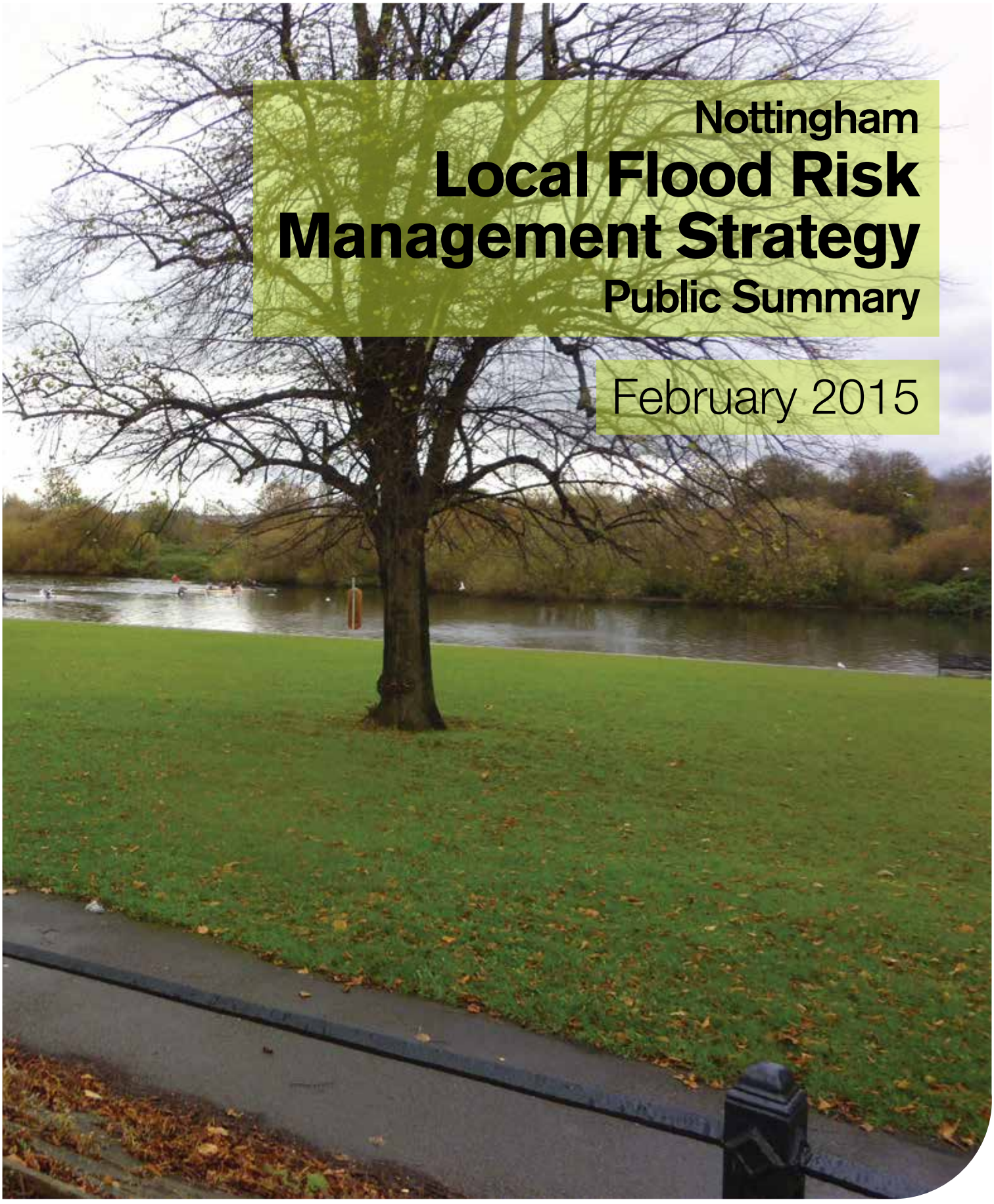

Nottingham Local Flood Risk Management Strategy

Public Summary

February 2015

Nottingham City Council

Foreword

The effects of flooding can be devastating. It can cause people to be displaced from their homes for several months, cause major disruption to transport and have significant impacts for the local economy.

Parts of Nottingham recently benefited from the construction of a £45 million flood defence scheme along the River Trent, but there is still work to do to improve the level of protection to other areas of the city. One of our biggest challenges is dealing with flash flooding, which is difficult to predict and can affect the city with little or no warning. With a changing climate and the predicted increase in rainfall events it is important that the Council works closely with other organisations, including the Environment Agency and Severn Trent Water, and takes a long term and strategic approach to flood risk management.

