability Strategy, with a vision set out to 2050.	▪ To develop further plans to manage flood risk and improve flood resilience across its network, maximising the use of nature-based solutions.	Ongoing

10. Status of Report & Disclaimer

This report has been prepared pursuant to the Council's statutory responsibility, under the FWMA, to investigate flood incidents in its area. The statutory duty to investigate is not absolute or exhaustive. Under Section 19 of FWMA, the Council's statutory responsibility is limited to conducting investigations only to the extent the Council deems it necessary.

Where the Council deems it necessary to investigate, it is required to address two questions under 19(1) of the FWMA:

- Firstly, the Council is required to identify relevant "Risk Management Authorities" (As defined by Section 6(13) of FWMA).

- Secondly the Council is required to investigate whether the Risk Management Authorities have exercised, or are proposing to exercise, flood risk management functions set out under Section 4 of FWMA.

The relevant flood risk management authorities identified by the Council are defined in this report. The flood risk management functions which the Risk Management Authorities are proposing are also described in the body of this report.

Beyond discharging the specific statutory responsibilities under Section 19(1) of FWMA, the intended purpose of this report is solely as a resource to assist Risk Management Authorities and stakeholders to better understand the relevant flooding incident and to mitigate risks going forward.

Although the Council has commented upon contextual issues related to the flood event, it is not the purpose of this report to determine any private rights arising from the flood event.

Nor is the purpose of this report to reach conclusions as to whether any Risk Management Authority or other stakeholder (e.g., private landowners, public bodies, or government agencies) has breached any duty of care (whether statutory or common law) that they may have held.

The Council has, in good faith, sought to locate and collate relevant primary and secondary evidence to prepare this report. The conclusions and findings contained in the report are based on a subjective evaluation of the information available at the time of the investigation. However, the Council does not guarantee that the contents will always be current, accurate or complete, and the Council accepts no responsibility for assumptions or statements made in the report which are based on evidence which is incomplete, inaccurate or both. As such, this report should not be considered as a definitive assessment of all factors that may have triggered or contributed to the flood event.

The Council expressly denies responsibility for any error, omission, or negligent misstatement in this report to the fullest extent permissible in law. Further the Council

does not accept any liability for the use of this report or its contents by any third party. Where any party wishes to assert any rights or cause of action related to the flooding event they are requested to rely on their own investigations.

10.1 Mapping

The maps included in this report are reproduced from Ordnance Survey material with the permission of OS on behalf of His Majesty's Stationery office © Crown copyright and database rights 2025. Ordnance Survey AC0000812035.

11. Glossary

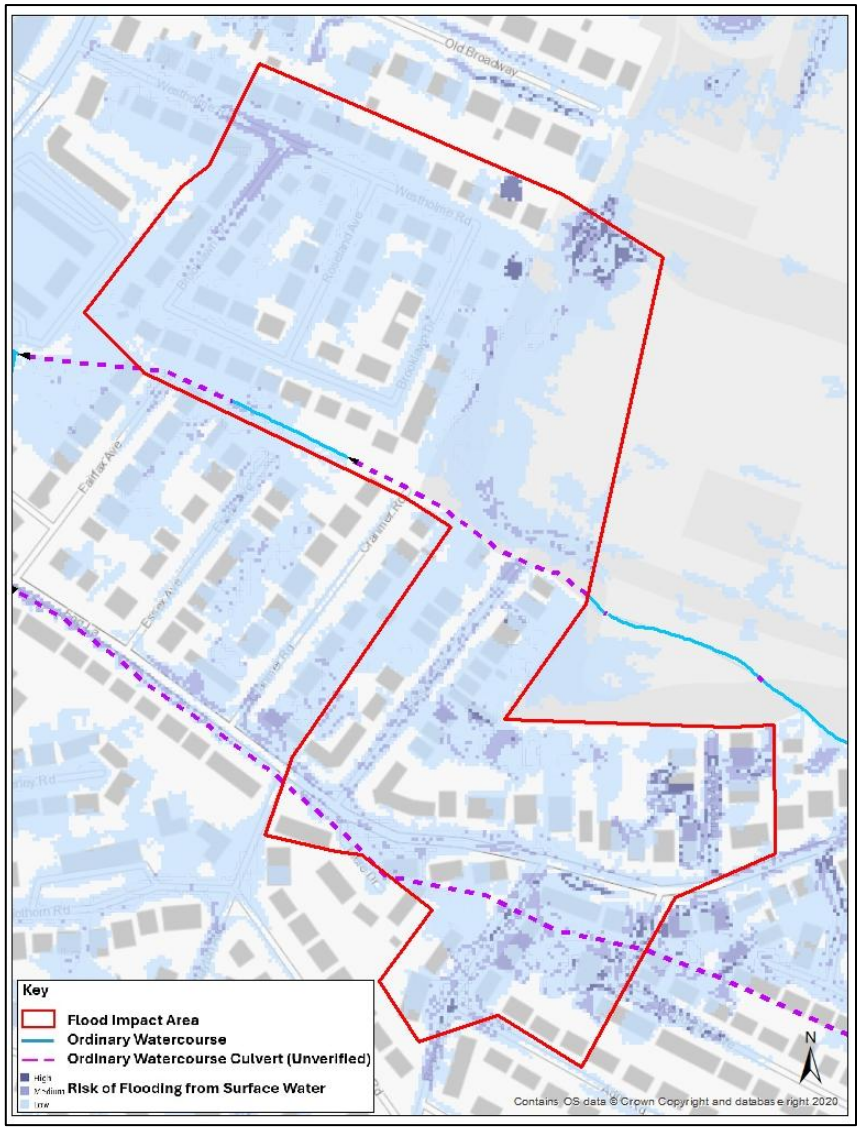
AEP	Annual Exceedance Probability. The probability (as a %) of a flood event of a certain magnitude occurring in any given year.
Canal	Artificial (human-made) waterways mostly constructed during the early part of the Industrial Revolution to allow the passage of boats or ships inland or to convey water for irrigation.
Category 1 Responder	Organisations at the core of the response to most emergencies (the emergency services, local authorities, NHS bodies).
Category 2 Responder	Organisations (such as the Health and Safety Executive, transport and utility companies) who are 'co-operating bodies'.
CRT	Canal & River Trust.
Culvert	An underground pipe or channel structure used to carry main rivers or ordinary watercourses beneath roads, structures, or urban areas.
EA	Environment Agency.
FAS	Flood Advisory Service. A meeting convened by the Met Office/EA when a Flood Guidance Statement indicates an amber or red alert.
FFC	Flood Forecasting Centre. A partnership between the Environment Agency and Met Office.
FGS	Flood Guidance Statement. A daily summary of flood risk for the next 5 days, published by the FFC & the EA.

Flood Alert	A flood alert means that flooding is possible so you should prepare now.
Flood Warning	A flood warning means that flooding is expected so you should act now.
Flood Zone 1	The likelihood of an area flooding from main rivers or the sea. An estimated an annual probability of <0.1%. Development is normally acceptable within these areas.
Flood Zone 2	The likelihood of an area flooding from main rivers or the sea. An estimated annual probability of between 0.1% - 1%.
Flood Zone 3	The likelihood of an area flooding from main rivers or the sea. An estimated annual probability of between 3.33% - 1%.
Flood Zone 3b	The likelihood of an area flooding from main rivers or the sea. Also known as functional flood plain. An estimated annual probability of greater than 3.33% (within which most development is unacceptable).
Fluvial Flooding	Where a Main River or Ordinary Watercourse overtops and overflows.
FWMA	Flood & Water Management Act (2010).
Groundwater	All water which is below the surface of the ground and in direct contact with the ground or subsoil.
Highway Drainage	Gullies, drainage channels and other features which collect and drain rainfall which falls onto the highway.
LiDAR	Light Detection and Ranging. A remote sensing method to obtain accurate ground elevation data.
LLFA	Lead Local Flood Authority.
Main River	Usually larger watercourses which are designated as a 'main river' on the Environment Agency's (EA) Main River Map.
mAOD	Meters above Ordnance Datum. Height measurements relative to average sea level. This is called 'ordnance datum'.
mASD	Meters above stage datum. Height measured relative to a fixed point on or close to the riverbed (local datum).
Met Office	The national meteorological service for the UK. Provides weather and climate-related services to the government, businesses, emergency responders and the public.
Ordinary Watercourse	Generally, any watercourse that is not a Main River, is considered an Ordinary Watercourse.

