

**BUILDING A BETTER
NOTTINGHAM**

**Nottingham
Local Flood Risk
Management Strategy**

Proud & Ambitious



**Nottingham
City Council**



Our Role

Managing Flood Risk in the City

Who are we?

Under the Flood and Water Management Act 2010, Nottingham City as a Lead Local Flood Authority have a statutory duty to develop, maintain and apply a Local Flood Risk Management Strategy for managing flood risks within its administrative boundary.



Our strategy outlines our approach to achieving this and details our objectives, aims and actions which seek to reduce the impact and likelihood of flooding across the city.

Flooding can have devastating impacts that affect people, property, businesses, the environment and the transport network. Nottingham has many different sources of local flood risk including, river flooding, surface water, groundwater, canal, reservoir, sewer and smaller watercourses.

Flooding though a natural process has been changed by the urbanisation of the city, changing the way that water flows in our rivers, beneath the ground and over the surface of the land. As Nottingham continues to grow, we aim to see development happen sustainably that does not increase the risk of flooding.

Whilst it is not possible to prevent all flooding, there are many actions that can be taken to reduce the impacts on our communities. It is important that resources are focussed on our areas and communities that suffer the greatest impacts of flooding to have the greatest possible impact.

This strategy has been developed to highlight what the City Council is planning to do to manage local flood risk to our communities now and into the future. It is a source of information for all individuals, communities and businesses prone to flooding and supports the many different organisations we work with to manage flood risk across the city.

Our Partners

Who do we work with to manage flood risk?

There are many agencies that have responsibilities for managing flood risk in Nottingham. Flooding can be complex, and it is important for these organisations to work together in partnership.

Nottingham City Council

- As the Lead Local Flood Authority, we have several responsibilities which include:
 - Lead on managing and investigating flood risk from surface water, ground water and ordinary watercourses.
 - Develop a strategy for managing local flood risk in Nottingham.
 - Work in partnership with other organisations to manage flood risk.
 - Maintain a register of structures or features that have a significant effect on flood risk.
 - Act as a statutory consultee on major planning applications with respect to surface water management.
- The City Council also has responsibility as the Highways Authority, this includes providing and maintaining highway drainage features such as road gullies.

Surface water

Groundwater

Highway flooding

Ordinary watercourses



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Environment Agency

- The Environment Agency is defined as a Risk Management Authority and has a Strategic Overview of all forms of flooding.
- They have developed a National Flood and Coastal Erosion Risk Management Strategy. The Environment Agency is responsible for managing flood risk from larger watercourses ('main rivers'), estuaries, the sea and reservoirs.

Main rivers

Coastal

Reservoirs



Environment
Agency

Severn Trent Water

- Severn Trent Water are the water and sewerage company that covers Nottingham. They have a duty to provide effectual drainage and are responsible for public sewers that collect wastewater and rainwater.

Sewage

SEVERN

TRENT

WATER

Our Ambitions

What do we want to achieve?

To serve Nottingham well, by creating a clean, green and connected city



We want to achieve:

- ◆ A reduction of flooding in the city:
 - ◆ We want to see the amount of flooding incidents in the city decrease wherever possible through work with ourselves and our key partners.
- ◆ A reduction to the impacts of flooding:
 - ◆ We aim to find ways of reducing the impact of flooding in locations where it may not be possible to stop this happening, looking at ways to support our most at risk communities.
- ◆ More knowledge sharing:
 - ◆ To involve communities and raise awareness of flood risk management activities encouraging a culture of resilience.

We will do this by:

- ◆ Co-ordinating Efforts:
 - ◆ Manage and develop our working relationships with our key delivery partners and work with Risk Management Authorities to increase flood resilience in Nottingham.

- ◆ Promoting Sustainable Development:
 - ◆ Work closely with the Local Planning Authority to ensure robust proposals for sustainable drainage in new developments.
- ◆ Increasing Community Resilience:
 - ◆ Identify our at-risk communities and find ways of working positively with community groups, residents and partners.