We are committed to managing flood risk through both routine maintenance and physical measures, such as flood defences. We also recognise the importance of supporting our citizens and businesses so that they know if they are at risk of flooding and what measures they can take to protect their own properties. It is important that we focus our resources on the communities that suffer the greatest impacts of flooding.

This Strategy has been developed in consultation with the public and with the many different organisations that have a role to play in managing flood risk across Nottingham.

Councillor Jane Urquhart

Portfolio Holder for Planning & Transportation

Nottingham City Council

Introduction

Sources of water, including the River Trent and its tributaries, were historically important factors in the growth of Nottingham. Flooding is a natural process but the urbanisation of the city over many centuries has changed the way that water flows in our rivers, beneath the ground and over the surface of the land.

Flooding can occur in a number of areas in Nottingham and can have devastating impacts that affect people, property, business, the environment and transport.

The risk of flooding is expected to increase in the UK due to climate change. As Nottingham continues to grow, it is important that new development happens sustainably and does not increase the risk of flooding, both in the city and elsewhere.

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 the limited resources that are available are focused on the areas and communities that suffer the greatest impacts of flooding to have the best possible impact.

The **Nottingham Local Flood Risk Management Strategy** has been developed to highlight what the City Council is planning to do to manage local flood risk to our communities now and in the future. It is a source of information for all individuals, communities and businesses prone to flooding in Nottingham City. It is also intended to be an information source for the many different organisations that we work with to manage flood risk across the city.

The full version of the Local Flood Risk Management Strategy is available on the City Council's website. This document summaries key information contained in the full strategy document.

What flood sources affect Nottingham?

Types of flooding

River flooding occurs when the volume of water exceeds the capacity of a river channel. Maps showing the areas at risk of flooding from rivers are available on the Environment Agency's website at **maps.environment-agency.gov.uk**

There are two different categories of river:

- **Main Rivers** are usually larger watercourses. Main Rivers in Nottingham include the River Trent, River Leen, Day Brook, parts of Tottle Brook, Fairham Brook and Nethergate Brook. The Environment Agency is responsible for managing Main River flood risk.
- **Ordinary watercourses** are smaller watercourses that are not Main Rivers. There are numerous ordinary watercourses within the city, including Broxtowe Park Brook, the upstream reaches of Tottle Brook, Robins Wood Dyke and Tinkers Leen. Nottingham City Council is responsible for managing ordinary watercourse flood risk.

Surface water flooding occurs when intense rainfall generates overland flow that overwhelms drains and public sewers, and accumulates in low-lying areas. Maps showing the areas at risk of flooding from surface water are available on the Environment Agency's website at **maps.environment-agency.gov.uk**

Groundwater flooding relates to situations where land that is not normally covered by water becomes flooded by water emerging from the ground. Groundwater levels respond slowly to rainfall, river levels and abstraction activities and can occur following prolonged rainfall, depending on the local geology. In the unlikely event that groundwater would rise above the surface of the land, the Council would be responsible for managing this flood risk.

Sewer flooding can occur when the capacity of the sewerage network is overwhelmed or when there is a blockage or collapse of a sewer. Some areas of the city experience high levels of blockages due to citizens and businesses flushing sanitary products into toilets or pouring fats, oils and grease down the sink. Severn Trent Water is responsible for managing flooding from the sewerage network.

Reservoir flooding can occur when all or part of a reservoir dam structure fails. Wollaton Park Lake is a reservoir that is categorised as being at high risk due to the number of properties at risk of flooding if the dam wall was ever to fail. The reservoir is regularly inspected and the risk of failure of the dam wall is low. The Environment Agency is responsible for managing flood risk from reservoirs.

Canal flooding could occur where there are issues with the management of water levels or a breach in embanked sections. Generally, locks and weirs on canals will control water levels and the risk of flooding is therefore low. In the city, the Nottingham and Beeston Canal interacts with the River Trent and flood gates are operated to manage the flood risk. The Canal and River Trust is responsible for managing flood risk from canals.

Integrated flooding occurs when two or more flood sources interact. For example, when river levels are high, sewers may be unable to drain away resulting in a backing up effect, which can lead to flooding.

