



# **Stockport Metropolitan Borough Council**

## **Level 1 Strategic Flood Risk Assessment**

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## Contacts

**CLAIRE GIBSON**  
Associate Technical Director

e Claire.Gibson@arcadis.com

Arcadis (UK) Ltd  
80 Fenchurch Street  
London  
EC3M 4BY  
United Kingdom

---

**JAMES BALL**  
Senior Consultant

e james.ball@arcadis.com

Arcadis (UK) Ltd  
80 Fenchurch Street  
London  
EC3M 4BY  
United Kingdom

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# Stockport Metropolitan Borough Council

## Level 1 Strategic Flood Risk Assessment

Author Rachel Goward

Checker James Ball

Reviewer Claire Gibson

Approver Renuka Gunasekara

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## Executive Summary

### Introduction and purpose of the Strategic Flood Risk Assessment

This Level 1 Strategic Flood Risk Assessment (SFRA) has been prepared for Stockport Metropolitan Borough Council, herein referred to as Stockport Council or the council. The SFRA provides a comprehensive and robust evidence base to support the emerging Local Plan. It will help to ensure that spatial planning decisions are informed by a clear understanding of flood risk across the borough.

This Level 1 SFRA report:

- Identifies flood risk from all sources across the borough.
- Supports the application of the Sequential Test and, where necessary, the Exception Test
- Provides guidance on the suitability of development in different locations, consistent with the risk-based approach set out in the National Planning Policy Framework.
- Identifies opportunities to reduce flood risk through strategic planning.
- Provides high-level recommendations for site-specific flood mitigation measures.

### Future Development

The Stockport Local Plan is expected to be adopted in late 2027 or early 2028 and will guide decisions about new development as far as the year 2042. This SFRA has reviewed the regulation 18 proposed site allocations supplied by Stockport Council in February 2026, along with the town centre living area. A total of 39 sites were reviewed of which 37 were residential sites and two were employment sites. In addition, a high-level review of flood risk to sites within the Strategic Housing Land Availability Assessment dataset that were not already permissioned or within the regulation 18 proposed site allocations was undertaken.

### Historic Flooding

Stockport has experienced significant, repeated flooding incidents driven by intense rainfall and watercourses which exceed their capacities. Notable incidents include events in June 2016, September 2016, July 2019, and in the winter of 2024 to 2025.

Data on sewer flooding incidents provided by United Utilities supports this reported level of historic flood risk across the borough, including 2,364 incidents in the period 2009 to 2025.

Knowledge of where flooding has occurred in the past provides additional support on the understanding of how flood risk is distributed across the borough and the potential impact on development planning.

### Overview of flood risk in the study area

A review of flood risk from all sources was carried out. Flood risk from rivers is present throughout the borough. Although much of the risk is constrained to undeveloped river corridors, urban areas of Cheadle and Hazel Grove, along with the northern edge of the Town Centre are at risk of flooding from rivers. Although areas of Stockport benefit from flood defences, a residual risk from overtopping, breach or failure remains.

Fluvial Flood Zones 3b, 3a, 2 and 1 in Stockport have been mapped, taking into account availability of information from computer models, to inform the suitability of development and the requirements for the Sequential and Exception Tests.

Flood risk from reservoirs is low, although the potential risk is present, the record of reservoir safety and legislation in England means that catastrophic failure of a reservoir dam is unlikely.

Sections of the Macclesfield Canal and the Peak Forest Canal run through the borough. There are a number of aqueducts within the study area, which could pose a potential flood risk.

The groundwater susceptibility mapping indicates there are sporadic areas within the borough where there is the potential for groundwater flooding to occur at the surface although much of the borough is at a lower risk of groundwater flooding.

Surface water flood risk is an issue in Stockport and is influenced by both the degree of urbanisation in some locations as well as the underlying ground conditions.

Sewer flooding remains a recognised local flood risk across Stockport, affecting both the Town Centre and residential neighbourhoods. The likelihood of sewer flooding increases during periods of severe rainfall, when the drainage network can rapidly become overwhelmed by the volume of water entering it.

Stockport borough as a whole is defined as a Critical Drainage Area and due to the disparate distribution of surface water flood risk across the borough combined with a clear need to take a stringent, integrated approach to managing surface water it is appropriate for this to remain the case.

### **Climate change**

This Strategic Flood Risk Assessment (SFRA) incorporates the latest guidance on climate change allowances, assessing the potential impact of increased peak river flows and rainfall intensity on future flood risk.

The risk of flooding from rivers is predicted to increase along all major watercourses in the borough. Although much of the increase is predicted to occur along areas of green space associated with river corridors, increases along the Micker Brook and Chorlton Brook in Cheadle do have the potential to encroach into urban areas. Small areas within Bramhall and Hazel Grove are also at increased risk from river flooding in the future. However, this is unlikely to have a significant impact on the regulation 18 proposed site allocations.

Information on the impacts of climate change can be used to support long-term decision-making on land allocation and development planning within Stockport.

### **Flood Risk Management**

Stockport benefits from flood warnings and flood alerts as well as some flood defences of varying standards. Flood defence assets are approaching the end of their design life and climate change will reduce their standard of protection further.

Flood risk management in Stockport should take into consideration existing flood risk management plans including the North West River Basin Flood Risk Management Plan 2021 to 2027 and the Stockport Local Flood Risk Management Strategy.

Opportunities to address flood risk in development may be realised through initiatives and strategies such as upstream attenuation storage, the Greater Manchester Integrated Water Management Plan, Stockport Local Plan, Stockport Integrated Drainage Strategy and Greater Manchester's Sustainable Drainage Design Guide.

### **Strategic assessment of potential development sites**

There are currently six regulation 18 proposed site allocations which are partially or entirely located in fluvial Flood Zones 2 or 3 in the present day. The addition of climate change to the Flood Zones does not place any additional regulation 18 proposed site allocations into Flood Zones 2 or 3. Careful planning of development sites should be undertaken to ensure that all proposed development within the site boundary can be located in areas of lowest flood risk.

There are 31 regulation 18 proposed site allocations which are located in fluvial Flood Zone 1 which are greater than one hectare. To accommodate development a sequential approach to the layout should be taken to avoid the areas of these sites which are shown to be at risk of flooding from surface water. In addition, mitigation measures may be required to manage surface water so that flood risk in the surrounding area does not increase. Careful planning early in the design phases will promote flood resilient design and delivery of sustainable development at these sites. A site-specific Flood Risk Assessment will be required for all.

The two regulation 18 proposed site allocations in Flood Zone 1 that are less than one hectare require a Flood Risk Assessment as they are in a Critical Drainage Area (CDA).

A sequential approach to the location of development in the Town Centre should be taken by prioritising Town Centre sites at lowest risk of flooding. In acknowledging the aspirations for the regeneration of Stockport Town Centre, should a search for alternative sites within the Town Centre not yield suitable alternatives for the proposed development in low flood risk areas, the Exception Test may be required.

In summary, site-specific Flood Risk Assessments will be required to assess the flood risk to proposed developments, for both regulation 18 proposed site allocations and sites which may come forward in future. Sites which require application of the Sequential or Exception Test have been identified within the report.

### **Maintenance of the Strategic Flood Risk Assessment**

This Strategic Flood Risk Assessment (SFRA) is a live document that is intended to be updated periodically as new information and guidance becomes available. This SFRA has been developed using the best available information at the time of preparation. The outcomes and conclusions of this SFRA may not be valid in the event of future changes to information and data. It is the responsibility of the user to ensure they are using the best available information.

This SFRA demonstrates that the majority of planned development in Stockport, based on the regulation 18 proposed site allocations, can be accommodated in areas at lower risk of flooding. Further work to support the application of the Sequential and Exception Tests to the two regulation 18 proposed site allocations (Brookfield Business Park and Compstall Mills) that are at higher risk is recommended. This additional work could form an addendum to the Level 1 SFRA as opposed to a Level 2 SFRA.

Although there are no regulation 18 proposed site allocations within the Town Centre, Stockport Council are planning around 8,000 new homes in the Town Centre. A Level 2 SFRA covering only Stockport Town Centre was published in 2024. Since this was before the Environment Agency released their updated flood risk mapping, it is recommended that this is reviewed and updated as needed to take account of the most recent data given that flood risk in the Town Centre is predominantly focussed around the River Mersey.

Additional and more detailed hydraulic modelling may be required to inform a Level 2 SFRA to provide more detail on the onset, speed, hazard and depth of flooding for example.

Should Stockport Council find that, in future, they are receiving large numbers of applications for sites in areas at risk of flooding elsewhere in the borough, it is recommended that a Level 2 SFRA is completed to provide more detail on the nature of flood risks in the areas of interest.

### **Limitations**

This SFRA has been produced using the most up-to-date and available data at the time of its production. Should further data become available that would contribute further to understanding flood risk across Stockport it should be considered for any future addendums to this SFRA.

# 1 Introduction

## 1.1 Project context

- 1.1.1.1 This Strategic Flood Risk Assessment (SFRA) is a key aspect of the local planning process. It ensures that the emerging Stockport Council Local Plan takes account of the latest flood risk management information and guidance to deliver sustainable development.
- 1.1.1.2 Government increases in the housing target for Stockport, meant that a new Local Plan was required to ensure that new development is focused in the most sustainable locations. As a key evidence base associated with the development of a Local Plan, an updated Level 1 SFRA covering the entire borough is now required to provide robust evidence to support the progression of the Local Plan.
- 1.1.1.3 In addressing this requirement, this Level 1 SFRA, prepared in April 2026, provides information on flood risk management and planning for the whole of the Stockport Borough.

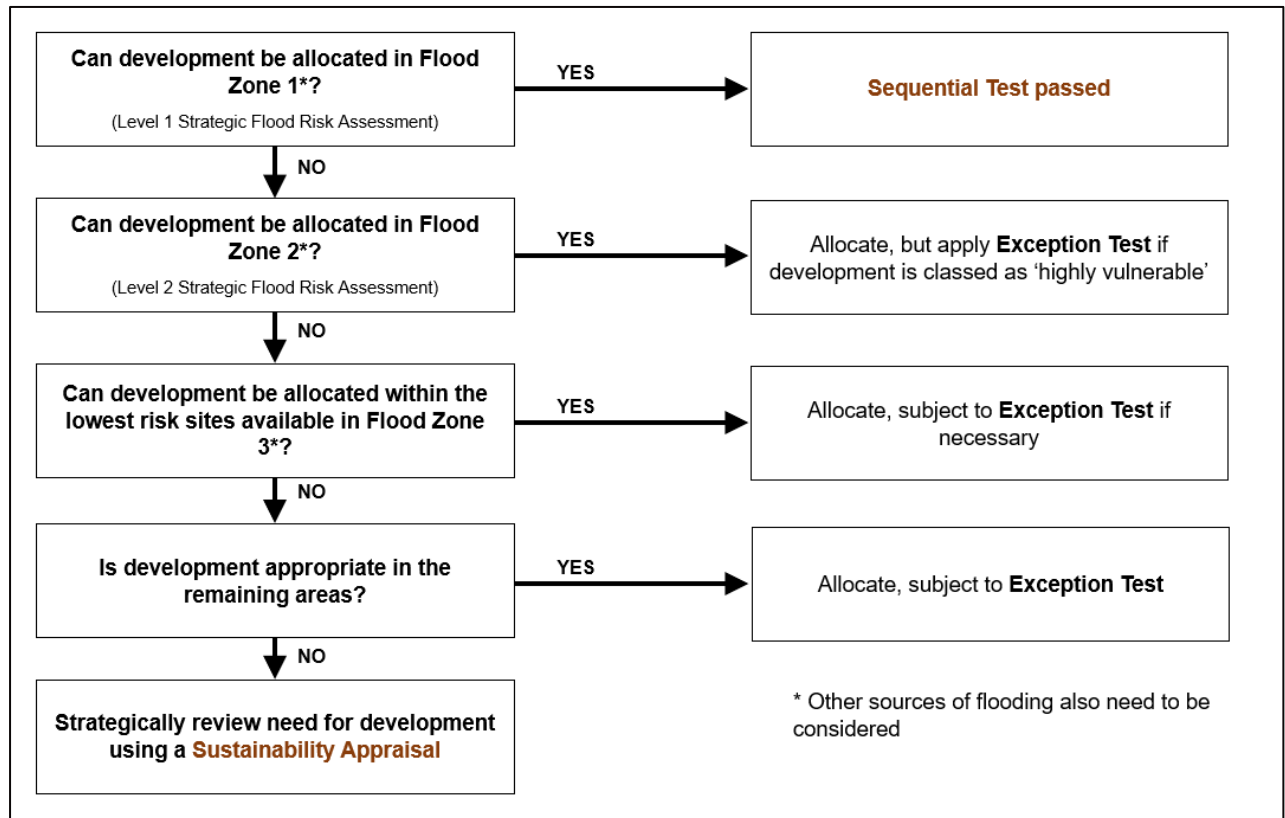
## 1.2 Policy context

### 1.2.1 National policy

- 1.2.1.1 The National Planning Policy Framework sets out rigorous tests to ensure that people and property are protected from flooding. The Sequential Test requires that development is preferentially located in areas of lowest flood risk. If the Sequential Test shows that there are no suitable sites at lower flood risk, then the Exception Test will be required to demonstrate that the development has wider sustainability benefits which outweigh flood risk, that the development will be safe for its lifetime and will not increase flood risk elsewhere. Further details on the role of the Sequential and Exception Tests in planning are provided in Section 1.3.
- 1.2.1.2 Consultation on a revised National Planning Policy Framework ran from 16 December 2025 to 10 March 2026. A revised document is expected to be published in Summer 2026. A review of any implications for this Level 1 SFRA should be undertaken and any updates made as required.
- 1.2.1.3 The process for applying the Sequential Test is as follows. The process is then illustrated in Figure 1 below.
  - 1. Can development be allocated in Flood Zone 1 when considering all sources of flooding?
  - 2. If yes, the Sequential test is passed.
  - 3. If no, can development be allocated in Flood Zone 2 when considering all sources of flooding?
  - 4. If yes, the site is allocated but the Exception Test should be applied if the development is classed as highly vulnerable.
  - 5. If no, can development be allocated within the lowest risk sites available in Flood Zone 3 when considering all sources of flooding?

6. If yes, the site is allocated subject to the Exception Test if necessary.
7. If no, is the development appropriate in the remaining areas?
8. If yes, the site is allocated subject to the Exception Test.
9. If no, the need for development should be strategically reviewed using a sustainability appraisal.

