PETERBOROUGH

FLOOD RISK MANAGEMENT STRATEGY (FMS)

Public Summary

Peterborough
Creating the UK's Environment Capital

PETERBOROUGH
CITY COUNCIL

Front cover image: Whittlesey Washes in use. Source: Peterborough City Council
This page: Werrington Brook. Source: Patricia Taylor

INTRODUCTION

What is the Peterborough Flood Risk Management Strategy (FMS)?

The FMS is Peterborough's strategy and action plan for the future of flood risk management. It explains the flood risk in Peterborough, who the responsible organisations and individuals are, how funding for flood risk management projects works and what actions are proposed to manage the risk.

It has been written by Peterborough City Council with input from the Environment Agency Anglian Water, North Level District Internal Drainage Board, Middle Level Commissioners, Welland and Deeping Internal Drainage Board, the Highways Agency and the Local Resilience Forum.

This document is a summary, provided to give an overview of the contents of the FMS. This document is also open to consultation.

Why is it being prepared?

Under the Flood Water Management Act 2010 Peterborough City Council is now a Lead Local Flood Authority (LLFA). This means that the city council is responsible for co-ordinating the management of flood risk from surface water, groundwater and ordinary watercourses. The Act brings many new powers and duties, one of which is the preparation of a local flood risk management strategy.

It has been agreed by the flood risk management authorities in Peterborough that the FMS will cover all sources of flood risk, not just those managed by the city council. This will enable better co-ordination of approaches and actions across organisations.

Aims

The aims of the Peterborough Flood Risk Management Strategy are:

a) To confirm and raise awareness of the risk and management of flooding in Peterborough

b) To set out a clear plan of actions to tackle local issues and opportunities

c) To take a comprehensive partnership approach to flood risk management, considering other elements of water and environmental management that are affected or can be improved

d) To co-ordinate the actions of the different water management authorities to ensure projects and schemes are as efficient as possible and that joint funding opportunities are sought.

River Nene at the Embankment. Source: Peterborough City Cou

WHO IS RESPONSIBLE FOR WHAT?

If the flooding is an emergency affecting safety please call 999.

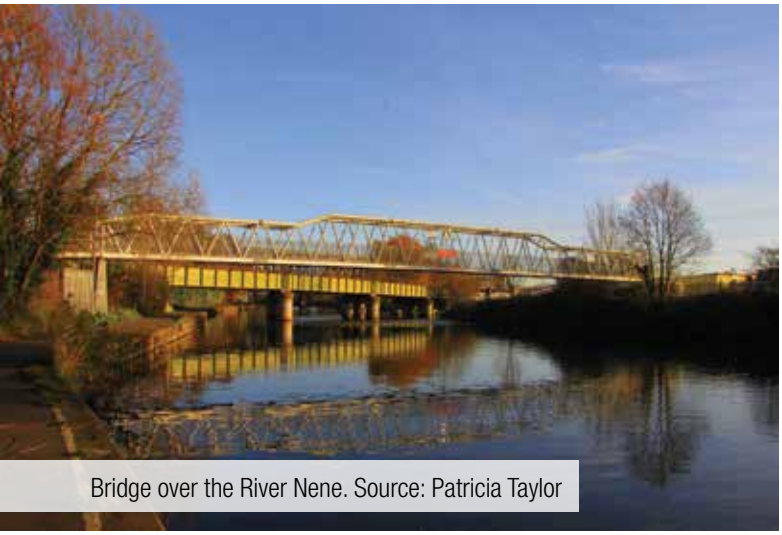
Organisation	Responsibility	Contact details
Peterborough City Council	Surface runoff from heavy rainfall (including highway drainage) Ordinary watercourses Groundwater	Tel: 01733 747474 Out of hours tel: 01733 864157 Email: watermanagement@peterborough.gov.uk
The Environment Agency	Main Rivers Tidal flooding Reservoirs	General tel: 03708 506506 Floodline: 0345 988 1188
Internal Drainage Boards	Managing the water levels in watercourses within Fen areas (the northern and eastern rural areas of Peterborough)	North Level District IDB Tel: 01733 270333 Email: eng@northlevelidb.org
		Welland and Deeping IDB Tel: 01775 725861 Email: info@wellandidb.org.uk
		Middle Level Commissioners Tel: 01354 653232 Email: admin@middlelevel.gov.uk
Highways England	Draining the major A roads in Peterborough	Tel: 0300 123 5000 Email: info@highwaysengland.co.uk
Anglian Water (as Peterborough's water company)	Sewers	Tel: 0800 771 881 Email: anglianwatercustomerservices@anglianwater.co.uk
Other utility companies	Electricity, gas, and communication networks	UK Power Networks (electricity) Tel: 0800 783 8838
		National Grid gas emergencies (gas) Tel: 0800 111 999
Property owners	Protection of your individual property from flooding	-
Riverside landowners	Ensuring the flow of water in watercourses on or adjoining your land	
Developers	Ensuring development has no negative impact on flood risk and wherever possible provides improvement	-

The full draft Peterborough Flood Risk Management Strategy can be viewed online at: http://www.peterborough.gov.uk/floodstrategy

WHAT FLOOD RISK DOES PETERBOROUGH FACE?

What different types of flood risk exist in Peterborough and how significant is the risk?

A variety of different sources of flood risk are relevant to Peterborough. Each risk is discussed below on the basis of flooding that could occur when the capacity of the system is exceeded.



Bridge over the River Nene. Source: Patricia Taylor

Main River
These are watercourses which have been designated as Main River by the Government due to their risk level. Peterborough has 17 Main Rivers listed in section 7.9.3 of the Peterborough Flood Risk Management Strategy. Some of these flow into the River Nene and some into the River Welland (both of which are Main Rivers themselves). Main Rivers can be tidal or non-tidal. In Peterborough the only tidal stretch of river is on the Nene downstream of the Dog in a Doublet sluice. The FMS rates the average risk of non-tidal Main River flooding in Peterborough as being high and the risk of tidal Main River flooding as low.