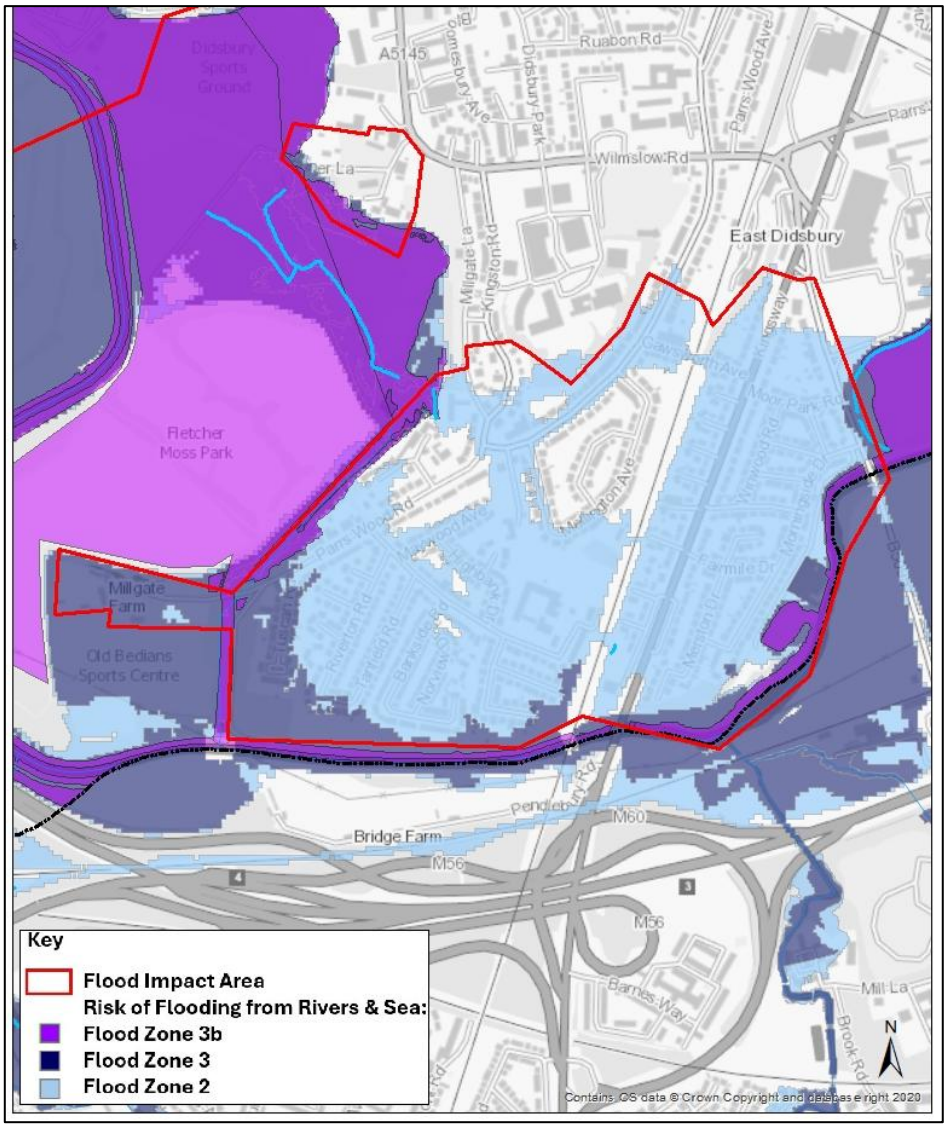
Property Flood Resilience	Measures which can help reduce the impact and damage caused in the event of a flood. Either ‘resistance’ (aim to prevent water entry) or ‘’recoverability’ (reduce impact/damage when floodwater enters a property).
Return Period	Statistical analysis to estimate the frequency at which an event of a certain magnitude is likely to occur (e.g. ‘1 in 2-year’ or ‘1 in 100-year’). A ‘1 in 100-year’ event can occur multiple times within a 100-year period and, with each new flood event that occurs, the return period for a particular magnitude of event can change. A better way to communicate risk is the Annual Exceedance Probability (AEP) which is expressed as a percentage chance of occurrence.
Riparian Landowner	Any person/business/organisation who owns a stretch of a watercourse.
RMA	Risk Management Authority.
Severe Flood Warning	A severe flood warning means that flooding could cause danger to life and significant disruption to communities. You must act now.
Surface Water Flooding	Also known as pluvial flooding. Where water cannot soak into the land or flow into drains so flows over the surface instead.
UU	United Utilities.

Appendix I – Maps of Fluvial/Surface Water Flood Risk in Flooding Locations

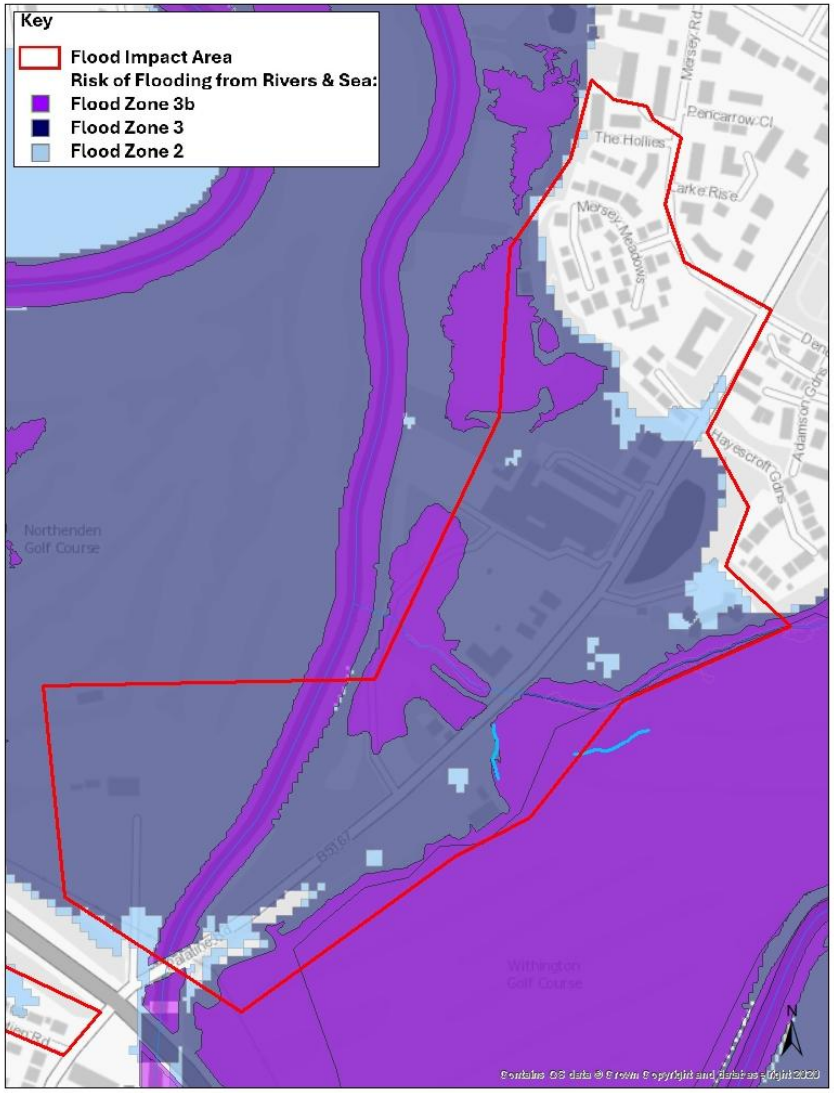
Surface Water flood risk mapping for the areas affected by flooding surrounding Fog Lane Park, East Didsbury.