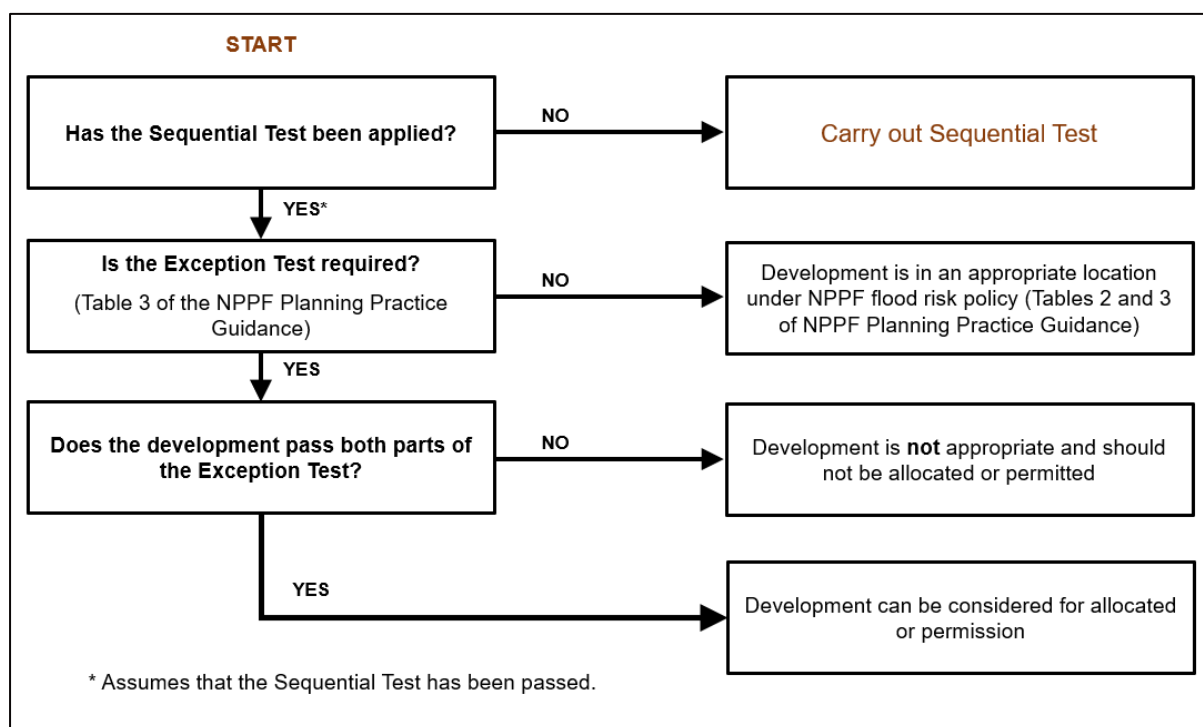
Figure 1 Flow diagram showing the process of site allocation using the Sequential Test



The process for applying the Exception test is as follows. This process is then illustrated in Figure 2 below.

1. Has the Sequential Test been applied?
2. If no, carry out the Sequential Test.
3. If yes, assuming the Sequential Test has been passed, is the Exception Test required?
4. If no, the development is in an appropriate location under the National Planning Policy Framework flood risk policy.
5. If yes, does the development pass both parts of the Exception Test?
6. If not, the development is not appropriate and should not be allocated or permitted.
7. If yes, development can be considered for allocation or permission.

Figure 2 – Flow diagram showing how to apply the Exception Test



1.2.1.4 All Local Planning Authorities are expected to follow these tests to ensure that sites with lowest risk of flooding are developed in preference to those with a higher risk of flooding. Preparation of a Strategic Flood Risk Assessment (SFRA) is key to this process to fully understand the flood risk across the area and to inform Local Plan preparation and application of the Sequential Test. The Planning Practice Guidance requires that the Sequential Test considers all sources of flood risk.

1.2.1.5 This SFRA is written in line with the guidance prepared by the Environment Agency.

## 1.2.2 Local policy and guidance

1.2.2.1 In November 2025, the Stockport draft Local Plan was published. This document considered future development to the year 2042. The regulation 18 proposed site allocations consultation period ran from 7 November 2025 to 21 December 2025. The formal Regulation 19 Publication stage is scheduled to take place in June and July 2026.

1.2.2.2 Table 1-1 summarises the Local Plan policies which are relevant to this SFRA.

Table 1-1 Local Plan flood risk policies

| Policy Number                                       | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INF 3: Flood Risk                                   | <p>Major development will be required to take an integrated, nature-based approach to protect the quantity and quality of water bodies and managing flood risk.</p> <p>Applicants must assess flood risk from their development proposals, using the most up to date Strategic Flood Risk Assessment (SFRA) and any other available evidence to minimise risks of flooding by steering development to areas with the lowest risk of flooding.</p> <p>Development within areas at risk from flooding must include measures to ensure it is resilient in the event of flooding.</p> |
| INF 4: Drainage                                     | <p>Development proposals must incorporate an integrated approach to the management of flood risk, surface water, groundwater and foul drainage.</p> <p>Surface water must be managed as close to its source as possible. Wherever possible landscape features should be used to manage water, store water and slow the flow of water.</p> <p>Development proposals must not result in the loss of open watercourses (including ponds), and culverts must be opened wherever possible.</p>                                                                                         |
| INF 5: Sustainable Drainage Systems (SuDS)          | <p>Drainage strategies must provide a sufficient water management plan that demonstrates a satisfactory SuDS layout with appropriate maintenance is possible, or compelling justification as to why SuDS cannot be incorporated into a scheme.</p> <p>Drainage strategies must provide optimum water runoff rates and volumes taking into account relevant local and national standards, and the impact of the Water Framework Directive (or successive legislation/regulations) on flood risk issues.</p>                                                                        |
| CR 1: Climate resilience, mitigation and adaptation | <p>All development must be sustainable in design and construction, incorporating best practice in resource management and climate change mitigation and adaptation. Applications must, where relevant, address flooding, water management, sustainable drainage and blue infrastructure.</p>                                                                                                                                                                                                                                                                                      |

## Integrated Water Management Plan

- 1.2.2.3 The Greater Manchester Combined Authority Integrated Water Management Plan sets out how Greater Manchester, which includes Stockport, can work towards integrated and sustainable management of water within the region. Underpinning this aim is the need for the integration of investment in water infrastructure with investment in housing, transportation and energy. The Integrated Water Management Plan is a journey which will facilitate long term planning and co delivery of sustainable solutions, reinforced by a partnership between the Greater Manchester Combined Authority, Environment Agency and United Utilities.

- 1.2.2.4 Seven workstreams support the development of the Integrated Water Management Plan. These workstreams are interconnected but with their own goals and plans. Since the publication of the Integrated Water Management Plan report in 2023, work has continued, strengthening partnership working and identifying opportunities across the area. New development in Stockport must ensure that it makes a positive contribution to the actions and aspirations set out in the Integrated Water Management Plan.

### **Stockport Integrated Drainage Strategy**

- 1.2.2.5 Phase 1 of the Stockport Integrated Drainage Strategy is currently under development. It will outline how a coordinated approach to managing surface water and flood risk must be taken. New developments must manage runoff using a hierarchical approach, prioritising the use of source control on all developments. The Integrated Drainage Strategy will include a series of Town Centre neighbourhood masterplans, identifying appropriate techniques and approaches to the management of flood risk in each one. It will outline how a coordinated approach to managing surface water and flood risk must be taken. The Integrated Drainage Strategy will guide future development, investment and improvements in public realm and all new development must ensure that their proposals contribute towards meeting these aims and objectives.

### **Stockport Design Code**

- 1.2.2.6 The Stockport Design Code is currently under development. It takes forward the existing National Design Guide and will set bespoke design requirements for Stockport. The National Design Guide highlights the importance of nature within well-designed places. It recognises that 'well-designed places integrate existing, and incorporate new, natural features into a multifunctional network that supports quality of place, biodiversity and water management, and addresses climate change mitigation and resilience'.
- 1.2.2.7 The code will also support Stockport Council's strategic approach to development by making best use of available land for new homes and businesses and so protects existing green belt land and green spaces.
- 1.2.2.8 The development of the design code provides an opportunity to establish clear requirements and guidance for integrating sustainable drainage systems across all new developments, helping to manage surface water runoff and reduce the risk of surface water flooding throughout Stockport.

### **Local Flood Risk Management Strategy**

- 1.2.2.9 The 2016 Stockport Local Flood Risk Management Strategy outlines how Stockport Council manages flood risk across the borough. It promotes a collaborative, risk-based approach to reducing the likelihood and impact of flooding. It focuses on educating communities, raising public awareness, and implementing measures to manage and reduce flood risk.

## 1.3 Sequential and Exception Tests

- 1.3.1.1 The Sequential and Exception Tests are described in section 1.2.1.
- 1.3.1.2 This Strategic Flood Risk Assessment (SFRA) will inform the decision-making processes underpinning the development of the Local Plan and enable the application of the Sequential and Exception tests in the allocation of future development sites.
- 1.3.1.3 This SFRA can also be used as an evidence base when assessing whether or not individual planning applications satisfy the Sequential and Exception Tests. If an individual site has already been identified as passing the Sequential Test through the development plan process, its proposal is consistent with the allocated use and there are no known changes to the level of flood risk, then no further assessment of the Sequential Test is required. Applications for some minor development or changes of use do not require application of the Sequential Test (in line with the guidance in paragraph 176 of the National Planning Policy Framework), unless the application is for a change of use to a caravan, camping or chalet site, or to a mobile home site. Development is also exempt from the Sequential Test if it is solely at risk from surface water flooding and a site-specific Flood Risk Assessment demonstrates it will be safe throughout its lifetime, without increasing flood risk elsewhere. This exemption does not apply to sources of flooding other than surface water.

## 1.4 Data collection

- 1.4.1.1 Data for this SFRA was supplied by the following stakeholders:
- Environment Agency
  - Stockport Metropolitan Borough Council
  - Greater Manchester Combined Authority
  - British Geological Survey
  - United Utilities
- 1.4.1.2 The incoming data register is included in Appendix A.

## 1.5 Description of the study area

### 1.5.1 Stockport Metropolitan Borough Council

- 1.5.1.1 Stockport is a major metropolitan borough in Greater Manchester, England. According to the Office for National Statistics the population of Stockport was 297,191 in 2022 and this is projected to rise to 315,310 by 2032.

## 1.5.2 Watercourses

- 1.5.2.1 Appendix B shows the watercourses within Stockport. Only main rivers are named.
- 1.5.2.2 Stockport lies within two operational waterbody catchments, the Bollin Dean Mersey Upper and the Goyt Etherow Tame. Both these catchments drain to the River Mersey.
- 1.5.2.3 The main rivers within Stockport are grouped by tributary group and described in the report sections below. Main rivers are usually larger rivers and streams which are formally designated and shown on the main river map. The Environment Agency carries out maintenance, improvement or construction work on main rivers to manage flood risk. There are three main rivers to which all the other main rivers in Stockport drain: the River Goyt, the River Tame and the River Mersey.

### River Goyt

- 1.5.2.4 The River Goyt flows in a predominantly open channel northwest through the borough from Mill Green towards the centre of Stockport where it meets the River Tame. The River Goyt is fed by multiple smaller rivers in the eastern part of the borough. These include the River Etherow, Cataract Brook and Hollywood End Brook.
- 1.5.2.5 The River Etherow forms part of the borough boundary near Ridd Wood. From there, it flows in an open channel southwest towards Compstall where it meets the River Goyt.
- 1.5.2.6 Cataract Brook and Hollywood End Brook both originate in rural areas in the eastern part of the borough. Both watercourses flow predominantly in open channels west to join the River Goyt at Marple Bridge. Cataract Brook is briefly culverted at Marple Bridge.
- 1.5.2.7 Tributaries of the River Goyt located in the central part of the borough include Torkington Brook, Poise Brook and Otterspool Brook.
- 1.5.2.8 Otterspool Brook flows in an open channel in a southerly direction for approximately 0.8km from Romiley to where it joins the River Goyt, near Otterspool Bridge.
- 1.5.2.9 Torkington Brook flows in an open channel in a general northwesterly direction for approximately 3km from near Hawk Green to its confluence with the River Goyt.
- 1.5.2.10 The Ochreley Brook and Hazel Grove Brook rise in the southeast of the borough and join to form the Poise Brook near Torkington.
- 1.5.2.11 The Poise Brook flows in an open channel in a general northerly direction to its confluence with the River Goyt.

### River Tame

- 1.5.2.12 The River Tame flows in an open channel in a general southwesterly direction towards Stockport Town Centre to its confluence with the River Goyt. Here, the River Goyt and River Tame join to form the River Mersey.

### **River Mersey**

- 1.5.2.13 The River Mersey is formed at the confluence of the River Goyt and the River Tame in Stockport Town Centre. Underneath Stockport Town Centre, the River Mersey is largely channelised and spanned between a series of covered bridges.
- 1.5.2.14 The River Mersey is joined by three tributaries in Stockport downstream of the River Goyt and River Tame confluence. These tributaries are Hempshaw Brook, Micker Brook, and Gatley Brook.
- 1.5.2.15 The Hempshaw Brook originates southeast of Stockport Town Centre and flows in a general northerly direction for 1km to its confluence with the River Mersey. It flows as a series of open channel and culverted sections.
- 1.5.2.16 The Micker Brook flows in a general northwesterly direction towards its confluence with the River Mersey. The Micker Brook forms the downstream end of the Ladybrook Valley which runs through Stockport. At various points, it is called Bollinhurst Brook, Norbury Brook, Bramhall Brook, the Lady Brook and Micker Brook. The majority of this watercourse is in an open channel.
- 1.5.2.17 Tributaries of Micker Brook include Poynton Brook, Bollinhurst Brook, Carrwood Park Brook, Bruntwood Hall Brook and Chorlton Brook. Poynton Brook and Bollinhurst Brook originate in the south of the borough and flow in a general north westerly direction.
- 1.5.2.18 The Carrwood Park Brook originates near Bramhall and flows in a northerly direction to join Micker Brook near Bramhall Green. The Bruntwood Hall Brook flows in a general northerly direction from its headwaters in Stanley Green to its confluence with the Micker Brook near Cheadle. Chorlton Brook flows in a general northwesterly direction from Cheadle to its confluence with the Micker Brook. Chorlton Brook flows through Cheadle in a series of open channel and culverted sections.
- 1.5.2.19 Gatley Brook flows from its origin near Heald Green in a general northerly direction to its confluence with the River Mersey just outside the borough boundary. Part of Gatley Brook is known colloquially as Heald Green Brook.

### **Black Brook**

- 1.5.2.20 Black Brook originates in Heaton Chapel in the north of the borough and flows in a northerly direction out of the borough. It eventually flows west to join the River Mersey 6km west of the borough.

### **River Dean**

- 1.5.2.21 The River Dean flows in a general westerly direction along the southern most part of the borough boundary, south of Woodford. It forms part of the borough boundary before flowing west to its eventual confluence with the River Mersey, approximately 20km west of the borough.

- 1.5.2.22 The River Dean has one tributary in Stockport. This tributary is referred to as Handforth Brook or Spath Brook and flows in a general westerly direction out of the borough towards Handforth, where it joins the River Dean.

## 2 User guidance

- 2.1.1.1 The anticipated users of this Strategic Flood Risk Assessment (SFRA) are listed below. The tasks for which each user might apply the findings of the SFRA to are listed along with the sections of the SFRA which should be referred to for assistance.
- Stockport Metropolitan Borough Council Local Planning Authority
    - Using the SFRA datasets in the local development planning process. Sections 1, 3, 4, 5, 6, 7.
    - Assessment of individual planning applications, Sequential and Exception Tests. Sections 1, 3, 4, 5, 6, 7, 8.
    - Assessment of planning applications as a statutory consultee on flood risk and water management. Sections 1, 3, 4, 5, 6, 7, 8.
  - Environment Agency
    - Provide advice to Stockport Metropolitan Borough Council about the Local Plan. Sections 3, 4, 5, 6, 7, 8.
  - Developers and their consultants
    - Inform site specific Flood Risk Assessments. Sections 4, 5, 6, 7, 8.
    - Evidence to support the Sequential and Exception tests for individual applications. Sections 5, 6.
    - Identify ways in which development could help to reduce the causes and impacts of flooding. Sections 7, 8.
  - Emergency Planners, Emergency Services and Local Resilience Forums
    - Understand the risk of flooding to existing and proposed communities in order to plan for emergencies. Sections 3, 4, 5, 6, 7, 8.
    - Advise on the impact of any proposed development on emergency planning, including any extra resources that may be needed. Section 8.
    - Advise on measures which should be included in development to avoid or minimise further impacts on emergency planning. Section 8.
  - The Risk Management Authorities of Stockport Metropolitan Borough Council (Highways, Planning, Neighbourhoods), Environment Agency, United Utilities, Network Rail, National Highways and the Canal and River Trust.
    - Inform their assessment and management of sources of flood risk they are responsible for. Sections 5, 6, 7, 8.
    - Identify opportunities where development may help to reduce the causes and impacts of sources of flood risk they are responsible for. Section 8.
  - The Neighbourhood Forums of Woodford, High Lane, Marple, Mellor, Marple Bridge, Mill Brow and Compstall.
    - Considering whether neighbourhood planning areas may be appropriate for development. Sections 4, 5, 6, 7, 8.
  - Adjoining Local Authorities of Manchester City Council, Tameside Metropolitan Borough Council, Derbyshire County Council, Peak District National Park Authority, Cheshire East Council and High Peak Borough Council.
    - Inform strategic flood risk management planning across Greater Manchester. All report sections.
- 2.1.1.2 This SFRA report is accompanied by a package of online files submitted to Stockport Council. Relevant map layers are listed in Appendix C.