How and when will we achieve these?

- ◆ The aim of this Local Flood Risk Management Strategy is to reduce the impact of flooding on people, property and businesses in Nottingham. There are many different elements to flood risk management and this aim will be achieved through a variety of activities and measures over a range of timescales, these are outlined in our action plan.

Our following ambitions highlight how we intend to meet our goal to contribute to making Nottingham a cleaner, greener, safer city. Our approach focuses on four key pillars:

Ambition 1 - Prevention

By taking a proactive approach to Flood Risk Management we look to reduce the potential of risk before it happens.

Working together with our key partners we will look to understand our areas of risk and when we can implement preventative works.

Working closely with the Local Planning Authority we will promote and require the use of SuDS in new developments.

Ambition 2 - Protection

Our capital programme will be reviewed annually to ensure adequate investment in physical works.

We will support initiatives for property owners to install flood resilient measures for their homes and businesses, providing guidance and advice.

Work with key partners for the ongoing maintenance of our reservoirs and dams.

Ambition 3 - Resilience

Work with community groups and programs focussed on building local resilience and local emergency response plans.

Educate our residents about flood risk, preventative measures and riparian responsibilities.

Continue working ties with Environment Agency, the warning systems and emergency response plans.

Ambition 4 - Recovery

Work with our partners on recovery plans for affected communities following flood events.

Understand the wider impacts of flooding to Nottingham (e.g. mental health, commercial effects).

Continue to offer bespoke long-term support through, information, guidance and advice to all affected residents/business owners.

Prevention

Flood risk has traditionally centred around taking a reactive approach to flooding incidents, we want our approach to look more into proactive actions to see where we can look to reduce the potential risk before it happens. We have laid out five measures to help us work towards meeting our ambition.

Measure 1



Promote sustainable development across the city that seeks to reduce flood risk.

- ◆ Robust planning policy is essential to ensure the appropriate consideration to flood risk is given to all new developments, we will ensure that Nottingham City's Local Plans and Policies continues to consider flooding in a robust manner.
- ◆ As part of our role as a statutory consultee on major planning applications, we will continue to promote the use of SuDS in all developments.
- ◆ Ensuring new developments incorporate flood resilience and resistance into their proposals. We will encourage new building techniques to ensure properties are better protected to withstand the potential effects of flooding.

Measure 2



Gain a greater understanding of flood risks posed to Nottingham City.

- ◆ Learning where our current at-risk locations are is vital to ensure resources are placed where they are most effective, by working with communities to understand recent flooding events we can start to highlight our prioritisation.
- ◆ Effective flood management is reliant on accurate and high-quality data, we will collect, manage, and share data to ensure all partners have access to relevant and reliable information regarding current and future risk for Nottingham City.
- ◆ Expand our knowledge of assets across the city. Whilst we have a duty to keep a record of "Significant Flood Risk Assets" we recognise that all assets have a part to play in managing flood risk, we want to ensure the functionality of our drainage network continues by aiming to identify all relevant assets which play an active part in our network.

Measure 3



Identify and prioritise local flood risks, taking climate change projections into account.

- ◆ Undertake continual annual reviews of our capital works programme to ensure that resources are being prioritised at our most vulnerable and affected communities.
- ◆ Imbed the impact of climate change guidance ensuring that any proposals, works or initiatives will be relevant and appropriate for future projected risk.
- ◆ Where possible the prioritisation should be on nature-based solutions as part of any proposal to prevent flooding, such as creating green infrastructure like raingardens or bioretention areas. These solutions not only mitigate flood risks but also enhance the city's resilience to the long-term effects of climate change.

Measure 4



Work in partnership with risk management authorities to identify and prioritise local flood risks.