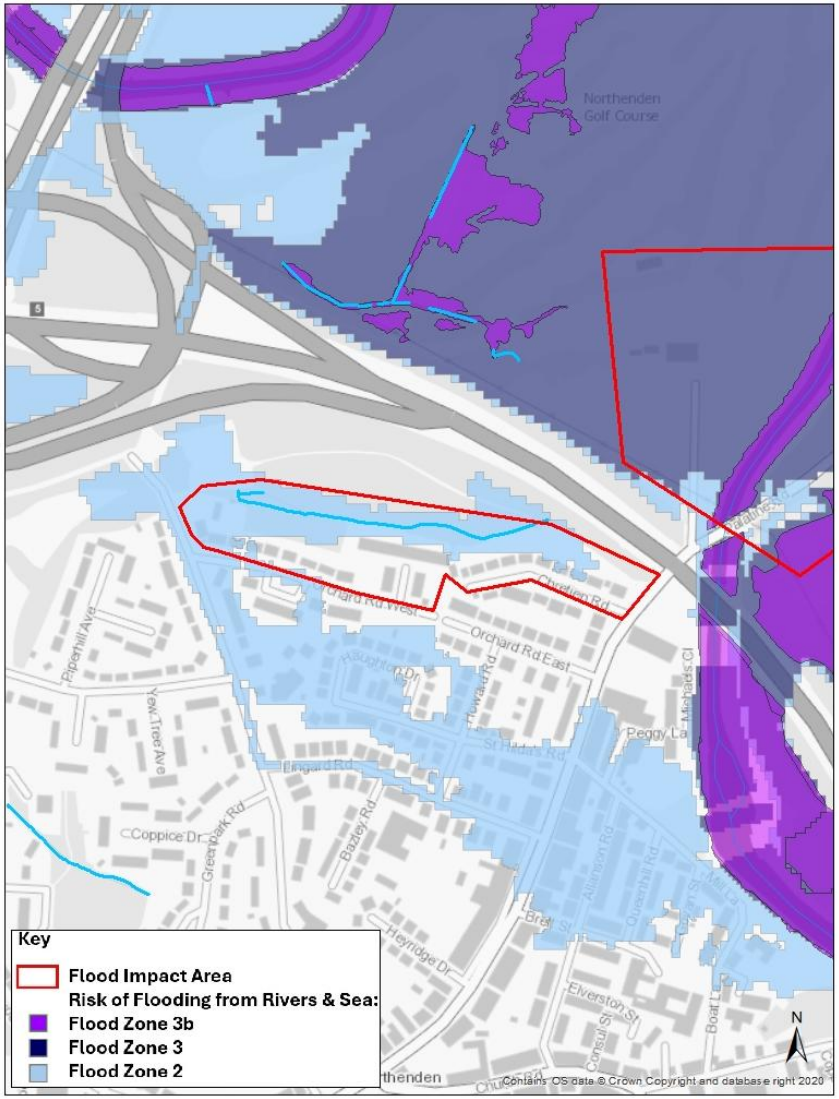
Fluvial flood risk mapping for the areas affected by flooding in the Stenner Lane and Parrs Wood areas, East Didsbury.



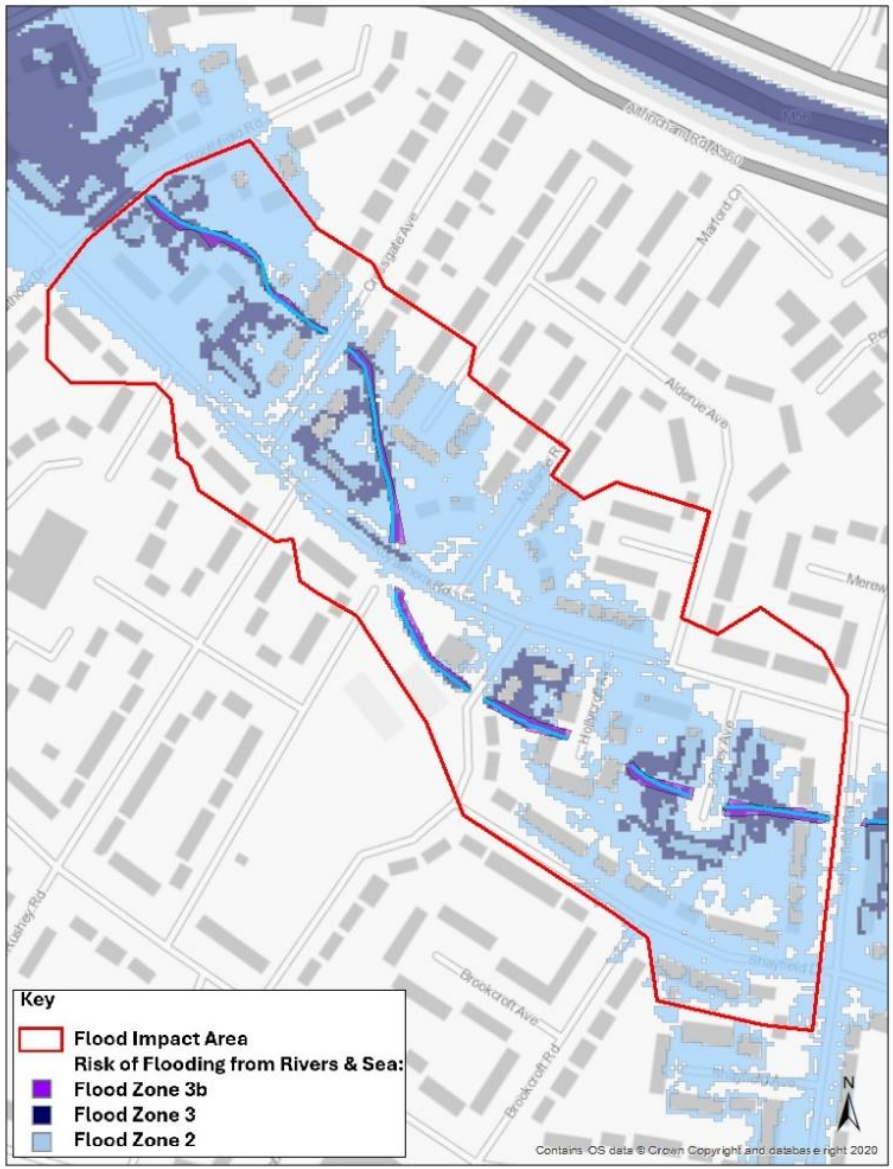
Fluvial flood risk mapping for the areas affected by flooding in the Palatine Road area of West Didsbury.