Existing plans and strategies for managing flood risk

Nottingham City Council and other partners with flood risk management responsibilities have plans and strategies for managing flood risk. Key documents that the City Council uses include:

- **Strategic Flood Risk Assessments** covering Greater Nottingham, the River Leen and Day Brook. These aim to direct new development away from flood risk areas and promote sustainable development
- The **Preliminary Flood Risk Assessment** provides an overview of the risk from all sources of flooding in Nottingham
- The **Surface Water Management Plan** identifies priority locations for managing flood risk from surface water and identifies an action plan for each area.

These documents can be found on the City Council's website at **www.nottinghamcity.gov.uk** or to request a copy email **drainage@nottinghamcity.gov.uk** or call **0115 915 5555**.

The Local Flood Risk Management Strategy aims to pull together and build on all of these documents to provide a succinct Action Plan for managing flood risk.

Who has responsibility for managing flood risk in Nottingham?

There are many authorities that have responsibilities for managing flood risk in Nottingham. Due to the complex nature of flooding in urban areas it is important that these organisations work together in partnership.

Nottingham City Council

In 2010, Nottingham City Council became a Lead Local Flood Authority which introduced a number of new responsibilities:

- Lead on managing of flood risk from surface water, groundwater and ordinary (minor) watercourses
- Develop a strategy for managing local flood risk in Nottingham
- Work with other organisations to lead investigations into significant flood incidents in the city
- Maintain a register of structures or features that have a significant effect on flood risk
- Prepare for new responsibilities regarding the sustainable drainage of new developments.

The City Council is the Local Planning Authority and has a responsibility to ensure that the flood risk to new developments is managed and that the future growth of the city does not create flooding problems or make existing flooding situations worse.

The City Council is the Highway Authority and is responsible for providing and maintaining highway drainage features, such as road gullies.

The 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.

Severn Trent Water

Severn Trent Water is defined as a Risk Management Authority as they 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 waste water and rain water and associated infrastructure.

Other key partners

There are a number of other organisations and partners that are not statutory Risk Management Authorities but work closely with the City Council when managing local flood risk in Nottingham. These stakeholders include:

- Councillors, citizens and communities, particularly those in flood risk areas
- Nottingham City Homes and other social housing providers
- Nottinghamshire County Council as the Lead Local Flood Authority for the neighbouring area
- Ashfield District Council, Broxtowe Borough Council, Rushcliffe Borough Council and Gedling Borough Council as neighbouring District Councils
- Trent Valley Internal Drainage Board (Fairham Brook)
- The Canal and River Trust (formerly British Waterways)
- Network Rail
- The Trent Regional Flood and Coastal Committee
- The Nottingham & Nottinghamshire Local Resilience Forum
- Natural England
- English Heritage
- Nottinghamshire Wildlife Trust
- Trent Rivers Trust
- Riparian land owners
- Developers

Working together to manage flood risk

Water flows between systems that are operated by different authorities. For example, when rain water flows overland, into highway drains, sewers and ultimately watercourses there are several organisations involved. It is crucial that partners, particularly the City Council, the Environment Agency and Severn Trent Water, work together to effectively manage flooding for Nottingham's residents.

The City Council has established good working relationships with relevant partners, sharing information and taking appropriate actions, where practicable, to manage flood risk in Nottingham.

How can you help to manage flood risk in Nottingham?

Everyone has a role to play in managing flood risk. Simple measures that all Nottingham residents and businesses can take include:

- Check whether your home or business is at risk of flooding from rivers or surface water using the Environment Agency's website at **maps.environment-agency.gov.uk**
- If you are at risk of flooding or if you have suffered flooding at your home or business before, take measures to prepare your property, such as making a flood plan or installing flood protection measures.
- Sign up for Environment Agency flood warnings by calling **0845 988 1188**.
- Manage surface water in a sustainable way if you extend your home or pave over your driveway.
- Avoid pouring fats, oils and greases down drains or flushing nappies, wipes or other sanitary products down the toilet.
- Report flooding problems to the City Council's Drainage Team, should they occur, by emailing **drainage@nottinghamcity.gov.uk** or calling **0115 915 5555.**

What are the objectives for managing local flood risk?

Working with its partners, the City Council has developed a number of objectives for managing flood risk. Considering these objectives in all flood risk management activities will help the City Council to achieve the overall aim of reducing the impact of flooding on people, property and businesses in Nottingham.