- ◆ By establishing data sharing frameworks and agreements with other risk management authorities we can combine datasets and understand areas of high risk, model potential solutions and prioritize intervention based on the most vulnerable communities and infrastructure.
- ◆ Integrating and collaborating management plans that align with both local and national strategies ensure that resources can be allocated efficiently, and the most effective solutions are implemented to mitigate future risk. These could include “sustainable drainage systems, natural flood management techniques and best working practices”.
- ◆ Promote engagement between all risk management authorities and our communities, by finding ways to work together to develop community-focussed initiatives.

Measure 5



Improve our flood risk management maintenance procedure.

- ◆ Establish a targeted and detailed routine inspection plan for all major flood risk assets, ensure a proactive maintenance plan is implemented to ensure all critical assets remain in a good condition reducing the likelihood of failure during large scale flood events.
- ◆ Expand our knowledge of all assets across the city not only those designated as critical assets. By understanding how all assets and systems work together we can ensure that any maintenance is targeted effectively.
- ◆ Review our use of smart monitoring technologies to strengthen our maintenance regime to ensure more targeted and cost-effective support is given to our areas that need it most during flooding events.



Protection

Where prevention is not possible, we must look at the most effective and efficient ways of protecting our most at risk communities and infrastructure to ensure cost-effective spending. We have laid out four measures to help us work towards meeting our ambition.

Measure 1



Continuous development and review of our Flood Risk Capital Programme.

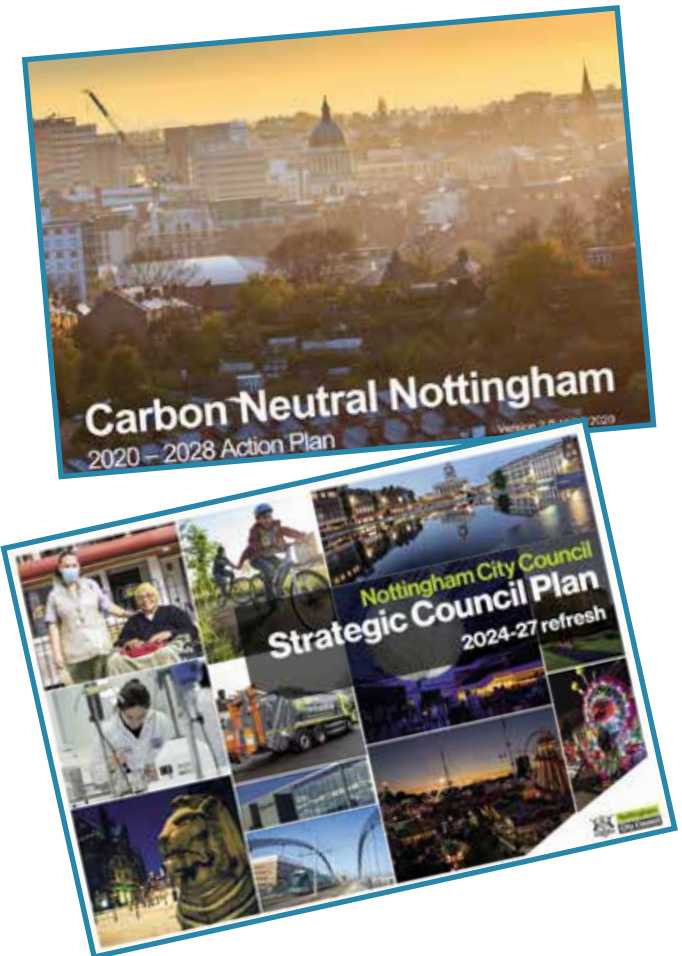
- ◆ Continually investigate ways of securing and leveraging different funding sources to sustain and expand our capital programme. It is vital to understand all funding options available including sources outside of the usual scope.
- ◆ Actively involve local communities, business and key stakeholders in the planning and review process, look to gather information and input from those directly affected by flooding to help prioritise our resources.
- ◆ Incorporate new and innovative ways of managing flood risk, looking at projects that protect for larger events, focussing on flexible solutions such as sustainable drainage and natural flood management.