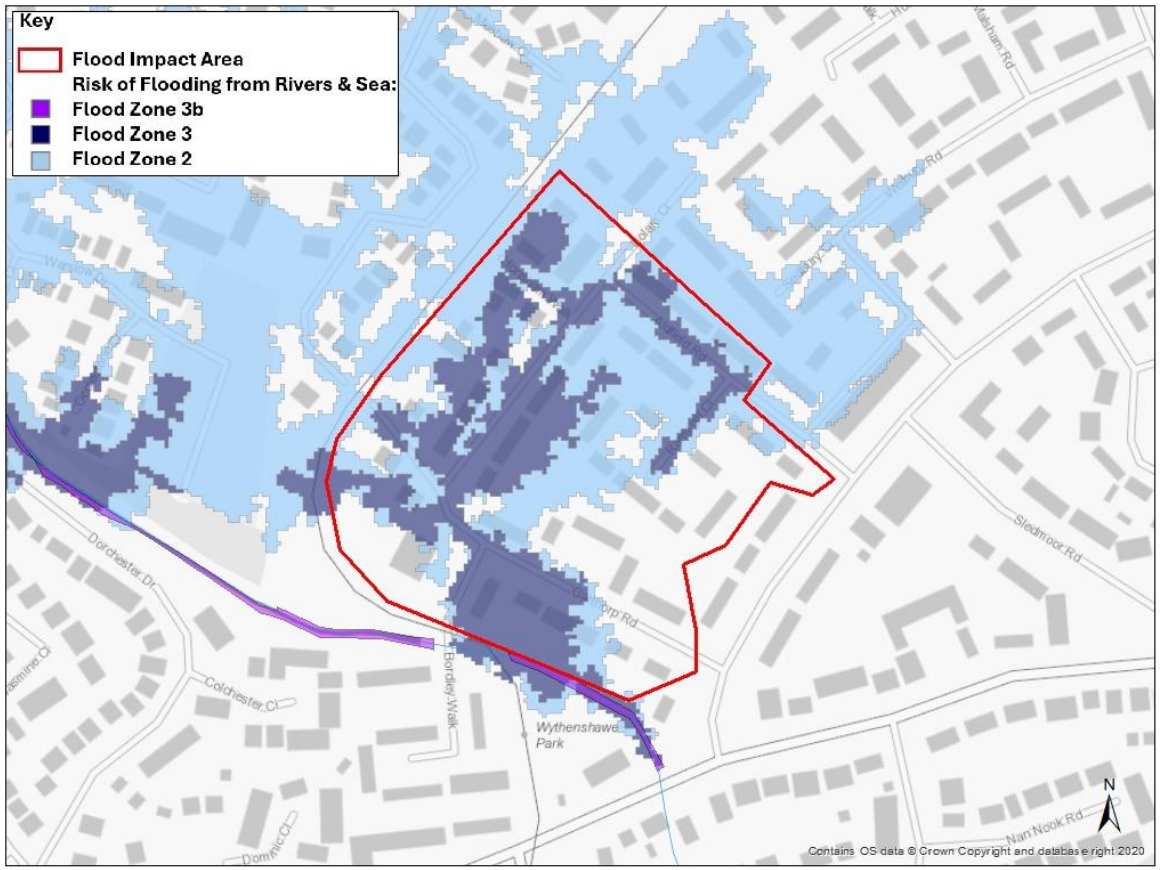
Fluvial flood risk mapping for the areas affected by flooding surrounding the Orchard Road Drain area in Northenden.



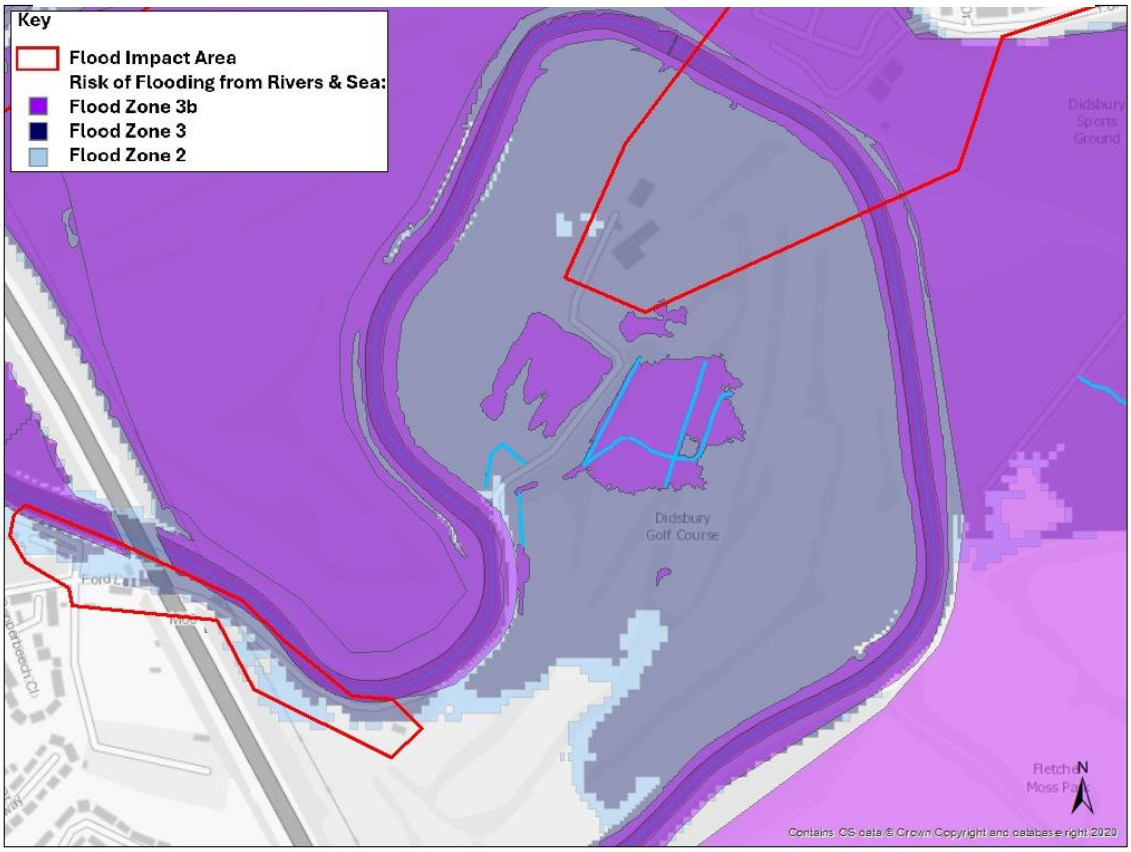
Fluvial flood risk mapping for the areas affected by flooding along the Brownley Brook in Wythenshawe.



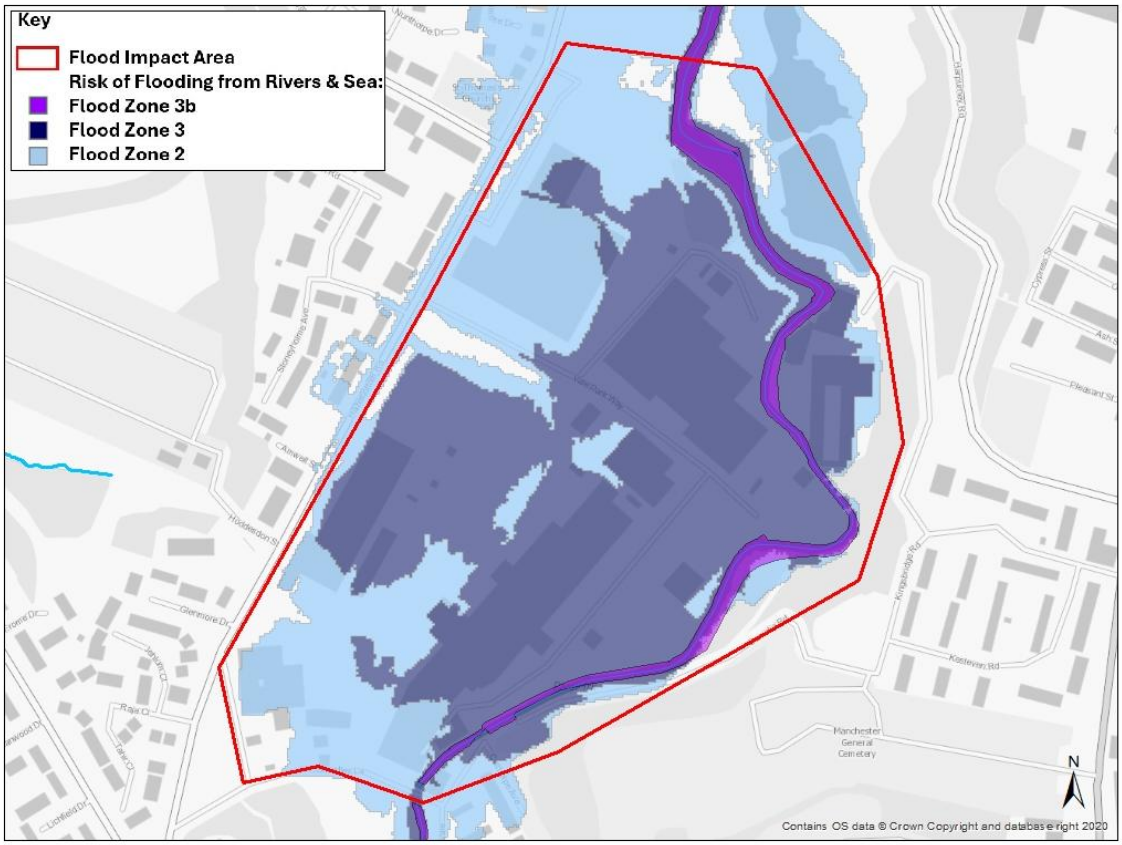
Fluvial flood risk mapping for the areas affected by flooding along the Baguley Brook in the Northern Moor area.