### 3 Future development

- 3.1.1.1 A local plan provides a vision for the growth and development of an area. It contains policies which outline how the local plan aims to meet the housing, employment, social and community needs of an area. It also considers how to protect and enhance the natural, built and historic environment.
- 3.1.1.2 The new Stockport Local Plan is currently being prepared and it is expected to be adopted in late 2027 or early 2028. The Stockport Local Plan will guide decisions about new development as far as the year 2042.
- 3.1.1.3 This Strategic Flood Risk Assessment (SFRA) has reviewed the regulation 18 proposed site allocations supplied by Stockport Council in February 2026. This dataset included 39 sites of which 37 are proposed for residential use and two are proposed for employment use.
- 3.1.1.4 In addition, sites within the Strategic Housing Land Availability Assessment dataset were supplied. This is the outcome of a review of sites which have the potential to accommodate development. It is not a site allocations exercise and does not mean that a site will definitely be developed for housing.
- 3.1.1.5 Most sites within the Strategic Housing Land Availability Assessment dataset are already permissioned and therefore will not be influenced by the findings of this SFRA. In addition, some of the sites overlapped with the regulation 18 proposed site allocations so have been reviewed as part of this dataset rather than the Strategic Housing Land Availability Assessment dataset.
- 3.1.1.6 A high level review of the remaining Strategic Housing Land Availability Assessment sites with respect to flood risk was carried out. As these sites will not necessarily be developed, they have been considered separately from the regulation 18 proposed site allocations to aid clarity in this SFRA.
- 3.1.1.7 Appendix D shows the regulation 18 proposed site allocations and the sites in the Strategic Housing Land Availability Assessment dataset.

## 4 Historic flooding

- 4.1.1.1 Stockport has experienced significant, repeated flooding incidents driven by intense rainfall and watercourses which exceed their capacities. Notable incidents include events in June 2016, September 2016, July 2019, and in the winter of 2024 to 2025.
- 4.1.1.2 Stockport was impacted by a severe flood event on 1 January 2025. Water levels in the River Goyt, River Mersey and River Tame rose to a height that restricted outfall discharges from the sewer network leading to flooding across the borough, with particular hot spots in Gatley, Cheadle, Offerton Green and Bramhall Green. The River Mersey reached the highest recorded level at the recording station at Brinksway in Stockport Town Centre. The event affected numerous residential properties and public assets, having a negative psychological and financial impact.
- 4.1.1.3 The Level 2 Strategic Flood Risk Assessment (2024) for Stockport indicates one incident of sewer flooding within the Town Centre boundary, at Greenhalgh Street. Historic sewer flooding incidents are further outlined in Section 4.4.
- 4.1.1.4 Records held by Stockport Council and the Environment Agency show historical fluvial flooding along the Hempsshaw Brook in September 2016. Flooding was reported to occur because of blockages at a trash screen on the culvert entrance at Waterloo Road and at the culvert entrance at Great Underbank, causing damage to several commercial properties.

## 4.2 Section 19 flood investigation reports

- 4.2.1.1 A Section 19 flood investigation report is a publicly available statement of the circumstances of a flood event. It examines the causes and impacts of the flood event, identifies responsible parties, and allows for appropriate measures to be implemented to mitigate future risk. As a Lead Local Flood Authority, Stockport Council has a duty under the Flood and Water Management Act 2010 to investigate flood events. Stockport Council holds Section 19 reports for several flood events which have occurred between 2012 and 2026. Details of these flood events are summarised in Table 4-1.

Table 4-1 Section 19 flood investigation reports for Stockport

| Event Date                 | Location                                     | Event Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11 May 2012                | Cataract Bridge Mill, Longhurst Lane, Mellor | <p>An obstruction in a culvert underneath the former Cataract Bridge Mill led to flooding at the site.</p> <p>Site investigation was deemed necessary given the Mill and surrounding area were subject to a planning application for residential development.</p> <p>The blockage was removed and a trash screen was installed on the upstream face of the culvert.</p>                                                                                                                                                                                                                                                                                                                    |
| 8 February 2016            | Dorset Avenue, Cheadle Hulme                 | <p>A blocked trash screen on the upstream face of a culvert became blocked leading to flooding in nearby gardens.</p> <p>Previous incidents of flooding had been reported at this location. These incidents were also reported to be caused by a blocked trash screen.</p> <p>The trash screen was cleared by the Lead Local Flood Authority and the riparian landowner was informed of their duties to maintain flow of the watercourse.</p>                                                                                                                                                                                                                                              |
| 8, 10, 11 and 16 June 2016 | Large parts of the borough                   | <p>Prolonged, high-intensity rainfall generated large volumes of surface water. The capacity of local drainage systems was exceeded and this was reported to contribute to increased local river levels.</p> <p>Communities across the borough were affected by internal and external property flooding from multiple sources, including combined surface water and sewer flooding, fluvial flooding, and groundwater flooding.</p> <p>Risk Management Authorities responded with support from the emergency services to close roads, arrange for sandbag delivery to residents, arrange emergency accommodation where needed, and establish incident reporting and incident hotlines.</p> |

| Event Date         | Location                                                                                                        | Event Description                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 September 2016  | Large parts of the borough. Key areas reported were the Heatons, Reddish, Davenport, Cale Green, Stepping Hill. | <p>A significant rainfall event following a dry period resulted in local drainage systems being overloaded causing public sewer flooding and private drain flooding throughout large parts of the borough.</p> <p>Over 650 properties were impacted by sewer flooding.</p> <p>Reactive responses by Risk Management Authorities included establishing incident hotlines, coordination with emergency services, and on site support to residents affected by flooding.</p> |
| September 2017     | Woodbrook Road, Mellor                                                                                          | <p>Internal property flooding occurred to 18 residential properties. This was reported to be due to a blocked trash screen at the Woodbrook Road culvert inlet combined with insufficient capacity of an overflow flood channel.</p> <p>The blocked trash screen and the overflow flood channel were cleared of debris and obstructions following the event and once floodwaters had subsided.</p>                                                                        |
| 28 to 31 July 2019 | Large parts of the borough                                                                                      | <p>An intense and significant rainfall event resulted in widespread flooding and transport disruption, leading to internal and external property flooding.</p> <p>776 flooding incidents were reported in the borough.</p> <p>The response from the Risk Management Authorities was reported to have been largely reactive. No prior clearing of critical structures was recorded.</p>                                                                                    |

| Event Date     | Location                   | Event Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 January 2025 | Large parts of the borough | <p>Heavy rainfall overnight on December 31 2024 led to severe flooding across the borough on January 1 2025. Notably, the River Tame overtopped its banks leading to flooding of the ground floors of Meadow Mill occupied by commercial uses, however no domestic properties were flooded. Further watercourses, including Chorlton Brook, Micker Brook, and Lady Brook, also overtopped their banks.</p> <p>Surface water issues affected many roads and road transport drainage in areas of known low-lying flood risk across the borough.</p> <p>The Section 19 report indicates the flooding was primarily caused by exceptional rainfall and record river levels, leading to an overwhelming of the capacity of both surface water and sewer drainage systems.</p> <p>Immediate responses to the incident from Risk Management Authorities included the evacuation of affected residents to safety, emergency assistance to residents and in particular vulnerable residents, the establishment of emergency rest centres, gully and road clearances, and restoration of key services such as water and wastewater.</p> <p>Post-flood actions and responses including clearing up the borough, supporting displaced residents in temporary accommodation.</p> |

## 4.3 Flooding incident records held by Stockport Council

- 4.3.1.1 Data on flood incidents held by Stockport Council covering the period from January 2021 to January 2026 was provided. The locations of the flood incidents are shown in Figure E.1 in Appendix E.
- 4.3.1.2 Flooding incidents are widely distributed across the borough, with clusters of flood events in Gatley, Hazel Grove, Cheadle, Bramhall Green, Offerton Green and Stockport Town Centre. There are fewer reported incidents in the north of the borough.
- 4.3.1.3 A separate dataset was provided for reported flooding incidents for January 2025 due to the high number of incidents reported during this month. These incidents are also shown in Figure E.1 in Appendix E. Whilst flooding incidents were reported across the borough, the Cheadle and Gatley areas experienced more flooding than most.

## 4.4 Highway Flooding

- 4.4.1.1 Flooding of the A555 near Hall Moss Lane is known to occur. Consultation with Stockport Council confirmed that the A555 highway drainage issues are being addressed separately by the Highways team via a package of measures that will reduce the volume of water flowing into the highway drainage, increase the discharge rate from the pump station at the A555 Hall Moss Lane overbridge and address the capacity issues at the Chester Road Gyratory ponds.

## 4.5 Recorded sewer flooding incidents

- 4.5.1.1 Flood events which are caused purely by sewer flooding are difficult to identify. This is because they are frequently combined with other surface water flooding incidents. This is particularly the case in urban areas such as Stockport where the surface water drainage system and sewer systems interact. This interaction can be from combined sewers which convey foul water and surface water and when foul or combined sewers interact with other elements of the surface water drainage network such as highway drainage and private drainage assets.
- 4.5.1.2 There is one reported incident of sewer flooding in Stockport listed in the [Level 2 Strategic Flood Risk Assessment](#) for Stockport which was published in 2024. The incident occurred in a cellar at Greenhalgh Street in 2010.
- 4.5.1.3 The [Level 1 Greater Manchester Strategic Flood Risk Assessment Update](#) was published in 2021. This report suggests that sewer flooding hotspots across the borough include Cheadle Hulme, Romiley, and Foggbrook.
- 4.5.1.4 Further incidents of sewer flooding have taken place during large flood events in June and September 2016. These incidents are reported in the Section 19 reports for June and September 2016. On these occasions, heavy and intense rainfall meant that sewers and drainage systems were overwhelmed. This led to combined surface water and sewer flooding across several parts of the borough.

- 4.5.1.5 United Utilities provided data on sewer flooding incidents across Stockport. Incident data was provided covering the period from 2009 to 2025. During the recorded period, there were a total of 2,634 reported incidents of sewer flooding. There were 1,295 reported incidents of internal flooding and 1,339 reported incidents of external sewer flooding. Incident data is presented in Appendix E.
- 4.5.1.6 Reported incidents are generally evenly distributed throughout Stockport, with the exception of the east and far east of the borough having less reported incidents. There are several locations with a high concentration of historic sewer flooding incidents, including Cheadle Hulme, Woodley, Stepping Hill. Most notably, there is a high concentration of incidents at Holiday Lane in Offerton, with 662 reported incidents between 2009 and 2020. However, United Utilities have since upgraded the sewer scheme at Holiday Lane and there have been no reported incidents of sewer flooding there since completion of the scheme in 2021. Oval View in Woodley is a further hotspot, with 147 of the total incidents being reported at one address between 2009 and 2020.

## 4.6 Reported groundwater flooding incidents

- 4.6.1.1 Stockport Council confirmed that they receive reports of cellar flooding in Edgeley and parts of the Town Centre near the Hemphshaw Brook. Anecdotal evidence suggests that this flooding is driven by high infiltration rates through the sandstone which underlies this area. In addition, these high infiltration rates can also result in groundwater draining into culverted watercourses which do not have capacity.
- 4.6.1.2 Reports of cellar flooding in Marple which is underlain by clay soils have also been received by Stockport Council.

## 5 Sources of flood risk

### 5.1 Rivers

- 5.1.1.1 Computer based hydraulic models for nine watercourses in Stockport were supplied by the Environment Agency. Some of the outputs from these hydraulic models have been used to map Flood Zone 2, Flood Zone 3a and Flood Zone 3b as described in the following sections.

#### 5.1.2 Flood Zone 1

- 5.1.2.1 Flood Zone 1 is defined as land with a low probability of flooding. It is defined as land which has an annual probability of river and sea flooding of less than 0.1% (1 in 1000).

#### 5.1.3 Flood Zone 2

Flood Zone 2 is described as having a medium probability of flooding. It is defined as land which has an annual probability of river flooding of between 1 per cent (1 in 100) and 0.1 per cent (1 in 1000).

- 5.1.3.1 Table 5-1 summarises the approach to mapping Flood Zone 2.

#### 5.1.4 Flood Zone 3a

- 5.1.4.1 Flood Zone 3a is described as having a high probability of flooding. It is defined as land which has a 1 in 100 or greater annual probability of river flooding. The mapping of Flood Zone 3a does not take into account the presence of any flood defences.

- 5.1.4.2 Table 5-1 summarises the approach to mapping Flood Zone 3a.

#### 5.1.5 Flood Zone 3b

- 5.1.5.1 Flood Zone 3b is also referred to as the functional floodplain. Functional floodplain comprises land where water has to flow or be stored in times of flood. This is defined as:
- Land having a 3.3 per cent (1 in 30) or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or
  - Land that is designed to flood even if it would only flood in more extreme events.

- 5.1.5.2 An important output of this Strategic Flood Risk Assessment (SFRA) is the mapping of the functional floodplain across the borough.
- 5.1.5.3 Where modelled flood extents for a flood event with a 3.3 per cent (1 in 30) annual probability of flooding are available, these have been used to define the functional floodplain. In line with guidance received from the Environment Agency as part of this SFRA, these modelled outlines should be treated as indicative.
- 5.1.5.4 For all other watercourses where detailed hydraulic modelling is not available, all of the existing Flood Zone 3 is considered to be within Flood Zone 3b, ensuring that a conservative approach to flood risk and planning is taken.
- 5.1.5.5 Where a developer believes that their proposed development is not within the functional floodplain as defined by this Strategic Flood Risk Assessment (SFRA), they should provide sufficient detail to support this as part of their site-specific Flood Risk Assessment.

## **5.1.6 Approach to mapping Flood Zones**

- 5.1.6.1 The approach taken to mapping Flood Zones in this Strategic Flood Risk Assessment is outlined in Table 5-1. The Flood Zones are shown in Appendix F.