Measure 2



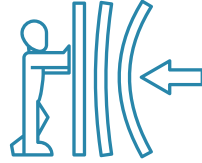
Strengthen policies, practices and procedures.

- ◆ Promotion of sustainable drainage systems across Nottingham is crucial to ensure our city remains resilient to both climate change and flooding. We will investigate mandating the use of features such as green roofs, rain gardens and permeable surfaces in both new developments and retrofits.
- ◆ Review Council practices and plans across the authority to ensure where possible importance is given to how flood risk and water is management across the authority ensuring a cohesive and targeted approach is taken.
- ◆ Work with neighbouring risk management authorities to ensure that where flood risk is affected across boundaries, that working practices and policies provide holistic benefits and look to promote wider benefits where possible.





Measure 3



Promote and support property level resilience and personal resilience.

- ◆ Develop and distribute guidance for residents in Nottingham city about Property Level Resilience that outline practical and cost-effective options, the benefits, and frequently asked questions regarding its installation.
- ◆ Enable residents to become self-resilient through providing them the means and equipment to do so where possible. Ensuring support to given to our most at risk communities.
- ◆ Encourage the use of flood planning at an individual level, showing the important for planning for potential flooding and the steps an individual can take to protect their property. Supporting additional work with community groups where appropriate.

Measure 4



Investigate nature-based solutions.

- ◆ Further develop and review nature-based flood management projects such as restoring natural river channels and replanting trees and wild areas. By reviewing the effectiveness of these solutions, we can gather evidence to support the broader implementation of future works.
- ◆ Collaborate with local landowners, environmental groups, authorities, and the community to explore opportunities to incorporate and implement nature-based solutions on both private and public land. Identifying partnership opportunities can help with scaling up the adoption of natural solutions and provide additional benefits such as biodiversity and recreational space.
- ◆ Work with the Local Planning Authority and colleagues within the authority for finding ways to encourage or require the use of these solutions in new developments and urban regeneration projects. These guidelines would promote the use of sustainable features and natural solutions to promote multi-benefits across the authority.

Resilience

Unfortunately, flooding can be unavoidable and as such we need to find ways to make our city as resilient as possible. Where we cannot prevent or protect our properties, we have laid out five measures to help others work towards becoming resilient.

Measure 1



Support communities with their flood response plans across the city.

- ◆ Investigate how we can assist community groups in the creation of flood response groups in our areas of highest risk, providing guidance and support on flood preparedness and response strategies.
- ◆ Assist residents and local communities with support and communication networks, ensuring that our most vulnerable residents have aid to become resilient to the effects of flooding.
- ◆ Explore what resources could be developed to help support communities in evolving flood response and action groups.

Measure 2



Enhance our flood risk communication tools.

- ◆ Strengthen working relationships with schools, colleges and universities across Nottingham, looking at how we can support development and understanding revolving around key flood risk related issues.
- ◆ Evaluate how we communicate with our communities during flooding events to ensure that effective messages are reaching the appropriate individuals. Providing updated real time information to affected areas is crucial to ensuring effective measures can be taken before flooding happens.
- ◆ Continually review all existing guidance documents on preparing, responding and recovering from a flood, by regularly reviewing our guidance we can ensure that the correct information is being passed on.

Measure 3



Work with key delivery partners in ensuring new developments where possible incorporate flood resilience.

- ◆ Engage with developers and consultants at the early stages of the planning process to ensure that flood resilience is a key consideration in the design of all new developments across the city.
- ◆ Look to integrate flood resilience into our role as a statutory consultee in the planning process. By providing comments to the local planning authority and incorporating comments regarding flood resilience we can strengthen their consideration in the planning process.
- ◆ Work with our key delivery partners to promote the inclusion of sustainable drainage and resilient features in all developments and projects, encouraging best practice and developing guidance for their inclusion.