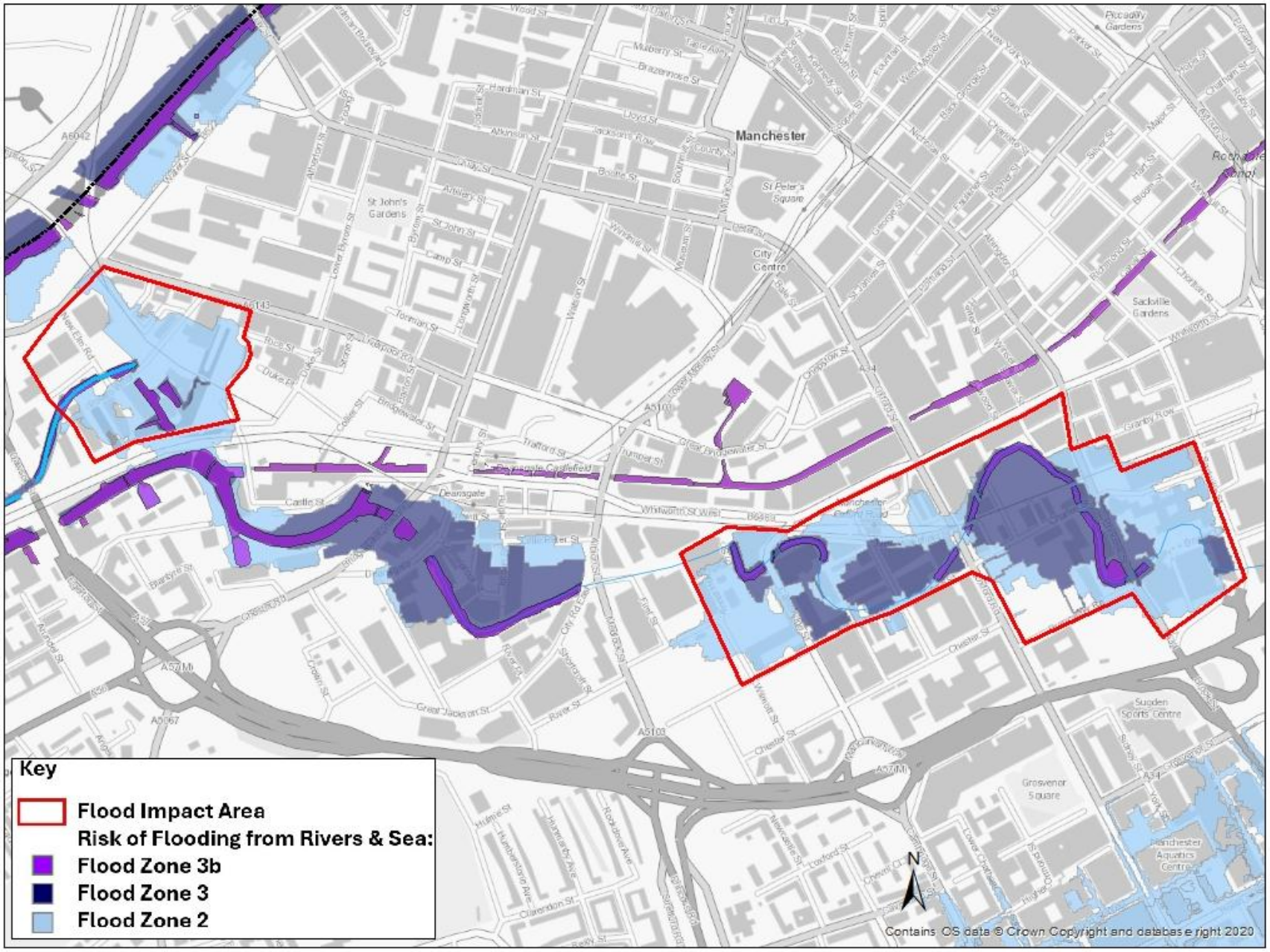
Fluvial flood risk mapping for the areas affected by flooding in the area around Ford Lane (Northenden) and nearby East Didsbury.



Fluvial flood risk mapping for the areas affected by flooding in Harpurhey/Crumpsall.