Table 5-1 Flood Zones defined for each watercourse in Stockport

| Watercourse                                                            | Map Tile Reference | Flood Zone 3b                                                                                                 | Flood Zone 3                                           | Flood Zone 2                                           |
|------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| Upper Mersey<br>(Downstream of the Stockport Road West and Tiviot Way) | C, F, G            | Maximum modelled flood extent for the 3.3 per cent (1 in 30) annual probability event with defences in place. | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |
| River Goyt<br>(Downstream of Marple Bridge)                            | C, D, G, H         | Maximum modelled flood extent for the 3.3 per cent (1 in 30) annual probability event with defences in place. | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |
| River Goyt<br>(Upstream of Marple Bridge)                              | H, I               | Flood Zone 3 as defined by the Flood Map for Planning.                                                        | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |
| Poise Brook<br>(Downstream of Buxton Brook)                            | G                  | Maximum modelled flood extent for the 3.3 per cent (1 in 30) annual probability event with defences in place. | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |
| Black Brook<br>(Downstream of Carnforth Road)                          | B, C               | Maximum modelled flood extent for the 3.3 per cent (1 in 30) annual probability event with defences in place. | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |
| Chorlton Brook<br>(Downstream of Adswold Park)                         | F                  | Maximum modelled flood extent for the 3.3 per cent (1 in 30) annual probability event, undefended event.      | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |

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| <b>Watercourse</b>                    | <b>Map Tile Reference</b> | <b>Flood Zone 3b</b>                                                                                          | <b>Flood Zone 3</b>                                    | <b>Flood Zone 2</b>                                    |
|---------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| River Tame<br>(Downstream of the M60) | C                         | Flood Zone 3 as defined by the Flood Map for Planning.                                                        | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |
| River Etherow                         | D, E                      | Flood Zone 3 as defined by the Flood Map for Planning.                                                        | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |
| Micker Brook                          | F                         | Maximum modelled flood extent for the 3.3 per cent (1 in 30) annual probability event with defences in place. | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |
| Lady Brook                            | F, G, K                   | Flood Zone 3 as defined by the Flood Map for Planning.                                                        | Flood Zone 3 as defined by the Flood Map for Planning. | Flood Zone 2 as defined by the Flood Map for Planning. |

## 5.2 Reservoirs

- 5.2.1.1 Flooding from reservoirs can occur as a result of a failure or breach of the reservoir dam, overtopping of the reservoir dam or emergency releases into the catchment. The Reservoirs Act 1975 requires that any reservoir with a capacity greater than 25,000 cubic metres is registered with the Environment Agency and is subject to a rigorous inspection regime to manage the risks of failure.
- 5.2.1.2 There are three water bodies in Stockport which are registered under the Reservoirs Act. These include Roman Lakes in Marple, the lake at Etherow Country Park in Compstall, and the lakes at Reddish Vale. These reservoirs are shown in Appendix G.
- 5.2.1.3 Additionally, there are several reservoirs located outside of the borough which pose a residual flood risk to Stockport. These reservoirs are located within the headwaters of many of the watercourses which flow through Stockport. The mechanism of flooding from reservoirs in and around Stockport would be as a result of additional flows from a reservoir failure entering these rivers thereby increasing the risk of flooding downstream.
- 5.2.1.4 The Environment Agency Flood Risk from Reservoirs map shows areas that might be flooded if a reservoir were to fail and release the water it holds. The map, shown in Appendix G, illustrates the potential flood extent if reservoirs were to fail and release the water that they hold. The map shows the extent of reservoir flooding when:
- Local rivers are at normal levels (Dry Day)
  - Local rivers have already overflowed their banks (Wet Day)
  - Reservoirs fail during a high river flow scenario (Fluvial Contribution)
- 5.2.1.5 A review of the mapping shows that the reservoir flood extents are predominantly constrained to the River Etherow, River Goyt, River Tame, River Mersey and Micker Brook floodplains. In addition, parts of Portwood, Cheadle and Stockport Town Centre are shown to be at risk.
- 5.2.1.6 Toddbrook Reservoir in Whaley Bridge is owned by the Canal and River Trust. Following heavy rainfall in July and August 2019, part of the spillway collapsed resulting in increased flow over the spillway. The spillway channel ultimately discharges to the River Goyt which enters Stockport at Strines in the south east of the borough before flowing north and west through Marple Bridge to join the River Mersey at Portwood. A full scale emergency response was initiated at the time of the event ensuring that no loss of life occurred.
- 5.2.1.7 Following the event, an independent safety review was undertaken by the government which led to the launch of the Reservoir Safety Reform programme to modernise and strengthen reservoir regulation. In addition, a new spillway has been completed at Toddbrook which will ensure it is resilience for future flooding events and reduce risk to communities downstream.

- 5.2.1.8 Therefore, the Environment Agency Flood Risk from Reservoirs map represents an extreme worst-case scenario of dam breach flooding, and in reality, the chances of a reservoir failing catastrophically in the United Kingdom are extremely remote. This is due to the stringent inspection and maintenance requirements imposed by the Reservoirs Act 1975, as amended by the Flood and Water Management Act 2010. This form of flooding is therefore not considered to pose a significant risk to the borough.

## 5.3 Canals

- 5.3.1.1 The risk of flooding from canals is generally low because of their regulated nature. The main source of flooding from canals results from a breach of raised canal embankments or collapse of a canal reach above culverted sections of a watercourse. Sections of the Macclesfield Canal and the Peak Forest Canal run through the borough. There are a number of aqueducts within the study area, which could pose a potential flood risk. For example, failure of Hatherlow Aqueduct crossing Green Lane or Marple Aqueduct crossing the River Goyt during a flood event could potentially have severe implications for the highway network and increase the flood risk along the River Goyt.
- 5.3.1.2 Appendix H shows assets within the borough which are managed and maintained by the Canal & River Trust.

## 5.4 Groundwater

- 5.4.1.1 Groundwater flooding occurs when groundwater rises to the ground surface. This may happen during winter and/or after long or heavy rainstorms. There are generally two forms of groundwater flooding. The first is referred to as clearwater flooding which happens when groundwater levels rise to the surface in areas where the underlying rocks are permeable. The second type of groundwater flooding is referred to as river-groundwater flooding. This happens when water levels in a river are connected to permeable rocks and soils in river valleys; it can result in flooding in areas which are far from the river even though the river levels are below the riverbanks.
- 5.4.1.2 The British Geological Survey groundwater flooding dataset was obtained and used to review the susceptibility of Stockport to groundwater flooding. This dataset is based on geological and hydrogeological information and has been used to identify areas where geological conditions could enable groundwater flooding to occur and where groundwater may come close to the ground surface. This is a susceptibility dataset and does not indicate hazard or risk, or the likelihood of the occurrence of an event of a particular magnitude.
- 5.4.1.3 The groundwater susceptibility mapping supplied by the British Geological Survey, shown in Figure I.1 in Appendix I, indicates that western areas including Bramhall, Cheadle, Cheadle Hulme, the Heaton, Reddish and Stockport Town Centre have a limited susceptibility to groundwater flooding. Eastern areas of the borough including Compstall, and parts of Hazel Grove, Marple and Mellor also have a low susceptibility to groundwater flooding. However, in some areas, the groundwater susceptibility mapping indicates there are sporadic areas where there is the potential for groundwater flooding to occur at the surface. These areas include the south and east of Hazel Grove, the west of Marple, Hope Valley, and parts of Romiley and Bredbury. The mapping indicates

these locations are susceptible to clearwater flooding, superficial deposits flooding, and a combination of both.

- 5.4.1.4 The Environment Agency Groundwater Source Protection Zones dataset shows areas where groundwater sources used to supply drinking water must be protected from pollution. The Source Protection Zones are shown in Figure I.2 in Appendix I. Zone 1 is the areas immediately around the abstraction point. The area of Zone 2 is based on a combination of distance from the abstraction point, volume of water abstracted and time taken for the water to travel through the underlying rocks. Zone 3 is the area around a supply source within which all the groundwater ends up at the abstraction point.
- 5.4.1.5 A Source Protection Zone associated with the Robinsons Brewery covers much of central Stockport. This is discussed in the paragraph below. The area around Woodford in the south of the borough is also within a Source Protection Zone.
- 5.4.1.6 The Stockport Town Centre Level 2 Strategic Flood Risk Assessment (SFRA) reports that the Robinsons Brewery were licenced to abstract a maximum of 3,637 cubic metres a day of water from the sandstone bedrock aquifers beneath Stockport Town Centre and that it was likely that licenced abstractions were controlling groundwater levels and localised groundwater flood risk. Robinsons are relocating their brewing operations to a site in Bredbury, approximately three miles away, meaning that this groundwater abstraction is no longer in place. Therefore, further analysis and investigation on the potential flood risk implications due to groundwater regime changes in the area should be carried out by those planning development in the area.
- 5.4.1.7 The Upper Mersey Abstraction Licensing Strategy indicates the availability of groundwater across Stockport. Map 2 and Map 3 of the Upper Mersey Abstraction Licensing Strategy indicates Stockport to be an area of groundwater availability.

## 5.5 Surface water

### 5.5.1 Environment Agency Surface Water Flood Map

- 5.5.1.1 Surface water flooding occurs when rainwater does not drain away through the normal drainage pathways or soak into the ground but lies on, or flows over, the ground instead. This Strategic Flood Risk Assessment (SFRA) predominantly uses the Environment Agency Flood Map for Surface Water to map flood risk from surface water. The methods used to generate the Environment Agency mapping do not include specific representation of the underground pipe network. Instead, a drainage rate in millimetres per hour is applied as an ongoing loss within urban areas of the model.
- 5.5.1.2 This mapping defines four levels of flood risk:
- A high risk area has a greater than 3.3 per cent (1 in 30) annual probability of flooding.
  - An area of medium risk has between a 1 per cent (1 in 100) and a 3.3 per cent (1 in 30) annual probability of flooding.
  - An area at low risk has between a 0.1 per cent (1 in 1000) and a 1 per cent (1 in 100) annual probability of flooding.
  - An area at very low risk has a less than a 0.1 per cent (1 in 1000) annual probability of flooding.
- 5.5.1.3 The modelling used to support this mapping does not contain sufficient information for it to be used to determine surface water flood risk to individual properties.
- 5.5.1.4 Stockport has large, urbanised areas coupled with areas with a rural character and varied landscape. However, surface water flood risk is a key issue across much of the borough. The ground conditions across Stockport affect how surface water behaves. The Town Centre, Edgeley and the northern part of the borough mainly have sandstone beneath them, while the south has a mix of sands and clays. In the east, clay is much more common. Clay does not let water pass through as easily as sand or sandstone, so water tends to sit in the soil above it. This leads to the ground becoming saturated more quickly and increases surface water runoff.
- 5.5.1.5 Irrespective of the ground conditions, the risk of surface water runoff across the borough is heightened further due to urbanisation. Urbanisation increases the area of impermeable surfaces including tarmac, concrete and paving. Impermeable surfaces prevent rainwater from infiltrating into the underlying ground, causing large increases in the volume and frequency of surface water runoff.
- 5.5.1.6 The Stockport Local Flood Risk Management Strategy states that the potential for surface water flooding is predicted mainly in the Cheadle and Gatley settlements.
- 5.5.1.7 Appendix J shows the risk of surface water flooding across the borough.

## 5.5.2 Critical Drainage Areas

- 5.5.2.1 The Stockport Council Local Guidance on Flood Risk Assessment and Drainage Strategies states that the borough is one of the highest flood risk regions in the northwest of England in terms of surface water and sewer flooding. Therefore, Stockport Council defines the entire borough as a Critical Drainage Area. Surface water in Critical Drainage Areas needs to be managed to a higher standard than would usually be required.
- 5.5.2.2 The Environment Agency Flood Map for Surface Water shows areas throughout the borough are at risk of surface water flooding. Whilst there are some clear surface water flow routes associated with existing watercourses, there are also areas of surface water flood risk distributed across the entire borough. Given the existing challenges which surface water flooding presents across Stockport, a stringent, integrated approach to managing surface water is needed to ensure that development can be accommodated sustainably now and in the future.
- 5.5.2.3 It is therefore recommended that continuing to consider the whole borough as a Critical Drainage Area will facilitate this integrated approach to water management by ensuring clarity and consistency in the policies applied. It is recognised that there will be different approaches to surface water management across the borough however these approaches must work together holistically to achieve widescale benefits.

## 5.6 Sewers

- 5.6.1.1 Sewer flooding most often occurs during severe rainfall events, where heavy and intense downpours overwhelm the drainage system and sewer network. As reported in the Level 1 Update and Stockport Town Centre Level 2 Strategic Flood Risk Assessment (SFRA) (2024) large parts of Stockport are served by older sewerage infrastructure that can struggle to cope with high volumes of water and can become easily blocked. When this happens, water may back up through drains and overflow into nearby homes, businesses, or public areas.
- 5.6.1.2 Sewer flooding in Stockport can be triggered by several factors, including blockages, overloaded pipes, and surcharging of the sewer system during intense storms. The Level 2 Stockport SFRA (2024) and the Level 1 SFRA for Greater Manchester, as well as the Stockport Council Section 19 Flood Investigation reports, highlight certain areas as being more vulnerable to sewer flooding. These include the Hempshaw Brook corridor, Green Lane, Romiley, and areas with steeper streets or drainage bottlenecks that make it harder for water to drain away quickly.
- 5.6.1.3 Overall, sewer flooding remains a recognised local flood risk across Stockport, affecting both the Town Centre and residential neighbourhoods. The likelihood of sewer flooding increases during periods of severe rainfall, when the drainage network can rapidly become overwhelmed by the volume of water entering it.

## 6 Impact of climate change

### 6.1 Context

- 6.1.1.1 Climate change is the long-term global shift in average weather patterns which is occurring as a result of increasing levels of carbon dioxide in the atmosphere. However, it is not only the change in average weather patterns which present challenges; in the United Kingdom extreme weather is becoming more common.
- 6.1.1.2 The Stockport Climate and Nature Strategy 2025 to 2030 establishes a borough-wide framework to reduce greenhouse gas emissions, enhance biodiversity, and strengthen climate resilience. The strategy prioritises nature-based solutions, expanding renewable energy generation, and sustainable transport, recognising their role in managing climate risks, including heatwaves and flooding.
- 6.1.1.3 This Strategic Flood Risk Assessment (SFRA) will support the Climate and Nature Strategy by promoting the development of multifunctional green space which contributes to the management of flood risk whilst also providing opportunities to improve natural habitats.

### 6.2 Rivers

- 6.2.1.1 The predicted impact of climate change on peak river flows is based on the United Kingdom Climate Projections which provides guidance on increases in river flows, as a percentage, at the river management catchment level. Stockport is located in the Upper Mersey Management Catchment. Table 6-1 lists the predicted increase in peak river flows for the Upper Mersey Management Catchment. Three different climate change allowances are provided for each future timeframe. These allowances are based on percentiles. A percentile is a statistical measure which shows where a value lies within a dataset. Using percentiles to inform the emissions scenarios provides a more robust assessment of risks associated with climate change.
- 6.2.1.2 The Central allowance is based on the fiftieth percentile. This means that there is a 50 per cent chance that the increase in river flows will be lower than the projected value, and a 50 per cent chance that the increase in river flows will be higher than the projected value.
- 6.2.1.3 The Higher Central allowance is based on the seventieth percentile. This means that there is a 70 per cent chance that the increase in river flows will be lower than the projected value, and a 30 per cent chance that the increase in river flows will be higher than the projected value.
- 6.2.1.4 The Upper End allowance is based on the ninety fifth percentile. This means that there is a 95 per cent chance that the increase in river flows will be lower than the projected value, and a 5 per cent chance that the increase in river flows will be higher than the projected value. This represents the most extreme climate change scenario.

Table 6-1 Climate change peak river flow allowances

| Allowance      | Total potential change anticipated from 2015 to 2039 | Total potential change anticipated from 2040 to 2069 | Total potential change anticipated from 2070 to 2115 |
|----------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| Central        | 13 per cent                                          | 22 per cent                                          | 41 per cent                                          |
| Higher Central | 17 per cent                                          | 31 per cent                                          | 53 per cent                                          |
| Upper End      | 27 per cent                                          | 51 per cent                                          | 85 per cent                                          |

6.2.1.5 The Environment Agency Flood Map for Planning - Flood Zones with Climate Change dataset shows how the combined extent of Flood Zones 2 and 3 could increase with climate change over the next century, ignoring the benefits of any existing flood defences. The dataset assumes that no changes to flood defences or land-use will occur in future. The Flood Zones plus climate change mapping uses the central allowance for the timeframe 2070 to 2125.