Local Flood Risk Management Aim:

Reduce the impact of flooding on people, property and businesses in Nottingham

Objective 1: Work collaboratively with partners	Work collaboratively with Risk Management Authorities and stakeholders to deliver effective maintenance, understand flood risk, to jointly invest in schemes and share expertise.
Objective 2: Sustainable new developments	Ensure that new development is sustainable, is not at risk of flooding and does not increase flooding elsewhere. Promote the use of sustainable drainage systems to manage water quality, water quantity and biodiversity improvements.
Objective 3: Economically sustainable activities	Deliver cost-effective, proportionate and risk-based flood risk management schemes and maintenance activities.
Objective 4: Community engagement	Engage with communities and politicians to raise awareness of flood risk, resilience measures, preparedness and riparian responsibilities.
Objective 5: Multiple benefits	Promote flood risk management activities that consider climate change, enhance the natural and historic environment, deliver blue-green infrastructure, improve water quality and provide biodiversity and amenity benefits.
Objective 6: Catchment-based approach	Promote a joined-up and catchment-based approach to flood risk management whilst supporting the delivery of improvements to the water environment.
Objective 7: Local flood risk information	Further improve information on flood drainage assets and knowledge of current and future local flooding risk using a risk-based approach.

What specific measures will be taken to manage flood risk in Nottingham?

Existing plans and strategies have been used to identify priority areas for focusing available resources to manage flood risk. Proposed measures have been identified for each priority area and these form an action plan for managing flood risk in the short, medium and long term.

Category	Activity	Timescale
Statutory duties	Lead on **investigations** into flooding incidents that meet local thresholds	Ongoing
	Develop a comprehensive **register** of flood risk management assets and features	Medium
	Continue to support the work of Development Management, Regeneration and Planning Policy, Severn Trent Water and the Environment Agency to ensure that **development is sustainable** on flood risk grounds	Ongoing
	Identify and **designate features** that may have a significant impact on flood risk	Ongoing
	Make preparations for changes to the National Planning Policy Framework that will require **sustainable drainage systems** in all major development.	Short
Asset management	Continue to implement the recommendations of the Urban Highway Drainage Good Practice Guide, including a targeted risk-based approach to **highway drainage maintenance** regimes and tree leaf clearance	Ongoing
	Continue to **maintain minor watercourse**s and trash screens proactively and reactively, informed by telemetry systems	Ongoing
	Implement and record a cyclical programme of **asset inspections**.	Short
Community engagement	Working with partner organisations, develop and implement a prioritised and targeted **community engagement strategy** with at risk communities	Short – Medium
	Investigate options for entering into partnerships with suppliers to **support communities in protecting their own properties** by obtaining self-help measures at a lower cost.	Short

Activity	Short term actions	Timescale
Capital Schemes	**Broxtowe Park Brook, Broxtowe: Capital Maintenance and Flood Risk Management Scheme**	
	• Silt removal and silt management scheme	Medium
	• Investigate feasibility of delivering a flood risk management scheme	Medium
	• Delivery of flood risk management scheme (subject to feasibility and funding)	Long
	Colman Close, Top Valley: Surface Water Management Scheme	
	• Investigate feasibility of delivering a flood risk management scheme	Short
	• Delivery of flood risk management scheme (subject to feasibility and funding)	Short
	Day Brook Flood Alleviation Scheme	
	• Complete feasibility study into delivering schemes across the Day Brook catchment	Short
	• Design and delivery of flood risk management schemes (subject to feasibility and funding)	Long
	City-wide Property Level Protection Scheme	
	• Engage with homeowners and businesses and deliver Property Level Protection to approximately 70 properties across the City between 2015 and 2020 (subject to funding)	Short – Long
	Mapperley Park Surface Water Management Scheme	
	• Investigate feasibility of delivering a flood risk management scheme	Short
	• Delivery of flood risk management scheme (subject to feasibility and funding)	Medium
	River Leen at Bobbers Mill	
	• Investigate feasibility of delivering a flood risk management scheme	Long
	• Delivery of flood risk management scheme (subject to feasibility and funding)	Long
	Woolsington Close, Strelley: Surface Water Management Scheme	
	• Investigate feasibility of delivering a flood risk management scheme	Short
	• Delivery of flood risk management scheme (subject to feasibility and funding)	Short

Contact Us:

Nottingham City Council Drainage Team

Email: **drainage@nottinghamcity.gov.uk**

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