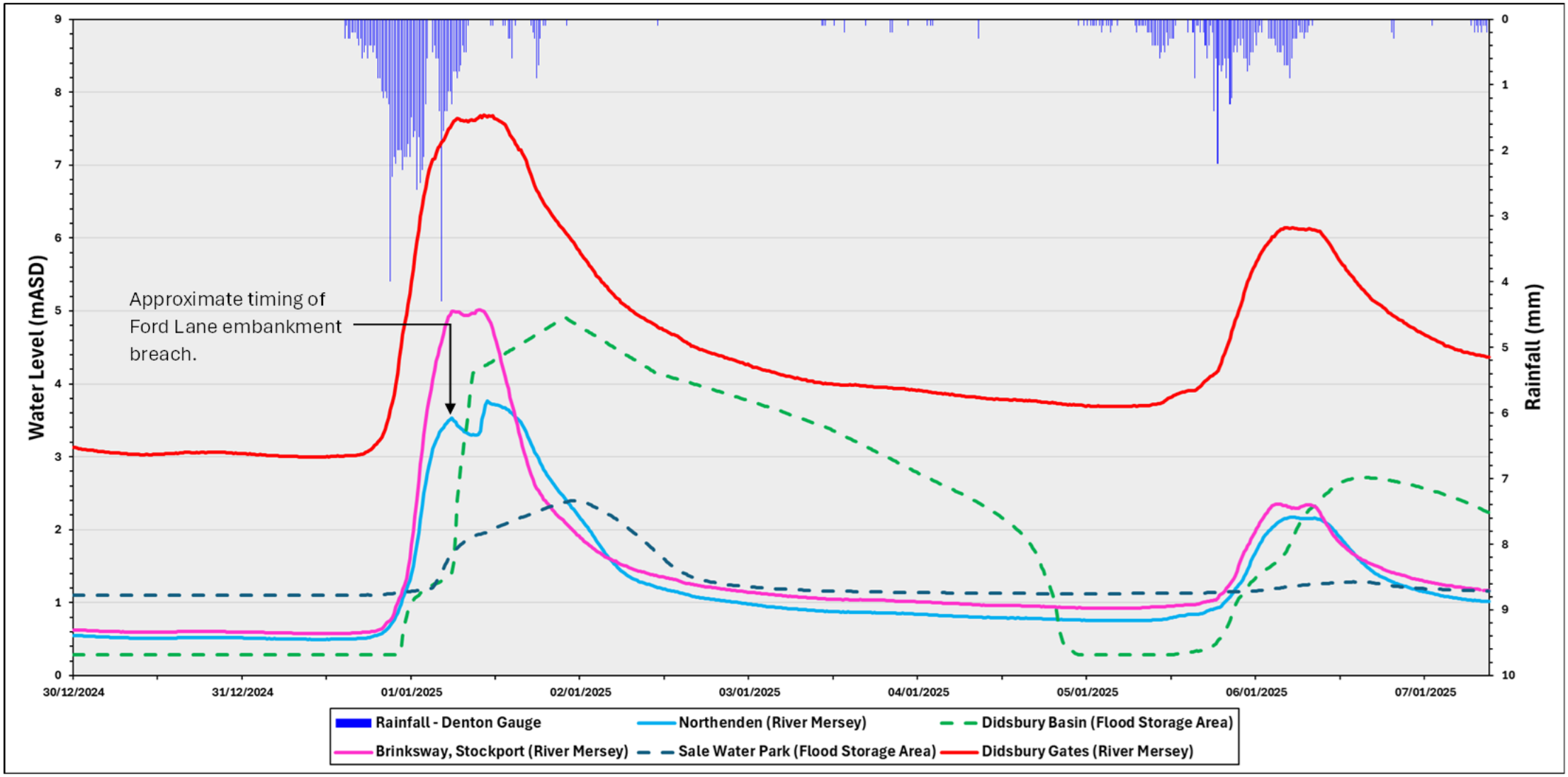


Fluvial flood risk mapping for the areas affected by flooding in the Deansgate area.

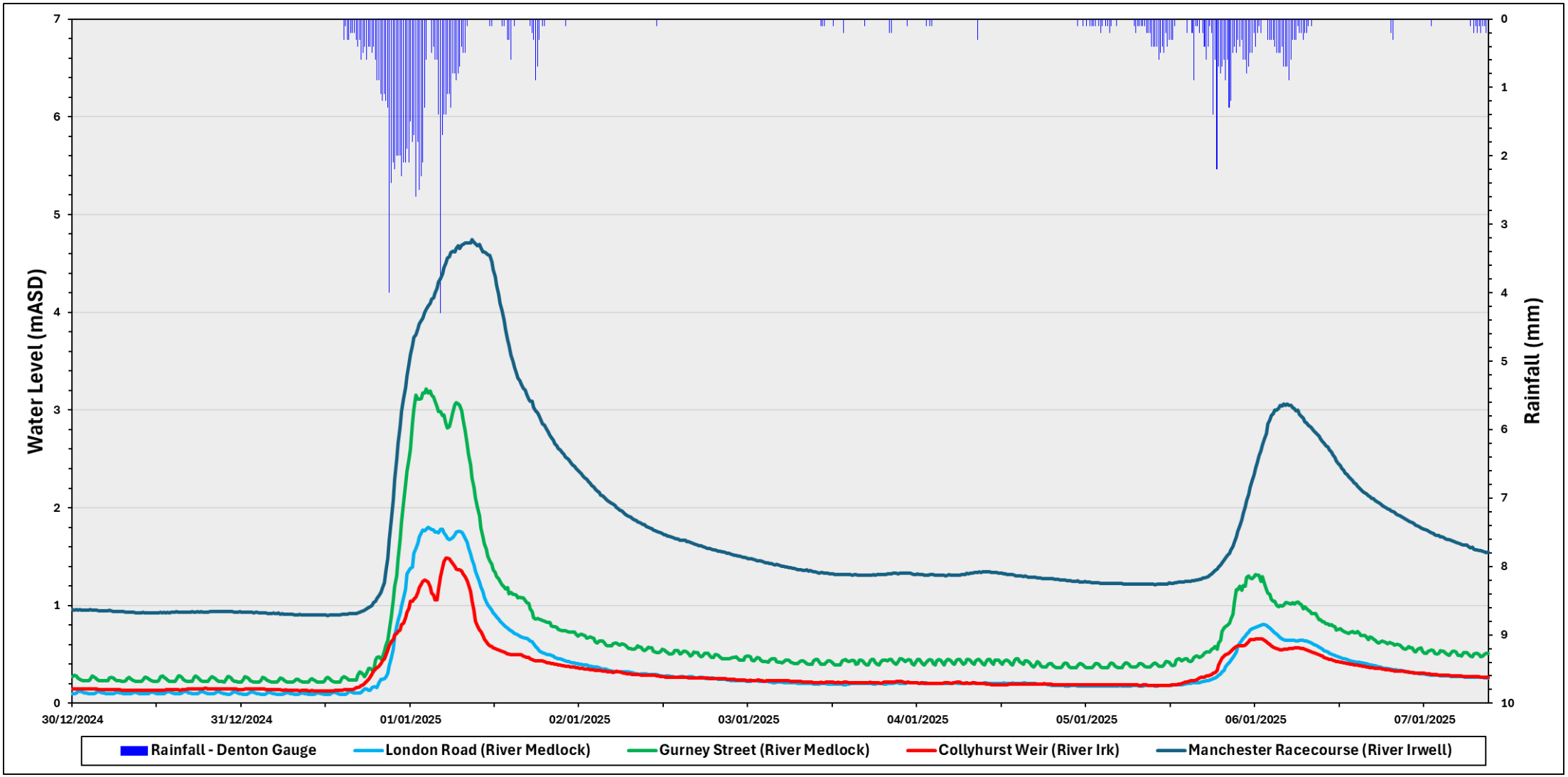


Appendix II – River Levels & Rainfall Graphs

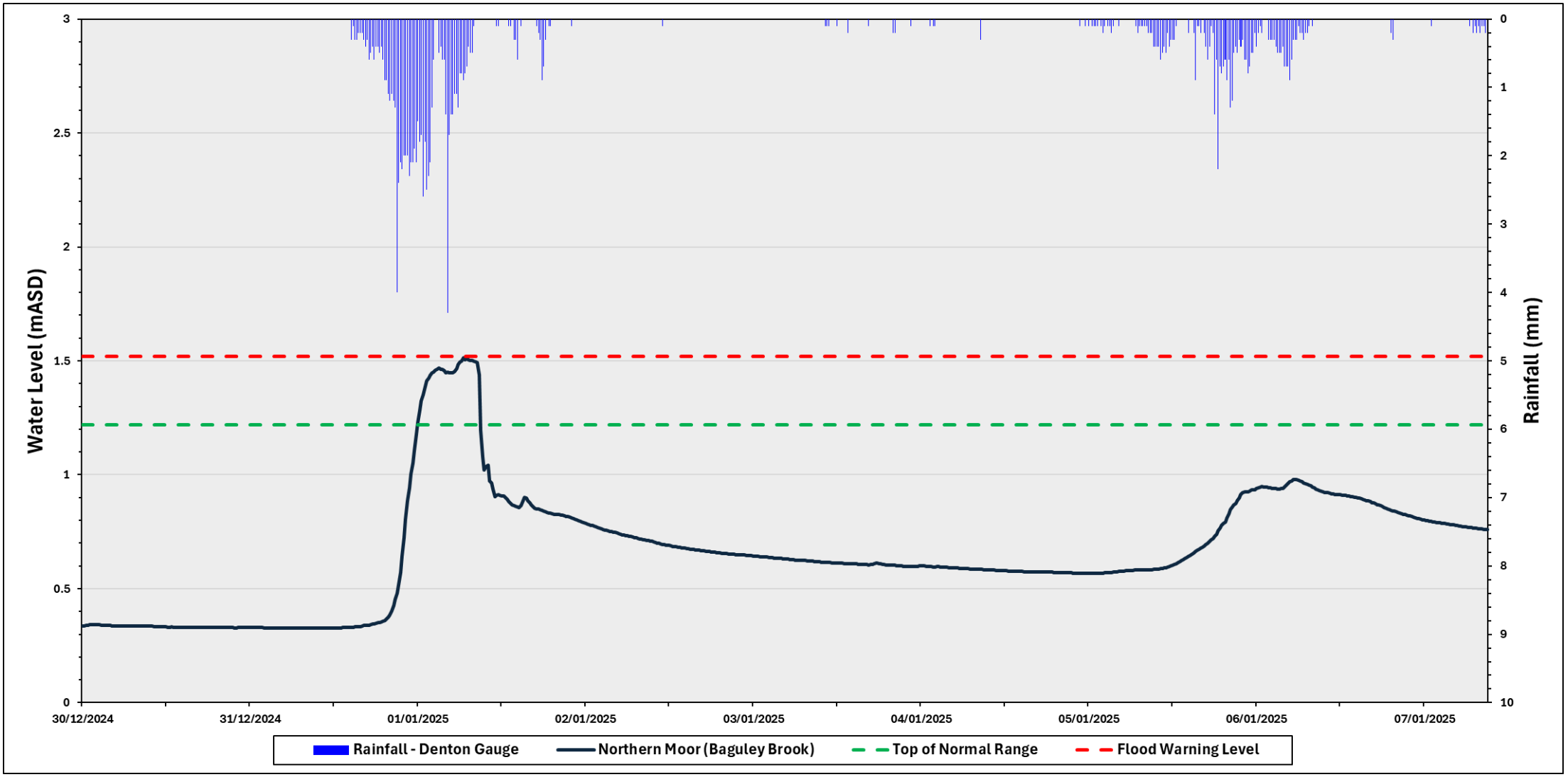
River Mersey – Observed River Levels & Observed Rainfall (30/12/2024 – 07/01/2025)