6.2.1.6 At Compstall Mills, data from the Flood Map for Planning – Flood Zones with Climate Change is unavailable. Consultation with the Environment Agency confirmed that this was due to issues merging data from national and local hydraulic models. An update to the mapping will be published in September 2026. Figure 3 shows the proposed extents for the Flood Map for Planning without climate change as supplied by the Environment Agency in June 2026. This should be treated as indicative until published.

Figure 3 Environment Agency draft Flood Map for Planning

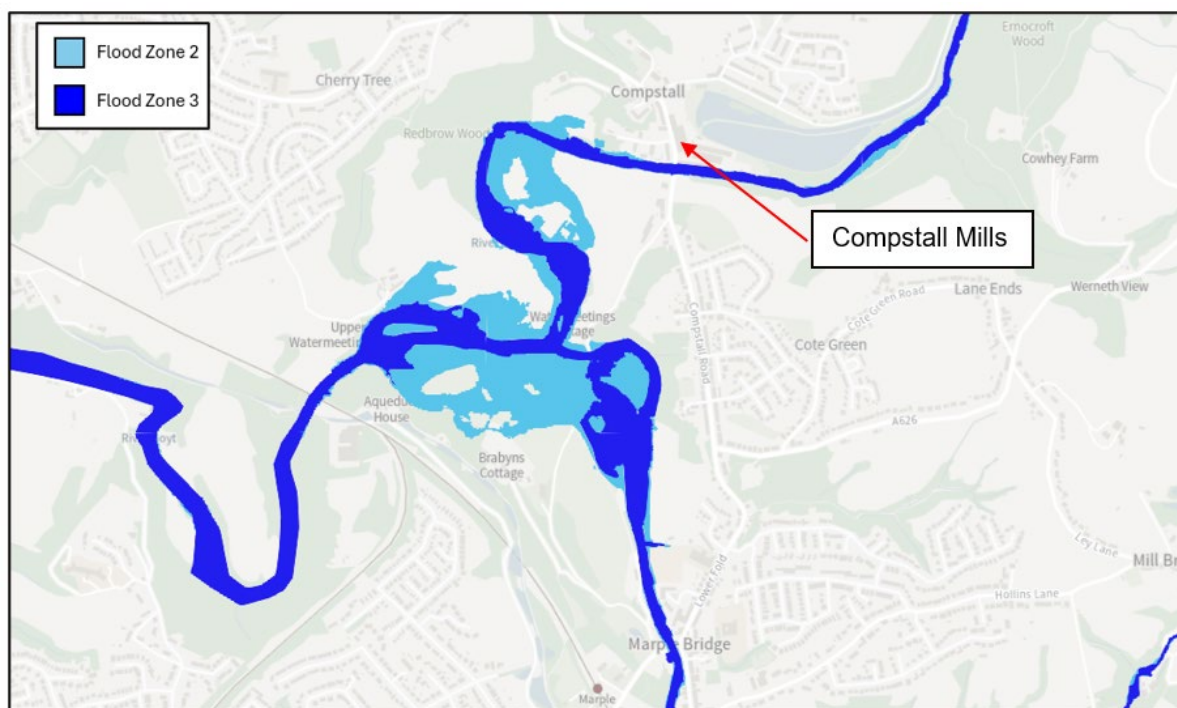
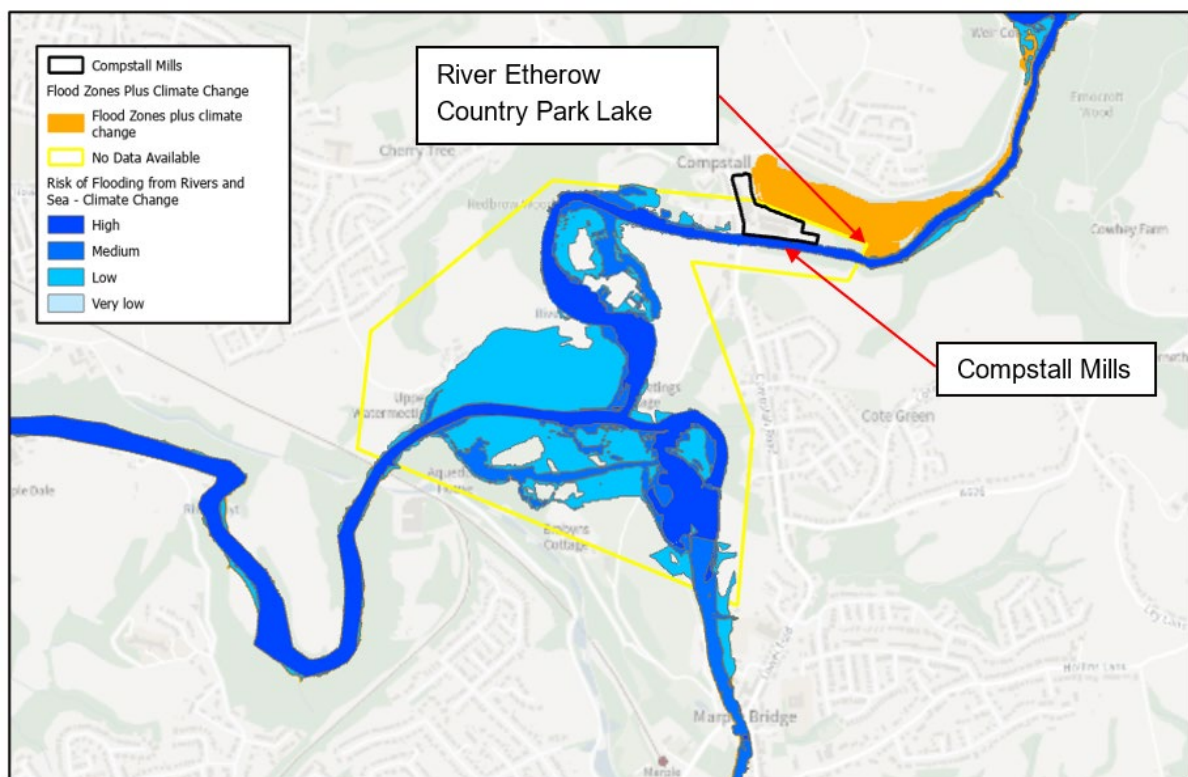


Image source: Environment Agency, June 2026

- 6.2.1.7 Upstream and downstream of this area, published Flood Map for Planning – Flood Zones with Climate Change outlines are similar to those excluding climate change and to the Risk of Flooding from Rivers and Sea with climate change. The only exception to this is the inclusion of the Etherow Country Park Lake itself within the flood zones.
- 6.2.1.8 Therefore, in the absence of the Flood Map for Planning – Flood Zones with Climate Change mapping in this area, the Risk of Flooding from Rivers and Sea with climate change mapping has been used to assess the likely impact of climate change. Given the similarities in extents described above and as this mapping is very similar to the proposed Flood Map for Planning mapping at Compstall Mills, this approach is considered both robust and proportionate for the SFRA at this stage.

Figure 4 Environment Agency Risk of Flooding from Rivers and Sea with climate change



- 6.2.1.9 Figure K.1 in Appendix K compares the Flood Zones plus climate change mapping to the present-day Flood Zones 2, 3a and 3b. Note that at Compstall Mills the Risk of Flooding from Rivers and Sea plus climate change outlines are shown.
- 6.2.1.10 The maps show that the risk of flooding from rivers is predicted to increase along all major watercourses in the borough. Although much of the increase is predicted to occur along areas of green space associated with river corridors, increases along the Micker Brook and Chorlton Brook in Cheadle do have the potential to encroach into urban areas. Small areas within Bramhall, Hazel Grove, Marple Bridge and Portwood are at increased risk from river flooding in the future. However, this is unlikely to have a significant impact on the regulation 18 proposed site allocations.

## 6.3 Surface water

- 6.3.1.1 The United Kingdom climate change predictions published by the Environment Agency indicate that wetter winters and more intense rainfall are expected. These impacts are likely to increase surface water runoff and result in more localised flooding. This will place an increased number of people, properties, and infrastructure at risk of experiencing surface water flooding. These predicted increases in surface water runoff due to climate change will also increase the pressure on sewers and the drainage network, thus increasing the probability of sewer-related flooding.
- 6.3.1.2 The Environment Agency Risk of Flooding from Surface Water map shows how the risk of surface water flooding is expected to increase in the future due to climate change.
- 6.3.1.3 The Risk of Flooding from Surface Water map classifies the risk of flooding into four likelihood bands:
- The high risk band has a greater than a 3.3 per cent (1 in 30) annual probability of flooding.
  - The medium risk band has between a 1 per cent (1 in 100) and 3.3 per cent (1 in 30) annual probability of flooding.
  - The low risk band has between a 0.1 per cent (1 in 1000) and 1 per cent (1 in 100) annual probability of flooding.
  - The very low risk band has less than a 0.1 per cent (1 in 1000) annual probability of flooding.
- 6.3.1.4 Figure K.2 in Appendix K compares the risk of surface water flooding across the borough in both the present day (in the year 2026) and the future due to climate change for the high risk band.
- 6.3.1.5 Figure K.3 in Appendix K compares the risk of surface water flooding across the borough in both the present day (in the year 2026) and the future due to climate change for the medium risk band.
- 6.3.1.6 The maps show that the risk of flooding from surface water is predicted to increase across all parts of the borough as a result of climate change. All future development sites should undertake a detailed review of the likely impacts of climate change on surface water flooding to ensure they remain resilient to future risk.

## 6.4 Reservoirs

- 6.4.1.1 The Environment Agency Risk of Flooding from Reservoirs Maximum Flood Extent dataset does not take climate change into account. Where a site-specific Flood Risk Assessment identifies that the risk of flooding from reservoirs presents a risk to the site, consultation with the reservoir undertaker and the Environment Agency should be carried out to agree the most appropriate method of assessing the present and future risk of flooding from the subject reservoir.

## 6.5 Groundwater

- 6.5.1.1 Rising temperatures and variation in rainfall patterns will change the way in which aquifers are recharged. The groundwater recharge season typically runs from September to April. Climate change may result in a reduction in the length of this season to between three and four months. However, more recharge may occur within this shorter period, leading to more rapid changes in groundwater levels. The potential for higher peaks in groundwater level and more flooding, driven by rainfall recharge may increase due to climate change.
- 6.5.1.2 Understanding the groundwater response to the changing weather patterns attributed to climate change is complex and work carried out by the British Geological Survey as part of the Future Flows and Groundwater Levels project did not identify a clear pattern of spatial changes across all future climate scenarios.
- 6.5.1.3 There are currently no groundwater flood alert areas across the borough. It is recommended that the Environment Agency Flood Alert Areas dataset is periodically reviewed to check whether any groundwater flood alert areas have been issued across the borough. It is further recommended that the British Geological Survey groundwater flooding dataset is periodically reviewed to identify any changes in groundwater flood risk across the borough.

## 7 Flood risk management

### 7.1 Flood warning

- 7.1.1.1 The Environment Agency provide a live flood warning service and it is recommended that all property owners within an Environment Agency flood warning area register for this service. The flood warning areas and flood alert areas covering the borough are listed in Table 7-1 and Table 7-2 respectively. The Environment Agency outline in their guide to flood alerts and warnings that a flood alert means flooding is possible and those in the affected area should make preparations should the flood occur. A flood warning means that flooding is expected and those in the affected area should take direct action to ensure their safety.

Table 7-1 Flood warning areas in Stockport

| Flood warning area name                                             | Flood warning area code | Description                                                                                                             |
|---------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------|
| River Tame at Denton, Hyde and Woodley                              | 013FWFGM63              | Areas at risk include properties in and around Manchester Road, Watson Street, and Riverside Kennels.                   |
| River Tame at Meadow Industrial Estate                              | 013FWFGM30              | Meadow Industrial Estate between the M60 and Tiviot Way.                                                                |
| River Goyt at Marple Bridge                                         | 013FWFGM65              | Areas at risk include properties on Brabyns Row, Grayston Court, Longhurst Lane and Low Lea Road.                       |
| River Etherow at Compstall                                          | 013FWFGM57              | Areas at risk include Etherow Country Park, Brabyns Brow, and low lying land and properties in these areas.             |
| River Goyt from Marple Dale to Offerton                             | 013FWFGM58              | Areas at risk include properties on Bongs Road, Dooley Lane, Vale Road and Chadkirk Business Park.                      |
| Poise Brook at Offerton and Hazel Grove                             | 013FWFGM74              | Areas at risk include Holiday Lane, Bean Leach Road, Shearwater Road, Ashton Place, Hazelwood Road and Torkington Park. |
| River Mersey at Cheadle Wood and Ford Lane                          | 013FWFGM32              | Cheadle Bridge, Cheadle Wood Farm, Parrswood Sports Pitches and Waterside Hotel & Leisure Club.                         |
| River Mersey at East Didsbury, Millgate Lane and Stenner Lane areas | 013FWFGM33A             | Fields at Bridge Farm to the north of the M60.                                                                          |
| Lady Brook at Bramhall Green                                        | 013FWFGM105             | Properties south of Bramhall Bridge, East Lodge, Brookdale Club and Theatre, and properties along Bridge Lane.          |

| <b>Flood warning area name</b> | <b>Flood warning area code</b> | <b>Description</b>                                                                                                                   |
|--------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Micker Brook at Cheadle Hulme  | 013FWFGM108                    | Properties on Sandringham Road, Warwick Close including First Steps Orrishmere Pre-School, Tattonmere Gardens, and Radnormere Drive. |

Table 7-2 Flood alert areas in Stockport

| <b>Flood alert area name</b>                                                                         | <b>Flood alert area code</b> | <b>Description</b>                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| River Mersey Uplands Catchment                                                                       | 013WAFMU                     | The River Goyt, the River Tame, the River Sett and the River Etherow, and their tributaries.<br><br>Areas around Saddleworth, Mossley, New Mills, Hazel Grove, Marple, Romiley, and Hyde.                            |
| Middle River Mersey catchment including areas near Bramhall, Stockport, Sale, Altrincham and Urmston | 013WAFMM                     | The middle River Mersey catchment includes Micker, Black, Sinderland and Poynton Brooks and their tributaries. Other locations which may be affected are Stretford, Gatley, Cheadle Hulme and Cheadle.               |
| River Bollin catchment, including Knutsford, Wilmslow, Macclesfield and Bollington.                  | 013WAFBO                     | The River Bollin catchment includes the rivers Bollin, Dean and Pedley, the Birkin and Mobberley brooks, and their tributaries. Areas around Knutsford, Wilmslow, Hale, Macclesfield and Bollington may be affected. |
| Micker Brook at Demmings Industrial Estate and surrounding area                                      | 013WAFMM                     | Properties on Demmings Industrial Estate, Old Wool Lane, The Demmings, Pickmere Gardens, Queens Road, Birtles Close, Brookfield Road, Demmings Road, Councillor Lane, Oak Road, and Ashfield Road.                   |
| Micker Brook at Broadway and Broadway Avenue                                                         | 013WAFMM                     | Properties on Broadway Avenue, Broadway and Wilmslow Road.                                                                                                                                                           |
| Chorlton Brook at Cheadle, Sports Field, Palmer Avenue and Cuthbert Road areas                       | 013WAFMM                     | Areas at risk include the sports field, some properties on Aber Road, Emlyn Grove, Carrs Road, Palmer Avenue, Cuthbert Road, and Stockport Road.                                                                     |

## 7.2 Features and structures

- 7.2.1.1 The Planning Practice Guidance states that the presence of existing flood risk management infrastructure should be initially ignored in the application of the Sequential Test so long as the long-term funding, maintenance and renewal of any structure is uncertain. Furthermore, climate change will impact on the level of protection that flood risk management infrastructure will offer throughout the lifetime of the development.
- 7.2.1.2 It is then appropriate to consider the role of flood risk management infrastructure in the variation of risk within high and medium flood risk areas. Information on flood depth, flood velocity and flood hazard should be obtained or generated to inform this assessment.