Measure 4



Ensure technology in flood monitoring is accessible and efficient across the city.

- ◆ Review our current use of smart technology in flood monitoring in the city, ensuring locations are still relevant and information is being shared with the correct people. Exploring the potential for further expansion of both the network and information sharing with our key partners.
- ◆ Explore the potential use of technology in our key risk areas and review the effectiveness, using any results to refine and scale the development to more areas across the city. Ensuring new technology is tailored to the specific needs of different areas.
- ◆ Explore how information can be shared with our residents and communities from any systems we hold. Looking at how relevant and important details can be shared ensures effective messages are provided.

Measure 5



Work with other risk management authorities on key policies and strategies which promote long-term resilience.

- ◆ Engage with all risk management authorities on consultations on any new or existing policies and procedures, additionally ensuring all key partners are fully consulted on any new emerging Nottingham City policies to ensure long-term resilience to built into all planning.
- ◆ Work as key delivery partners on important strategic developments from other risk management authorities of which affect flood risk management in the city. Investigating how we can support the delivery of these strategies to promote resilience across all areas.
- ◆ Support working groups between other authorities and national bodies to advocate for stronger national and regional policies that support resilience.

Recovery

When flooding does occur, we want to see recovery happening as soon as possible and being undertaken in an effective and coordinated manner. We have laid out four measures for how we can support or communities with their recovery.

Measure 1



Support public communication and information sharing.

- ◆ Support meetings and drop-in sessions with our partners following major flooding events to provide important and relevant information to those affected by flooding. Looking at methods to ensure accessibility for all potentially affected residents.
- ◆ Ensure all communication to residents is clear, concise, and accessible. Navigating flood risk can involve a great deal of detailed and technical knowledge, we aim to make sure all residents are able to access clear and accessible information.
- ◆ We aim to aid the recovery of individuals affected by flooding by providing on-site support, conducting formal investigations where necessary, collaborating with communities to understand flooding mechanisms, and reviewing whether all relevant authorities responded appropriately.

Measure 2



Provide guidance and support on how to access potential funding grants and sources.

- ◆ Following flood events, investigate any potential funding grants of which affected residents would be able to access either from national or local sources.
- ◆ Provide support to residents where appropriate in securing any highlighted funding or grants. Providing guidance and information to those affected and working with our key partners in partnership to ensure a cohesive and joined up approach.
- ◆ Work with national bodies following flooding events to prioritise future resources and funding sources, feeding into future planning and schemes for managing future risk.



Measure 3



Support colleagues and key partners during recovery phases.

- ◆ Assist colleagues and partners during the recovery phases by attending coordination meetings with key partners, including emergency services, health organisations and charitable groups to discuss ongoing recovery effects, share updates and address changing challenges.
- ◆ Encourage knowledge sharing and best practice during recovery. Providing opportunities to share knowledge during recovery phase ensures resources are used effectively and are prioritised in the locations needed most.
- ◆ Review how data is shared to key partners to assist during recovery phases. Those with responsibility for recovery need to ensure their resources are focussed on the correct places, by providing succinct and precise data we can support our partners in targeting resources effectively and efficiently.

Measure 4



Support wellbeing initiatives following flooding events.

- ◆ Investigate resources available for managing the mental health effects of flooding following events, explore ways of distributing any relevant information to those affected. Information should cover the ongoing affects on mental health following incidents of flooding, including; anxiety, stress and depression.
- ◆ Support flood action and recovery groups in their work with recently flooded communities, providing guidance and support, and methods of accessing support networks. Where flood action groups are not present, methods of ensuring this information is accessible will be investigated to ensure all residents have access.
- ◆ Work with public bodies and charities following flooding events (e.g. Red Cross, Samaritans) and provide relevant support where possible.



For more information, please contact:
floodriskmanagement@nottinghamcity.gov.uk