Manchester Central & North – Observed River Levels & Observed Rainfall (30/12/2024 – 07/01/2025)

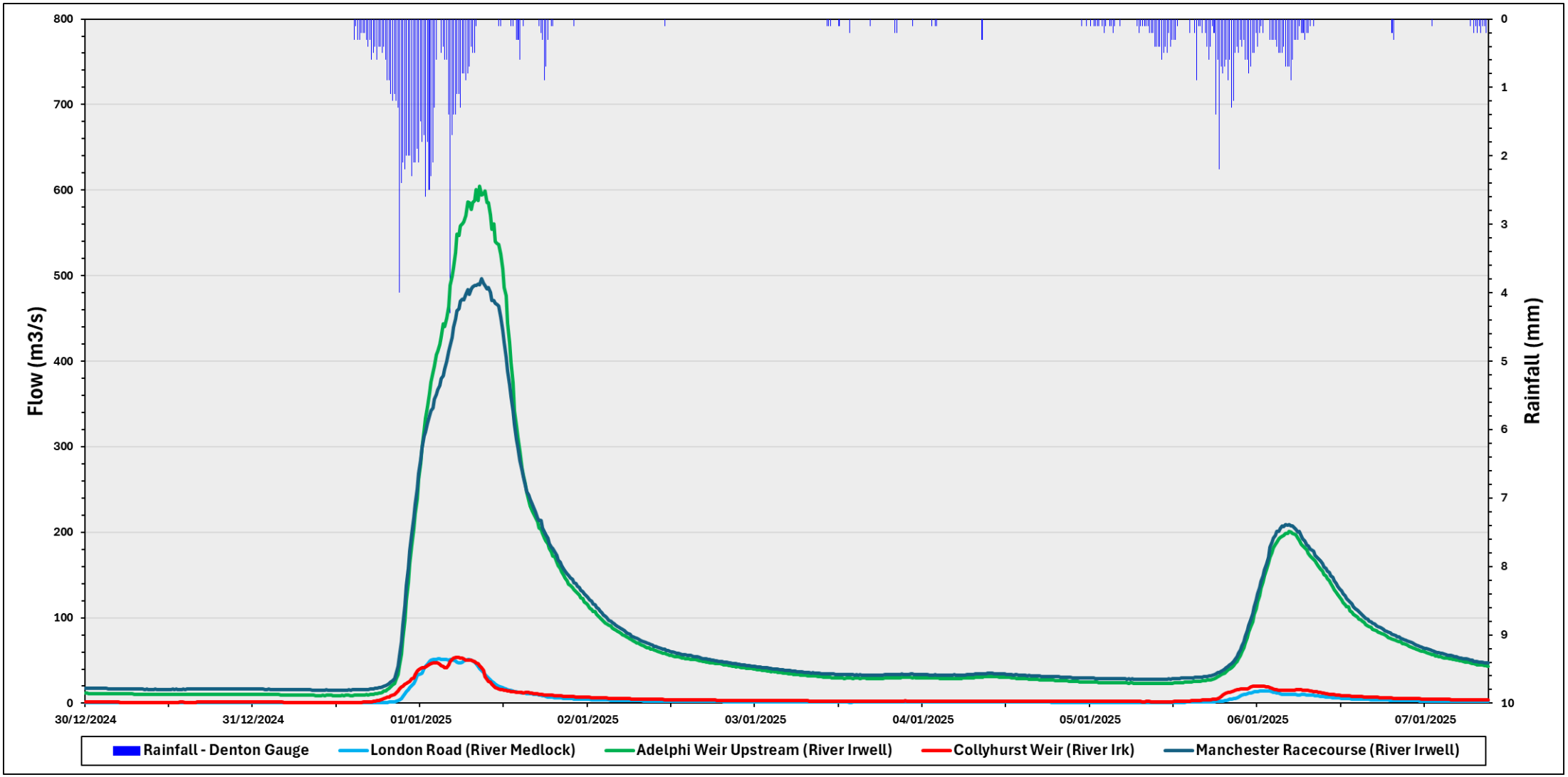


Baguley Brook – Observed River Levels & Observed Rainfall (30/12/2024 – 07/01/2025)