### 7.2.2 Flood defences

- 7.2.2.1 The Environment Agency Asset Information Management System dataset shows the distribution of flood defences currently owned, managed or inspected by the Environment Agency in Stockport. The Standard of Protection afforded by a flood defences is described in years. For example, a flood defence which has a Standard of Protection of five years is expected to protect surrounding properties and infrastructure from a flood event with a 20 per cent (1 in 5) annual probability of flooding. A description of the flood defences within the borough is provided below. Appendix F shows the locations of flood defences in the borough.
- 7.2.2.2 The dataset indicates that all the main rivers in Stockport, as a minimum, benefit from natural high ground with an indicative Standard of Protection of five years. Multiple watercourses also benefit from engineered high ground with a Standard of Protection of five years including Chorlton Brook, the River Mersey, Hempshaw Brook, Poise Brook and the River Etherow.
- 7.2.2.3 The River Mersey benefits from defences in the form of embankments with a design Standard of Protection of 50 years (protection from a flood event with a 2 per cent (1 in 50) annual probability of flooding) downstream of Stockport Town Centre.
- 7.2.2.4 The Level 2 Stockport Strategic Flood Risk Assessment (SFRA) (2024) reports that most of the defences across the borough are privately owned and as such the Environment Agency hold no existing information on their condition. The River Mersey Strategy Project states that some of these defences and assets are approaching the end of their design life. The existing Standard of Protection of these defences and assets will not account for changes in the future due to climate change. Therefore, there is an acknowledged residual risk that the lifetime of the defences would be lower than anticipated and therefore the likelihood of failure higher.

## 7.2.3 Flood risk management measures

7.2.3.1 Stockport Council provided locations and details of flood risk management structures across the borough. Thirteen flood risk management structures were listed within Stockport. These structures are summarised in Table 7-3 below.

*Table 7-3 Summary of flood risk management measures*

| Structure                   | Location                                  | Description                                                                                                                                                                                                                                                                                                    |
|-----------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reservoir                   | Compstall Mill                            | River Etherow Country Park Lake and Feeder Canal. Located on the right bank on the River Etherow near Compstall Mill.                                                                                                                                                                                          |
| Overland flood flow channel | Cataract Bridge, Mellor                   | Channel to carry excess flow during flood events. This overland flood flow channel has previously become obstructed, leading to insufficient channel capacity and localised flooding, as reported in Section 19 report from September 2017.                                                                    |
| Trash screen                | Cataract Bridge, Mellor                   | Trash screen on the inlet of a culvert within a residential development. This trash screen has become blocked on two separate occasions, leading to water flowing overland around the culvert causing localised flooding. These incidents are reported in Section 19 reports from May 2012 and September 2017. |
| Trash screen                | Cross Lane, Marple                        | Trash screen on inlet of a culvert for Marple Brook where it flows underneath Cross Lane.                                                                                                                                                                                                                      |
| Reservoir                   | Reddish Vale                              | Two reservoirs located on the right bank of the River Tame, immediately downstream of where it crosses the borough boundary.                                                                                                                                                                                   |
| Water storage               | Oakhurst Drive Recreation Ground, Cheadle | Water storage area on playing fields.                                                                                                                                                                                                                                                                          |
| Water storage               | Lavington Avenue Playing Fields, Cheadle  | Water storage area on playing fields.                                                                                                                                                                                                                                                                          |
| Trash screen                | St Davids Road, Cheadle                   | Trash screen on the inlet of the St Davids Road culvert.                                                                                                                                                                                                                                                       |
| Trash screen                | Strines Road Recreation Ground            | Trash screen on the inlet of a culvert underneath Strines Road, Marple.                                                                                                                                                                                                                                        |
| Trash screen                | Peak Bank, Romiley                        | Two trash screens on the inlet of the Peak Bank Culvert.                                                                                                                                                                                                                                                       |
| Trash screen                | Peak Bank, Romiley                        | Trash screen on the inlet of Waterside culvert.                                                                                                                                                                                                                                                                |
| Trash screen                | Bredbury                                  | Trash screen on inlet of Vernon Road culvert.                                                                                                                                                                                                                                                                  |
| Trash screen                | Adswold                                   | Trash screen on inlet of Dorset Avenue culvert. This trash screen has previously become blocked leading to flooding in gardens of the nearby residential properties, as reported in the Section 19 report from February 2016.                                                                                  |

## 7.3 Flood risk management plans

- 7.3.1.1 National scale flood risk management plans outline how flood risk will be strategically managed across the country as coordinated by the Environment Agency, Lead Local Flood Authorities and other Risk Management Authorities. Their core purpose is to establish national objectives and measures for reducing the likelihood and consequences of flooding. Measures which apply to specific river basins district and their flood risk areas are outlined in local flood risk management plans.

### **North West River Basin Flood Risk Management Plan 2021 to 2027**

- 7.3.1.2 Stockport is located in the North West River Basin District and is therefore covered by the North West River Basin District Flood Risk Management Plan 2021 to 2027. This plan describes the North West as dealing with a long history of significant flooding driven by multiple sources including rivers, surface water and sewers.
- 7.3.1.3 For the 2021 to 2027 cycle, the plan focuses on strengthening resilience to climate change through collaborative, catchment-based planning involving the Environment Agency, Lead Local Flood Authorities, water companies and local authorities.
- 7.3.1.4 The plan is structured around objectives tailored to individual catchments and recognises Stockport Council as a Risk Management Authority and partner in preparation of the plan. Objectives to reduce flood risk across the area include improving flood forecasting, delivering nature-based solutions, improving drainage and infrastructure resilience and supporting long term land and water management. The recommendations and guidance within this Strategic Flood Risk Assessment (SFRA) support and contribute to the success of this plan.

### **Local Flood Risk Management Strategy**

- 7.3.1.5 The 2016 Stockport Local Flood Risk Management Strategy outlines how Stockport Council manages flood risk across the borough. It promotes a collaborative, risk-based approach to reducing the likelihood and impact of flooding. It focuses on educating communities, raising public awareness, and implementing measures to manage and reduce flood risk.

## **8 Addressing flood risk in development**

### **8.1 Potential flood risk management opportunities**

#### **8.1.1 Upstream Storage**

- 8.1.1.1 Opportunities for catchment measures for potential floodwater storage are currently being explored by Stockport Council in collaboration with other key stakeholders, including the Environment Agency, Mersey Rivers Trust and National Trust. Measures under consideration include managing the volume and quality of floodwaters, as well as natural flood management techniques. However, there remains a significant amount of work to be undertaken to fully explore the feasibility and determine the most appropriate measures and locations for any upstream storage.

#### **8.1.2 Greater Manchester Integrated Water Management Plan**

- 8.1.2.1 The Living Integrated Opportunity Programme developed as part of the Integrated Water Management Plan will join up opportunities that align spatially with the aim of delivering best value investments and solutions. Businesses and stakeholders undertaking development in Stockport should reach out to the Greater Manchester Combined Authority to ensure that site proposals support and where possible enhance the objectives of this programme.
- 8.1.2.2 Developers should also familiarise themselves with the wider aims and objectives of the Integrated Water Management Plan to make sure that all their development plans and proposals work towards the long term ambition of transforming the management of water as a natural asset.

#### **8.1.3 Stockport Local Plan**

- 8.1.3.1 The Stockport Local Plan is currently under development. Once it has been adopted, all new developments should take account of any flood risk and surface water drainage management policies which are set out in the Local Plan.

#### **8.1.4 Stockport Integrated Drainage Strategy**

- 8.1.4.1 The Stockport Integrated Drainage Strategy will set out the options for the sustainable management of surface water in the Town Centre at a neighbourhood scale. All new development should consider the management of surface water at the start of the design process, setting out how source control will contribute to the site proposals. In doing so, positive outcomes for the site both environmentally and economically will be achieved.
- 8.1.4.2 New development must ensure that all site proposals are consistent with and contribute positively to achieving the aims and objectives of the Integrated Drainage Strategy.

## 8.1.5 Greater Manchester's Sustainable Drainage Design Guide

- 8.1.5.1 The Greater Manchester Sustainable Drainage Design Guide provides comprehensive technical guidance for the design, delivery and long-term maintenance of Sustainable Drainage Systems (SuDS) within highways, streets and public spaces across Greater Manchester. Adopted by the Greater Manchester Combined Authority, the guide promotes managing surface water as close to source as possible through green and blue infrastructure that mimics natural drainage processes.
- 8.1.5.2 It sets out core SuDS principles, including the drainage hierarchy and management train approach, and supports delivery of multiple benefits beyond flood risk reduction, such as improved water quality, biodiversity net gain, urban cooling, air quality, amenity, and public health. The guidance places particular emphasis on retrofit SuDS in constrained urban environments, encouraging scalable, buildable and adoptable solutions using standard materials that are resilient to climate change and suitable for long-term maintenance.
- 8.1.5.3 It complements the guidance set out by Transport for Greater Manchester in their 'Streets for All' strategy by integrating climate resilience, ecological enhancement and water management into the design and regeneration of the streets of Greater Manchester.

## 8.2 Future development

### 8.2.1 The Sequential Test

- 8.2.1.1 Boundaries for 37 residential development sites with a yield of 10,635 new homes were supplied for use in this Strategic Flood Risk Assessment (SFRA), together with an allowance of around 8,000 new homes being proposed across the town centre living area and two employment sites providing a minimum of 107,000 square metres of floorspace.
- 8.2.1.2 Stockport Council, supported by developers as appropriate, should carry out the Sequential Test where needed. A Sequential Test is required for major and non-major developments if any proposed building, access and escape route, land-raising or other vulnerable element will be:
- In Flood Zones 2 or 3.
  - In Flood Zone 3b as long as the development type is compatible as set out in Annex 3 of the National Planning Policy Framework.
  - Within Flood Zones plus climate change, showing it is at increased risk of flooding from rivers and sea in the future.
  - Within Flood Zone 1 and the SFRA shows it will be at increased risk of flooding during its lifetime.
  - Subject to sources of flooding other than rivers and sea.

- 8.2.1.3 For sites which are in Flood Zone 1 but are at risk of other sources of flooding, for example surface water and sewer flooding, a proportionate approach should be taken. As set out in the Flood Risk and Coastal Change Planning Practice Guidance, where a site-specific flood risk assessment demonstrates clearly that the proposed layout, design and mitigation measures would ensure the site remains safe from current and future flood risk for the lifetime of the development, without increasing flood risk elsewhere, then the Sequential Test need not be applied.

## 8.2.2 The Exception Test

- 8.2.2.1 If it is not possible for development to be located in Flood Zone 1, the Exception Test may have to be applied. For the Exception Test to be passed, it should be demonstrated that:

- The development would provide wider sustainability benefits to the community that outweigh the flood risk; and
- The development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

- 8.2.2.2 Residential development is considered more vulnerable under the National Planning Policy Framework. For residential development within Flood Zone 3a, the Exception Test would be required to demonstrate the development delivers wider sustainability benefits and would be safe from flooding for its lifetime. However, following a sequential approach to planning should ensure that residential sites are not located within Flood Zone 3a, therefore omitting the need for the Exception Test. Should residential development be located within Flood Zone 2, the Sequential Test must be undertaken to demonstrate the development could not have been located elsewhere.

## 8.2.3 Sites in Fluvial Flood Zones 2 and 3

- 8.2.3.1 There are currently six regulation 18 proposed site allocations which are partially or entirely located in Flood Zones 2 or 3 in the present day, when climate change is not taken into account. These are listed in Table 8-1 below and shown in Appendix D. The addition of climate change to the Flood Zones does not place any additional regulation 18 proposed site allocations into Flood Zones 2 or 3. Please note that Woodford Garden Village extension has very recently been granted planning permission upon appeal.

Table 8-1 Regulation 18 proposed site allocations which are partially or entirely located in fluvial Flood Zones 2 or 3

| Site                              | Total proposed housing yield | Total proposed area | Percentage of the proposed area in Flood Zone 2 | Percentage of the proposed area in Flood Zone 3 |
|-----------------------------------|------------------------------|---------------------|-------------------------------------------------|-------------------------------------------------|
| Brookfield Business Park          | 162 dwellings                | 5.5 hectares        | 56 percent                                      | 14 percent                                      |
| Compstall Mills                   | 130 dwellings                | 1.6 hectares        | Less than 1                                     | 40 percent*                                     |
| Woodford Garden Village Extension | 545 dwellings                | 29 hectares         | Less than one percent                           | Less than one percent                           |
| Sandown Road                      | 300 dwellings                | 14.9 hectares       | Less than one percent                           | Less than one percent                           |
| Cow Lane                          | 500 dwellings                | 20.7 hectares       | Two percent                                     | Two percent                                     |
| Heald Green East                  | 900 dwellings                | 42.6 hectares       | Two percent                                     | Two percent                                     |

\*An update to the Flood Map for Planning is expected in September 2026

- 8.2.3.2 These sites are at least partially located within Flood Zone 3. As per the National Planning Policy Framework, residential development is not permitted in Flood Zone 3 and therefore development within the site would need to be outside of Flood Zone 3. All except two of these sites are large enough that development within the site boundary could avoid Flood Zones 2 and 3, with all development directed towards Flood Zone 1.
- 8.2.3.3 Brookfield Business Park is an existing brownfield site which is still in active use. Approximately 70 per cent of the site is within Flood Zones 2 and 3 associated with the Micker Brook. If this site is shown to pass the Sequential Test, it should be subject to a Level 2 Strategic Flood Risk Assessment which provides a detailed and site specific evaluation of the flood hazards. This should be used to inform a site-specific Flood Risk Assessment in line with the requirements set out in the Flood Risk and Coastal Change Planning Policy Guidance. If the site layout as proposed does not pass the Sequential Test, steps should be taken to reduce the number of housing units, reconfigure the type of housing unit or consider whether the site could be developed for another use.
- 8.2.3.4 Compstall Mills is an existing brownfield site which has previously been subject to residential planning permission although this has now lapsed. The conservative approach taken to mapping the functional floodplain in this SFRA shows around 40% of the site to be in flood zone 3b which would make the site incompatible with the proposed use. However, the Risk of Flooding from Rivers and Sea mapping does not place the site at risk of fluvial flooding. Consultation with the Environment Agency as part of this SFRA indicated that there had been some data challenges in creating the Flood Map for Planning outlines in this location and an update is expected in September 2026. This should be reviewed to fully understand the flood risk at this site. If the site remains in Flood Zone 3, the Sequential Test must be passed. Residential development is then only permitted if the Exception Test is passed. If this site is shown to pass the Sequential

Test, it should be subject to a Level 2 Strategic Flood Risk Assessment which provides a detailed and site specific evaluation of the flood hazards. A site-specific Flood Risk Assessment should be prepared to document this. As above, if the site is not considered suitable for development in its current form, a review of proposals should be undertaken.

#### **8.2.4 Site in fluvial Flood Zone 1 which are at risk of surface water flooding**

8.2.4.1 Proposed development in fluvial Flood Zone 1 which is at risk of surface water flooding requires a site-specific Flood Risk Assessment.

8.2.4.2 The Flood Risk and Coastal Change Planning Practice Guidance, states that developments solely at risk of surface water flooding may avoid a requirement for the Sequential Test if a site-specific Flood Risk Assessment demonstrates they can be made safe without increasing risk elsewhere over the lifetime of the development.

#### **8.2.5 Sites in fluvial Flood Zone 1 which are greater than one hectare**

8.2.5.1 Proposed development sites which are greater than one hectare and located in fluvial Flood Zone 1 require a site-specific Flood Risk Assessment. There are 31 proposed development sites which are located in Flood Zone 1 which are greater than one hectare. For the majority of these proposed development sites, it is considered that development could be accommodated, taking a sequential approach to the layout to avoid the areas of these sites which are shown to be at risk of flooding from surface water. In addition, areas at risk of surface water flooding across these proposed developments can be managed using suitable drainage strategies meaning that development could be accommodated at these sites.

8.2.5.2 However, there are five of the regulation 18 proposed site allocations which are associated with larger areas of surface water flood risk as described below. These sites are all proposed for residential development.

8.2.5.3 At the Former Cheadle Brickworks, the surface water flooding is shown to pond in areas of lower elevation associated with previous workings. Development of the site should ensure that any existing surface water storage removed through the development of the site is appropriately mitigated for to ensure that flood risk to the surrounding areas is not increased.

8.2.5.4 At the Former Offerton High School site, surface water flood risk is predominantly associated with previous building footprints and infrastructure. A surface water drainage strategy which demonstrates that the new development will not increase flood risk to the surrounding area will be required.

8.2.5.5 The Jenny Lane site in Woodford is currently greenfield and surface water flooding is associated with areas which can be seen to store water at present. As this site is currently undeveloped, detailed analysis and planning will be required to develop a surface water drainage strategy which can accommodate the planned development whilst also managing any increases in offsite flood risk as a result.

- 8.2.5.6 The Chester Road site in Woodford is currently greenfield. Surface water flooding is predicted in isolated areas but also in areas which join up to form surface water flow routes outside of the site. As this site is currently undeveloped, detailed analysis and planning will be required to develop a surface water drainage strategy which can accommodate the planned development whilst also managing any increases in offsite flood risk as a result.
- 8.2.5.7 Detailed analysis of surface water flood risk at Compstall Mills should be undertaken to understand the flood pathways and inform a suitable surface water drainage strategy. This must be considered alongside fluvial flood risk as, when taking both sources of flood risk into account, a significant proportion of the site is at risk of flooding.
- 8.2.5.8 Mitigation measures that could be used as part of site wider surface water drainage strategies are discussed in Section 8.2.9.

## **8.2.6 Sites in fluvial Flood Zone 1 which are less than one hectare**

- 8.2.6.1 There are two sites located in Flood Zone 1 which are less than one hectare. Sites in Flood Zone 1 that are less than one hectare require a Flood Risk Assessment if they are in a Critical Drainage Area (CDA) or if the Environment Agency [Flood Map for Planning](#) shows there is a surface water flood risk. Stockport is identified as a CDA due to the combined fluvial, surface water, and sewer flooding risk. Therefore, the following sites require a site-specific Flood Risk Assessment, as outlined in Section 8.2.8 and the Stockport CDA policy, despite not shown to be at risk of flooding from surface water on the Environment Agency [Surface Water Flood Map](#):
- John Street, Hazel Grove: 109 dwellings across 0.5 hectares
  - Cheadle Hulme Station: 125 dwellings across 0.5 hectares
- 8.2.6.2 This Strategic Flood Risk Assessment (SFRA) in line with the [national standards for sustainable drainage systems](#) recommends that all development sites should promote the sustainable management of surface water, regardless of their size or Flood Zone classification.
- 8.2.6.3 The regulation 18 draft of the Local Plan sets out in policy that it requires a site-specific Flood Risk Assessment to be produced for all sites over 0.5 hectares.
- 8.2.6.4 This SFRA also recommends that a surface water drainage statement should be prepared and submitted to Stockport Council for consideration for sites smaller than 0.5 hectares.

- 8.2.6.5 The surface water drainage statement should take a proportionate approach in line with the scale of development to demonstrate that sustainable surface water management principles have been applied to the site design and that suitable arrangements for any adoption and maintenance needs are in place. The surface water drainage statement should also take regard of Stockport Council's pre application guidance for developers which is available on request from Stockport Council and the national standards for sustainable drainage systems.

## 8.2.7 Employment Sites

- 8.2.7.1 There are two proposed employment sites. Bredbury Gateway is not at risk of flooding from rivers now or in the future due to climate change. There are isolated areas of surface water flooding associated with depressions in the existing terrain in the northwest of the site. In the southeast of the site, there are surface water flow paths which convey water through the site. Development plans must accommodate these flow paths and demonstrate that there are not detrimental impacts to site users or third parties.
- 8.2.7.2 Heathside Park Road is not at risk of flooding from rivers now or in the future due to climate change. There are areas at risk of surface water flooding distributed throughout the site. Development plans must demonstrate that surface water has been managed appropriately and demonstrate that there are not detrimental impacts to site users or third parties.

## 8.2.8 Application of the Sequential Test in Stockport Town Centre

- 8.2.8.1 The Stockport Local Plan states that Stockport Town Centre is the most significant key location for the success of the borough. Stockport Town Centre is defined by the Town Centre Living Area boundary. The Local Plan highlights the need for Stockport Town Centre to evolve into a place which offers more than just retail with Local Plan policy STC1: Stockport Town Centre principles setting out the objectives for development in the Town Centre.
- 8.2.8.2 In addition to the policies set out in the Local Plan, Stockport Council has drafted Strategic Regeneration Frameworks for Stockport Town Centre East and West. The plans include up to 8,000 new homes over the next 15 years, a new secondary school, a modern hospital, and improved green spaces and public areas.
- 8.2.8.3 Figure L.1 in Appendix L shows the fluvial Flood Zones in the Town Centre and Figure L.2 in Appendix L shows the areas at risk of surface water flooding in the Town Centre. In line with a sequential approach, new development proposed in the Town Centre should be located in areas at lowest risk of flooding. When considering availability of areas at lowest risk of flooding, a suitable area of search should be defined.

- 8.2.8.4 The National Planning Policy Framework encourages Local Planning Authorities to identify areas in their plans that are best suited for different development types. In applying the Sequential Test to individual planning applications, local circumstances relating to the development type and needs must be taken into account. Furthermore, the accompanying Planning Practice Guidance confirms that the Sequential Test should be applied proportionately, focussing on realistic alternatives in areas of lower flood risk that could meet the same development need.
- 8.2.8.5 A sequential approach to the location of development in the Town Centre should be taken by prioritising Town Centre sites at lowest risk of flooding. In acknowledging the aspirations for the regeneration of Stockport Town Centre, should a search for alternative sites within the Town Centre not yield suitable alternatives for the proposed development in low flood risk areas, the Exception Test may be required.
- 8.2.8.6 To support Stockport Council in their aspirations to future-proof Stockport Town Centre as a place of choice to live, work and visit, Table 8-2 recommends suitable areas of search for a range of development types across Stockport Town Centre and the surrounding area.
- 8.2.8.7 It is recommended that more work is done to demonstrate how regeneration aspirations for the Town Centre are consistent with published guidance for undertaking the Sequential Test.

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Table 8-2 Suitable areas of search for different development types across Stockport Borough.

| Development type                                                                                                                                          | Suggested area or areas of search                                                        | Justification for suggested area                                                                                                                                                                            | Conditions to be met                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Residential schemes                                                                                                                                       | Whole borough                                                                            | All residential schemes contribute to housing needs across the borough.                                                                                                                                     |                                                                                                                                                                                                                                                     |
| Development which would contribute to stated regeneration aims in regeneration areas:<br><br>- Stockport Town Centre West<br>- Stockport Town Centre East | Areas covered by Stockport Town Centre Mayoral Development Corporation                   | Area is in need of regeneration and delivering new homes.                                                                                                                                                   | Developments in the Town Centre will promote urban regeneration and provide wider sustainability benefits to the community. Development should be located in areas accessible by walking, cycling, and public transport to minimise car dependency. |
| Offices and Commercial Premises                                                                                                                           | The Town Centre should be prioritised in line with policy BUS 2 of the draft Local Plan. | Development should be directed towards existing, accessible Town Centre sites, following by out of town areas.<br><br>Out of town sites should only be used if no suitable Town Centre sites are available. |                                                                                                                                                                                                                                                     |
| Transport and Energy Infrastructure                                                                                                                       | The entire borough                                                                       | All areas that promote sustainable, transit-oriented development, particularly in or around Stockport Town Centre or existing public transport hubs, are appropriate.                                       | The development will deliver wider benefits to the community.                                                                                                                                                                                       |

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| <b>Development type</b>                                | <b>Suggested area or areas of search</b>                                                 | <b>Justification for suggested area</b>                                                                                                                                                                                  | <b>Conditions to be met</b>                                                                                                                                                                  |
|--------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Healthcare Facilities                                  | Catchment area for new healthcare services.                                              | Locating health facilities within defined area of need as part of mixed-use development is preferred to facilitate community access.                                                                                     | The development will deliver wider benefits to the community.<br><br>In an accessible location served by a choice of sustainable travel options.                                             |
| Education                                              | The entire borough                                                                       | Development should be prioritised in areas of high population and housing growth.<br><br>Land should be available to meet outdoor curriculum needs.                                                                      | The development will deliver wider benefits to the community.<br><br>Development should be located in areas accessible by walking, cycling, and public transport to minimise car dependency. |
| Retail and Leisure                                     | The Town Centre should be prioritised in line with policy STC 3 of the draft Local Plan. | Development should be directed towards existing, accessible retail areas.<br><br>Out of town sites should only be used where no suitable Town Centre sites are available.                                                | The development will utilise brownfield land and promote urban regeneration.                                                                                                                 |
| Industrial or Warehousing and Distribution (Logistics) | Areas outside the Town Centre                                                            | Preference is given to brownfield land, well-connected sites, and areas with existing infrastructure.<br><br>Sites outside the Town Centre which are well connected to primary transport networks should be prioritised. | The development will utilise brownfield land and promote urban regeneration.                                                                                                                 |

## 8.2.9 Site specific flood risk assessments

8.2.9.1 A site-specific flood risk assessment is carried out by or on behalf of a developer to assess the flood risk to and from a potential development site. The assessment should demonstrate how flood risk will be managed now and over the lifetime of the development. The requirements for a site-specific Flood Risk Assessment are set out in the Planning Practice Guidance and in policy INF 3 of the Stockport Local Plan. This Strategic Flood Risk Assessment (SFRA) confirms that a site-specific Flood Risk Assessment should be completed for all development proposed:

- In Flood Zones 2 or 3
- Within Flood Zone 1 where the site area is greater than 0.5 hectares
- Where Flood Zone 1 and the Flood Map for Planning shows the development is at risk of surface water flooding.
- Within Flood Zone 1 where the SFRA shows it will be at increased risk of flooding during its lifetime.
- Where the area of the site is greater than 0.5 hectares.
- At risk from other sources of flooding
- Has a potential to increase the risks from flooding elsewhere
- Within the Flood Zones taking into account future increases due to climate change.
- In areas with critical drainage problems.

8.2.9.2 This SFRA has identified the following requirements for site-specific Flood Risk Assessments. These are intended to complement and enhance existing guidance set out in the National Planning Policy Framework and its accompanying technical guidance and within the Stockport Local Plan paragraph 509.

8.2.9.3 A site-specific Flood Risk Assessment should include, but not be limited to:

- Seeking a net reduction in flood risk where possible;
- Establishing whether the proposed development is likely to be affected by current or future flooding from any source, using up-to-date data and climate change scenarios;
- Assessing whether the development may increase flood risk on-site or elsewhere;
- Proposing appropriate mitigation and/or compensation measures within the site design to manage flood risk over the development's lifetime;
- Providing evidence to apply the Sequential Test;
- Providing evidence that the development will pass the Exception Test, where applicable;
- Supporting the definition of the functional floodplain, including areas where the Strategic Flood Risk Assessment definition may be overly conservative;
- Assessing the effectiveness of any existing flood defences, including standards of protection, and recognising that such defences may fail.

8.2.9.4 When considering the management of surface water, site-specific Flood Risk Assessments should:

- Ensure greenfield runoff rates are applied for greenfield sites or, as a minimum, that runoff rates are not increased, including allowances for climate change.
- Comply with policy INF4 in the Stockport Local Plan which requires that development on brownfield sites should reduce unattenuated runoff by 50 per cent.

- Ensure that all developments include provision for Sustainable Drainage System (SuDS), in line with policy INF 5 in the Stockport Local Plan, advice provided by Stockport Council, and the Stockport Integrated Drainage Strategy when published. Note that the Stockport Integrated Drainage Strategy is currently under development.
- Consider guidance on the planning information required for major developments as provided by Stockport Council directly to developers. This guidance includes an outline of the drainage hierarchy which all development sites should follow, criteria for assessing the impacts of climate change, and criteria for managing flood risk at development sites. This guidance is not publicly available.
- Adhere to any policies set out in the Stockport Design Code regarding the integrated management of run-off and drainage across new development sites.
- Take regard of Stockport Council's pre application SuDS guidance for developers.

## 8.2.10 Potential mitigation measures

- 8.2.10.1 For sites which have explored all opportunities to minimise flood risk through the sequential planning of development within the site but for which a degree of flood risk remains, for example larger development sites which lie in Flood Zone 1 but have multiple areas at risk of flooding from surface water which could not all be avoided, consideration of mitigation measures will be necessary. The following sections provide high level guidance on mitigation measures which could be considered.

### Development platforms and floor levels

- 8.2.10.2 Guidance issued to developers by Stockport Council in their role as Lead Local Flood Authority indicates that any development within Critical Drainage Areas is expected to have finished floor levels at a minimum of 300mm above road level to reduce the risk of surface water flooding. It should be noted that for fluvial flood events, finished floor levels should be set above the 1 per cent (1 in 100) plus climate change event plus an additional freeboard of 600 millimetres. All finished floor levels should be provided in metres above ordnance datum.
- 8.2.10.3 It may also be possible to allocate ground flood spaces for less vulnerable uses. In all cases, access and egress must be considered.
- 8.2.10.4 Subject to the Sequential Test and Exception Test being met, any loss of floodplain storage as a result of raised floor levels and development platforms or other construction works will need to be fully compensated for. Guidance requires that this should be on a level for level and volume for volume basis. This means that compensation storage must be provided at the same elevations from which it was removed to ensure that flood water behaves in a similar way after the development compared to before the development. Any proposal that does not meet these requirements must be robustly justified, demonstrating that flood risk will not increase on-site or elsewhere. Where such justification cannot be provided, the proposal should be refused. It is recommended that an initial consultation with the Environment Agency is undertaken for any developments where floodplain compensation is likely to be an issue.

### **New flood defences**

- 8.2.10.5 Construction of flood defences will always leave a residual risk should defences fail and therefore this option is not recommended. In situations where new flood defences can provide wider sustainable flood management benefits to existing undefended properties, this option may be considered. If pursued, an appropriate assessment of the impact of a breach and also the impact on floodplain storage and conveyance must be undertaken. The long-term maintenance of any flood defences must be ensured.

### **Resilience**

- 8.2.10.6 Resilience measures aim to reduce the damage arising from flood water within a building and facilitate a rapid return to normality. They can include:
- Waterproof flooring
  - Water resistant wall finishes
  - Placement of electrics at higher levels
  - Water resistant insulation which does not soak up water.

### **Flood risk management schemes**

- 8.2.10.7 The Environment Agency are currently assessing the feasibility of a scheme to reduce flood risk along the Poise Brook in Hazel Grove and Offerton Green. The scheme is in the appraisal stage and there was no further information available at the time of writing.