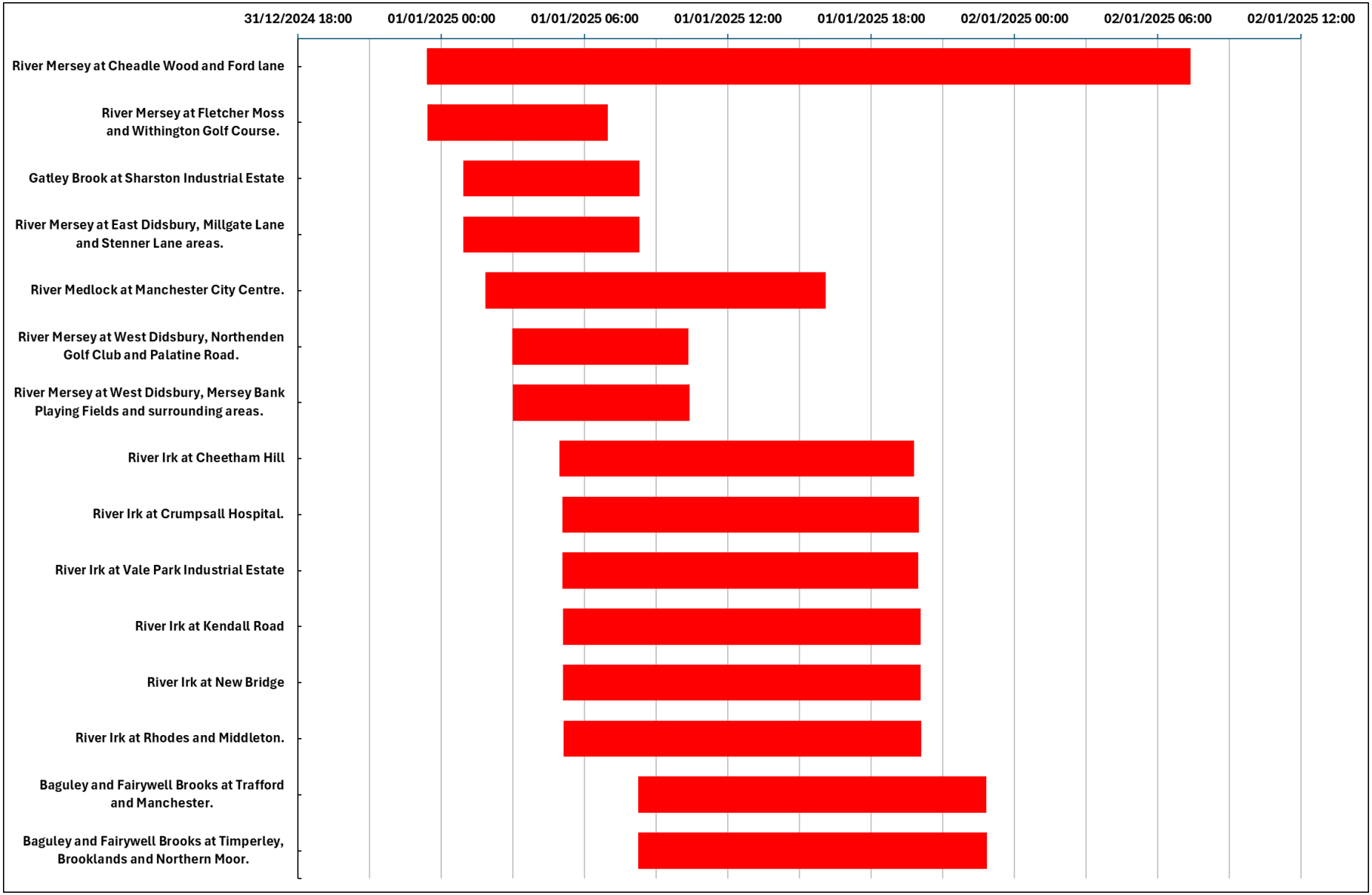


Appendix III – River Flow & Rainfall Graphs

Manchester Central & North – Observed River Flow & Observed Rainfall (30/12/2024 – 07/01/2025



Appendix IV - Timing and duration of Environment Agency flood warnings

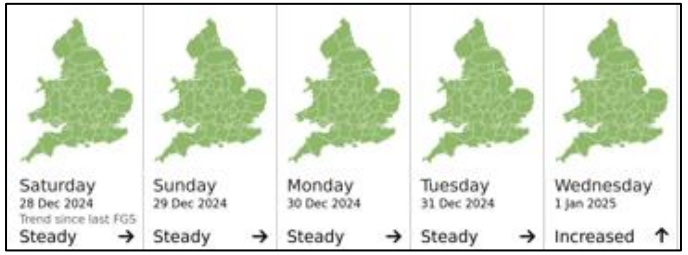


Location of Flood Warning Area	Date & Time Flood Warning Was Issued	Date & Time Flood Warning Was Ended
River Mersey at Cheadle Wood and Ford Lane	31/12/2024 at 23:24	02/01/2025 at 07:23
River Mersey at Fletcher Moss and Withington Golf Course.	31/12/2024 at 23:25	02/01/2025 at 07:33
Gatley Brook at Sharston Industrial Estate	01/01/2025 at 00:55	02/01/2025 at 07:23
River Mersey at East Didsbury, Millgate Lane and Stenner Lane areas.	01/01/2025 at 00:55	02/01/2025 at 07:23
River Medlock at Manchester City Centre.	01/01/2025 at 01:50	01/01/2025 at 14:15
River Mersey at West Didsbury, Northenden Golf Club and Palatine Road.	01/01/2025 at 02:58	02/01/2025 at 07:23
River Mersey at West Didsbury, Mersey Bank Playing Fields and surrounding areas.	01/01/2025 at 03:00	02/01/2025 at 07:23
River Irk at Cheetham Hill	01/01/2025 at 04:57	01/01/2025 at 14:51
River Irk at Crumpsall Hospital.	01/01/2025 at 05:04	01/01/2025 at 14:55
River Irk at Vale Park Industrial Estate	01/01/2025 at 05:04	01/01/2025 at 14:54
River Irk at Kendall Road	01/01/2025 at 05:05	01/01/2025 at 14:59
River Irk at New Bridge	01/01/2025 at 05:06	01/01/2025 at 14:58
River Irk at Rhodes and Middleton.	01/01/2025 at 05:07	01/01/2025 at 14:58
Baguley and Fairywell Brooks at Trafford and Manchester.	01/01/2025 at 08:14	01/01/2025 at 14:35
Baguley and Fairywell Brooks at Timperley, Brooklands and Northern Moor.	01/01/2025 at 08:14	01/01/2025 at 14:36

Appendix V – Flood Guidance Statements

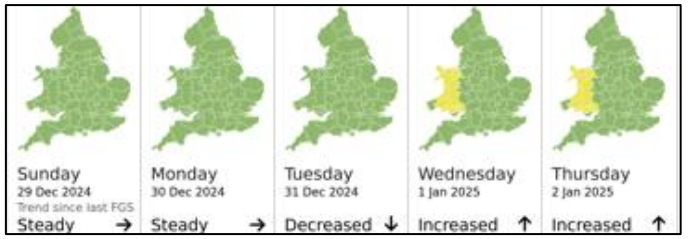
FGS Issued on Saturday 28th December

Saturday 28th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Sunday 29th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Monday 30th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Tuesday 31st – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Wednesday 1st – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Increased.



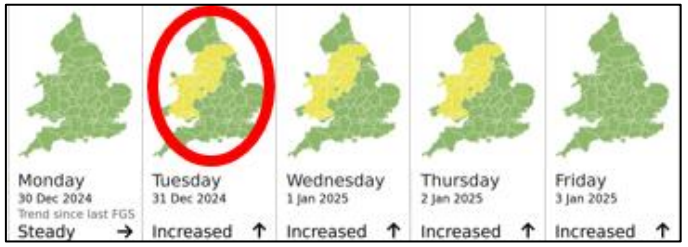
FGS Issued on Sunday 29th December

Sunday 29th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Monday 30th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Tuesday 31st – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Decreased.
Wednesday 1st – Impact: Minor, Likelihood: Low for the north-west of England. Impact: Minor, Likelihood: Medium for Wales. Trend: Increased.
Thursday 2nd – Impact: Minor, Likelihood: Low for the north-west of England. Impact: Minor, Likelihood: Medium for Wales. Trend: Increased.



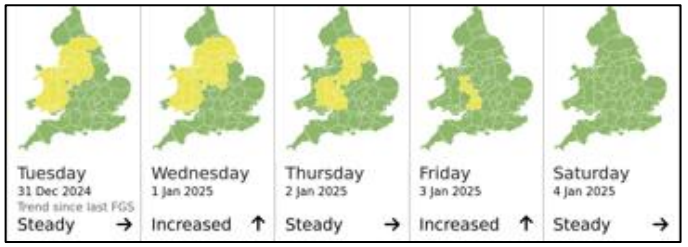
FGS Issued on Monday 30th December

Monday 30th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Tuesday 31st – Impact: Significant, Likelihood: Very Low for the north-west of England. Trend: Increased.
Wednesday 1st – Impact: Significant, Likelihood: Very Low for the north-west of England. Trend: Increased.
Thursday 2nd – Impact: Significant, Likelihood: Very Low for the north-west of England. Trend: Increased.
Friday 3rd – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Increased.



FGS Issued on Tuesday 31st December

Tuesday 31st – Impact: Significant, Likelihood: Low for the north-west of England. Trend: Steady.
Wednesday 1st – Impact: Significant, Likelihood: Low for the north-west of England. Trend: Increased.
Thursday 2nd – Impact: Significant, Likelihood: Very Low for the north-west of England. Trend: Steady.
Friday 3rd – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Increased.
Saturday 4th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.



FGS Issued on Wednesday 1st January

Wednesday 1st – Impact: Significant, Likelihood: Low for the north-west of England. Trend: Steady.
Thursday 2nd – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Friday 3rd – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Steady.
Saturday 4th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Increased.
Sunday 5th – Impact: Minor, Likelihood: Low for the north-west of England. Trend: Increased.