### **Ecological networks**

- 8.2.10.8 Work carried out by Stockport Council has mapped the ecological networks across the borough, which form part of the evidence base for the Local Plan. These networks include core areas, linear corridors, which are long uninterrupted strips of habitat connecting to other ecological areas, and ecological stepping stones, which are smaller, more sporadic areas of habitat which aim to link fragmented habitats and repair ecological breaks. Although developed primarily to enhance biodiversity and green space quality in the borough they offer the opportunity to provide flood risk benefits by slowing surface water run-off and increasing infiltration, stabilising riverbanks and reducing erosion and complementing existing sustainable drainage systems and green infrastructure across the borough.
- 8.2.10.9 If ecological features are to be used for flood risk benefits, these opportunities should be identified and reviewed as additional work may be required to maximise and maintain flood risk benefits in addition to ecological benefits.

### **Park Life Project**

- 8.2.10.10 A feasibility study carried out by Stockport Council under their Park Life Project considered the potential to develop flood mitigation measures in parks owned by Stockport Council. As this project remains at a feasibility stage, no individual projects have been funded. It is recommended that should funding become available, a holistic review of opportunities is undertaken.

## **8.2.11 Cumulative impacts of development**

- 8.2.11.1 Section 8.2 of this report describes future development in Stockport. Inappropriate and poorly managed development has the potential to increase surface water runoff to watercourses, alter groundwater recharge regimes and remove essential floodplain storage. Whilst one development in isolation may have limited impacts, the scale of development proposed across Stockport as a whole has the capacity to result in much more significant impacts. Therefore, it is critical that a holistic approach to development planning and flood risk is taken to mitigate any cumulative effects, including addressing climate change, urban creep, and future maintenance requirements of any proposed mitigation measures. All developments should seek to provide a betterment over the existing situation, whether this be attenuating surface water runoff, providing additional floodplain storage, or enhancing the groundwater recharge regime whilst aiming to maximise potential integrated water management benefits. All site-specific Flood Risk Assessments and Surface Water Drainage Strategies should clearly demonstrate their contribution to achieve this.

## **8.2.12 Strategic Housing Land Availability Assessment Sites**

- 8.2.12.1 Section 3 of this report describes the difference in the regulation 18 proposed site allocations and the Strategic Housing Land Availability Assessment (SHLAA) sites.
- 8.2.12.2 Of the SHLAA sites which are not already permissioned and do not overlap the regulation 18 proposed site allocations, only six are on the edge of Flood Zones 2 and 3. The areas of these sites which are in Flood Zones 2 and 3 are generally small enough so as not to pose a development constraint. It is likely that the development within these sites could be directed away from Flood Zones 2 and 3.

## 9 Conclusions and recommendations

### 9.1 Conclusions

- 9.1.1.1 The conclusions of this Strategic Flood Risk Assessment (SFRA) have been reviewed and updated following receipt of comments from the Environment Agency on draft iterations of the SFRA report.
- 9.1.1.2 This SFRA is a planning tool for flood risk and development in Stockport. Stockport Council, the Environment Agency, United Utilities and the British Geological Society were consulted to collate available and relevant flood risk information on all sources of flooding into one comprehensive assessment.
- 9.1.1.3 The new Stockport Local Plan is currently being prepared and it is expected to be adopted in late 2027 or early 2028. The new Stockport Local Plan will guide decisions about new development as far as the year 2042.
- 9.1.1.4 Stockport has experienced significant, repeated flooding incidents driven by intense rainfall and watercourses which exceed their capacities. A severe flood event on 1 January 2025 led to flooding across the borough driven by high river levels and restricted drainage outfalls.
- 9.1.1.5 Flood risk in Stockport is influenced by the multiple sources of fluvial, surface water, sewers and groundwater.
- 9.1.1.6 All watercourses in Stockport ultimately drain to the River Mersey which flows northwest out of the borough. The River Mersey is formed at the confluence of the River Goyt and the River Tame in Stockport Town Centre.
- 9.1.1.7 As a borough with large urban areas within it, surface water flood risk is a key issue across the borough. The Environment Agency Flood Map for Surface Water confirms that large areas of the borough are at risk of surface water flooding.
- 9.1.1.8 Stockport Council defines the entire borough as a Critical Drainage Area. Whilst the Environment Agency Flood Map for Surface Water shows that there are some clear surface water flow routes associated with existing watercourses, there are also areas of surface water flood risk distributed across the entire borough. Consequently, it is appropriate for the entire borough to be classified as a CDA.
- 9.1.1.9 Sewer flooding in Stockport can be triggered by several factors, including blockages, overloaded pipes, and surcharging of the sewer system during intense storms. The likelihood of sewer flooding increases during periods of severe rainfall, when the drainage network can rapidly become overwhelmed by the volume of water entering it.
- 9.1.1.10 British Geological Survey groundwater susceptibility mapping indicates the western part of the borough to have limited potential for groundwater flooding. In the eastern part of the borough, susceptibility to groundwater flooding is varied, with some areas having limited potential and some areas having potential for groundwater flooding at the surface, both from clearwater and superficial deposit flooding sources.

- 9.1.1.11 Groundwater regimes in the Town Centre may be subject to change due to the relocation of Robinsons Brewery and the ending of their associated groundwater abstraction.
- 9.1.1.12 Areas of Stockport benefit from flood defences and assets such as raised flood defences and overland flow channels, which afford some protection from fluvial and surface water flooding. However, a residual risk of flooding resulting from the failure of these defences remains. Additionally, there remains a risk of flooding from other watercourses and sources that have no formal flood defences.
- 9.1.1.13 The risk of flooding from rivers due to climate change is predicted to increase along all major watercourses in the borough.
- 9.1.1.14 The risk of flooding from surface water is also predicted to increase across all parts of the borough as a result of climate change.
- 9.1.1.15 The flood risk information, assessment, guidance and recommendations provided in this Strategic Flood Risk Assessment (SFRA) will provide Stockport Council with the evidence base required to apply the Sequential test. It also provides information on the application of the Exception Test, as required under the National Planning Policy Framework.

## **9.2 Recommendations**

### **9.2.1 Planning**

- 9.2.1.1 This SFRA has collated data on potential sources of flood risk and provided a series of maps to accompany this. This data and mapping should be used as the basis for the application of the sequential approach to flood risk, including the Sequential Test where required.
- 9.2.1.2 By using the flood risk information and applying the sequential approach, Stockport Council should aim to steer development away from areas of flood risk, in accordance with the policy and guidance set out in the national planning policy framework and planning practice guidance.
- 9.2.1.3 If after applying the Sequential Test, it is not deemed possible for development to be located outside of areas of flood risk, recommendations have been provided for the application of the Exception Test.
- 9.2.1.4 Developers and Stockport Council should work together to demonstrate how development at Brookfield Business Park and Compstall Mills meets the requirements of the Sequential Test and Exception Test. These are the two regulation 18 proposed site allocations which are partially or entirely in Flood Zone 2 or 3 and considered too small to accommodate the planned level of development without encroaching on areas within the site at higher risk of flooding noting that the updated Flood Map for Planning should be reviewed for Compstall Mills when it is published in September 2026. If these allocations do pass the Sequential Test, detailed analysis as part of a Level 2 SFRA should be carried out to understand the nature of the flood hazards and to inform a site-specific Flood Risk Assessment.

- 9.2.1.5 Review of the updated Flood Map for Planning, which is expected to be published in September 2026, at Compstall Mills is recommended to understand the reasons behind the significant difference in flood risk mapped by the Flood Map for Planning and the Risk of Flooding from Rivers and Sea given the lack of defences in the vicinity.
- 9.2.1.6 Sites that are partially in Flood Zone 2 or 3 should be planned so that development units within them are in Flood Zone 1.
- 9.2.1.7 All development applications across Stockport should consider the requirements for a site-specific Flood Risk Assessment. This is particularly critical given this SFRA has identified the whole of the borough to be located within a Critical Drainage Area. The mapping and information provided in this SFRA should be used to help inform where a more detailed assessment may be required.
- 9.2.1.8 Site-specific Flood Risk Assessments should be prepared in accordance with the Flood Risk and Coast Change Planning Practice Guidance, Stockport Local Plan, National Planning Policy Framework and the recommendations set out in Section 8.2.8 of this Strategic Flood Risk Assessment (SFRA).
- 9.2.1.9 Where potential development sites may be at risk of flooding from multiple sources, each individual source of flood risk should be considered as well as the combined scenario. A robust Flood Risk Assessment must be prepared which demonstrates that all sources of flooding to a site have been suitably assessed.
- 9.2.1.10 It is recommended that more work is done to demonstrate how regeneration aspirations for the Town Centre are consistent with published guidance for undertaking the Sequential Test.
- 9.2.1.11 Where a developer considers that their proposed development site is not within the functional floodplain as defined by this SFRA, it is their responsibility to provide sufficient evidence to support this as part of a site-specific Flood Risk Assessment.
- 9.2.1.12 To mitigate the cumulative impacts of development, a holistic approach to development planning and flood risk must be taken with all developments required to provide a betterment over the existing situation. All site-specific Flood Risk Assessments and Surface Water Drainage Strategies should clearly demonstrate their contribution to achieve this.

## 9.2.2 Policy

- 9.2.2.1 A review of the revised National Planning Policy Framework, due for publication in Summer 2026, should be carried out and any implications for this Level 1 SFRA should be identified. Updates should be made as required.
- 9.2.2.2 New development in Stockport must ensure that it makes a positive contribution to the actions and aspirations set out in the Integrated Water Management Plan. Businesses and stakeholders undertaking development in Stockport should reach out to the Greater Manchester Combined Authority to ensure that site proposals support and where possible enhance the objectives of this programme.

- 9.2.2.3 Developers should also familiarise themselves with the wider aims and objectives of the Integrated Water Management Plan to make sure that all their development plans and proposals work towards the long term ambition of transforming the management of water as a natural asset.

## **9.2.3 Surface water management**

- 9.2.3.1 New developments must manage runoff using a hierarchical approach, prioritising the use of source control on all developments. The Integrated Drainage Strategy will guide future development, investment and improvements in public realm and all new development must ensure that their proposals contribute towards meeting these aims and objectives.
- 9.2.3.2 All new development sites should follow recommendations for suitable and sustainable management of drainage, as outlined in the national standards for sustainable drainage and in Stockport's pre application drainage guidance for developers.
- 9.2.3.3 There are opportunities within the development of the design code to consider the implementation of integrated and sustainable drainage management across all new developments to help manage surface water runoff across new developments and decrease the risk of surface water flooding across Stockport.
- 9.2.3.4 Site-specific Flood Risk Assessments for the 31 proposed development sites which are located in Flood Zone 1 and are greater than one hectare should be prepared. This should demonstrate that development can be accommodated by taking a sequential approach to the layout to avoid the areas of these sites which are shown to be at risk of flooding from surface water.
- 9.2.3.5 For sites greater than one hectare where surface water flooding is extensive, mitigation measures discussed in Section 8.2.9 should be considered.
- 9.2.3.6 In line with the existing Stockport Critical Drainage Area (CDA) policy, a site-specific Flood Risk Assessment should be produced for all sites over 0.5 hectares.
- 9.2.3.7 This Strategic Flood Risk Assessment (SFRA) also recommends that a surface water drainage statement should be prepared and submitted to Stockport Council for consideration for sites smaller than 0.5 hectares. This should reflect the context of the site and nature of the proposed development demonstrating the source of the water, the pathways through the site and the ways in which it will be sustainably managed.

## **9.2.4 Risk management**

- 9.2.4.1 All datasets used to inform this SFRA should be periodically reviewed to identify updates or new products.
- 9.2.4.2 Investigation and analysis of stopping the Robinsons Brewery groundwater abstraction on groundwater regimes in Stockport Town Centre should be undertaken.
- 9.2.4.3 For sites which benefit from the presence of existing flood risk management infrastructure, the variation of risk within high and medium flood risk areas should be informed by information on flood depth, flood velocity and flood hazard.

- 9.2.4.4 Stockport Council should continue to fully explore the feasibility and determine the most appropriate measures and locations for any upstream storage.

## 9.2.5 Strategic Flood Risk Assessment maintenance and updates

- 9.2.5.1 This Strategic Flood Risk Assessment (SFRA) is a live document that is intended to be updated periodically as new information and guidance becomes available. This SFRA has been developed using the best available information at the time of preparation. The outcomes and conclusions of the SFRA may not be valid in the event of future changes to information and data.
- 9.2.5.2 Should significant changes to the information and data available used to inform this SFRA occur, it is recommended that an update or addendum be published as an addendum to this SFRA to best reflect changes in data and most appropriately assesses flood risk across Stockport.
- 9.2.5.3 The data mapped onto the figures presented in the Appendices to this SFRA should be made available online as an accessible, interactive digital resource.
- 9.2.5.4 The Planning Practice Guidance states that a Level 2 SFRA is required if either:
- All land needed for development cannot be located outside of areas at risk of flooding; or
  - Land needed for development can be located outside of areas at risk at flooding but it is anticipated that high numbers of future applications in flood risk areas on sites not currently identified in the Local Plan may be received.
- 9.2.5.5 This Strategic Flood Risk Assessment has demonstrated that the majority of planned development in Stockport, based on the regulation 18 proposed site allocations can be accommodated in areas at lower risk of flooding.
- 9.2.5.6 Further work to support the application of the Sequential and Exception Tests for the two regulation 18 proposed site allocations that are at higher risk is recommended. These sites are Brookfield Business Park, which is at risk of fluvial flooding from Micker Brook, and Compstall Mills, which is at risk of fluvial flooding from the River Etherow, pending review of the updated Flood Map for Planning. This could form an addendum to the Level 1 SFRA as opposed to a Level 2 SFRA.
- 9.2.5.7 Although there are no regulation 18 proposed site allocations within the Town Centre, Stockport Council are planning around 8000 new homes in the Town Centre. A Level 2 SFRA covering only Stockport Town Centre was published in 2024. Since this was before the Environment Agency released their updated flood risk mapping, it is recommended that this is reviewed and updated as needed to take account of the most recent data given that flood risk in the Town Centre is predominantly focussed around the River Mersey.
- 9.2.5.8 Additional and more detailed hydraulic modelling may be required to inform a new Level 2 SFRA to provide more detail on the onset, speed, hazard and depth of flooding for example.

- 9.2.5.9 Should Stockport Council find that, in future, they are receiving large numbers of applications for sites in areas at risk of flooding elsewhere in the borough, it is recommended that a new Level 2 SFRA is completed to provide more detail on the nature of flood risks in the areas of interest.

## **9.3 Notable limitations**

- 9.3.1.1 This Strategic Flood Risk Assessment (SFRA) has been produced using the most up-to-date and available data at the time of its production. Should further data become available that would contribute further to understanding flood risk across Stockport it should be considered for any future addendums to this SFRA.

**Appendix A. Data Register**

**Appendix B. Watercourses**

**Appendix C. List of GIS Files**

**Appendix D. Regulation 18 Proposed Site Allocations and Strategic Housing Land Availability Assessment Sites**

**Appendix E. Recorded Flood Incidents**

**Appendix F. Flood Zones and Flood Defences**

**Appendix G. Areas at Risk of Flooding due to Reservoir Failure**

**Appendix H. Canal & River Trust Assets**

**Appendix I. Groundwater Information**

**Appendix J. Surface Water Flood Map**

**Appendix K. Comparison of Present Day and Future Flood Risk**

**Appendix L. Town Centre Flood Maps**

Arcadis (UK) Ltd  
80 Fenchurch Street  
London  
EC3M 4BY  
United Kingdom  
Phone: +44 207 812 2000

[www.arcadis.com](http://www.arcadis.com)