Combined Nene river and tidal event
This is the risk of a North Sea high tide occurring at the same time as a Main River event. When this occurs water is directed into the Nene (Whittlesey) Washes flood storage reservoir to prevent flooding of Peterborough. If the Washes ever reach capacity eg because both river levels and high tides are higher than normal for several days, the impact of flooding would be significant. Overall, the risk is described as high in the FMS.

Ordinary watercourse
Any ditch or watercourse not designated as Main River is known as an ordinary watercourse. Flooding generally occurs when local rainfall is significant enough that the watercourse flow overtops the banks. The FMS rates the risk from this type of flooding as low.

Groundwater
When water rises up from underlying rocks and emerges onto the surface of the ground this can cause groundwater flooding. Flooding tends to occur after long periods of sustained rainfall and in low lying areas where the water table is at a shallow depth. On average the FMS rates the risk from this type of flooding as medium.

Surface water
Flooding from surface water occurs when very intense rainfall causes surface water sewers and/or drainage ditches to become full and so water instead flows across the ground. Surface water flooding can be common but is generally very localised and so the overall average risk is low.

Foul sewers
There are not many locations in Peterborough classed as being at risk from foul flooding due to capacity issues. Therefore the FMS does not rate this risk. Any properties that are at risk in this way, are recorded by Anglian Water on a register called the DG5 register.

Overflowing surface water sewer. Source: Peterborough City Council

The Dog in a Doublet Sluice protects Peterborough against tidal flooding. Source: Peterborough City Council

Combined sewer
Combined sewers take both rainwater (surface water) and wastewater (foul water). The risk of flooding from these comes when very heavy rainfall reduces the capacity in the sewer. On average the FMS rates the risk from this type of flooding as high.

Internal Drainage Board pumped catchment
The Fen areas of Peterborough have a carefully managed pumped catchment which uses ordinary watercourses and diesel and electric pumps to manage the water levels. Very localised waterlogging and surface water flooding is possible over short time frames but with minimal impacts and hence the FMS rates the risk from this type of flooding as low. Large scale failure of the drainage board systems is of considerably lower probability and would have to coincide with significant Main River flooding elsewhere in Peterborough and the region.

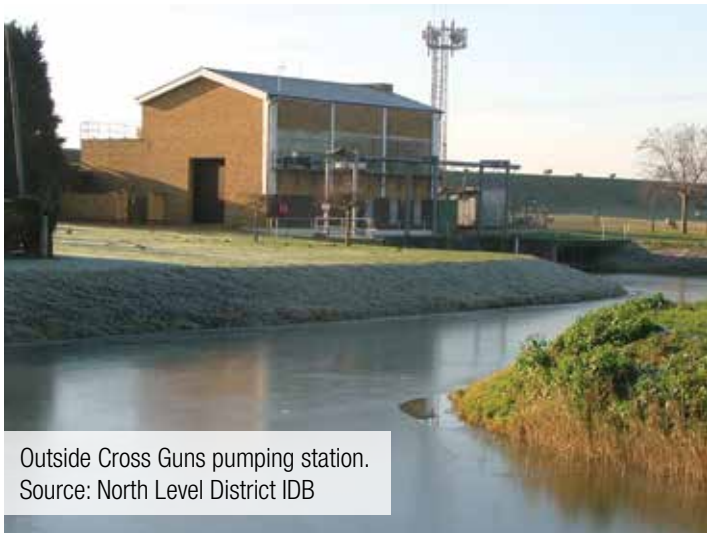
Reservoirs
The risk in Peterborough of flooding from reservoirs is considered low. This is because reservoirs are generally well designed, managed and monitored to reduce this risk and because the landscape means that any water escaping from the reservoir would spread far producing low flood depths.

Flooding can also occur due to operational issues. This could be because of blockages in the network eg from fat put down the drains, fly tipping or tree roots; from damage to pipes, eg from wear and tear or vandalism; or from the collapse of a pipe or river bank.

How can I find out about the risk in my local area?

Publicly available flood maps exist for Main River risk, for surface water risk and for the risk from reservoirs. To view these maps and discover the risk for your area please visit:

http://maps.environment-agency.gov.uk/wiyby



Outside Cross Guns pumping station. Source: North Level District IDB

Inside Cross Guns pumping station. Source: North Level District IDB

FLOOD WARNINGS

The Environment Agency provides a free flood warning service to properties mapped within the Environment Agency Main River flood zones. You can sign up to receive flood warnings by calling Floodline on **0345** 988 1188 or by signing up online.

To find out about flood alerts or warnings please visit the Environment Agency's flood website: http://apps.environment-agency.gov.uk/flood/31618.aspx

New text here

There is currently no warning system for surface water flooding but we recommend keeping an eye on the local weather forecast for heavy rainfall warnings.

HOW WILL THE RISKS BE MANAGED?

In order to manage the risks that Peterborough faces, the FMS includes an **Action Plan** of more than 50 actions to be implemented. This follows the successful delivery of a series of actions after the Flood and Water Management Act 2010 was first put in place. Appendix E lists the major actions completed so far.

In the **Action Plan** each action is listed with details about the lead organisation, timescales and costs. Actions are also measured against a set of objectives to ensure that these actions bring a range of different benefits to Peterborough.

Examples of the different types of actions in the FMS are provided below, set out by objective.

Objective 1 - Improve awareness and understanding of flood risk and its management, to ensure that everyone can make informed decisions and take their own action to become more resilient to risk.

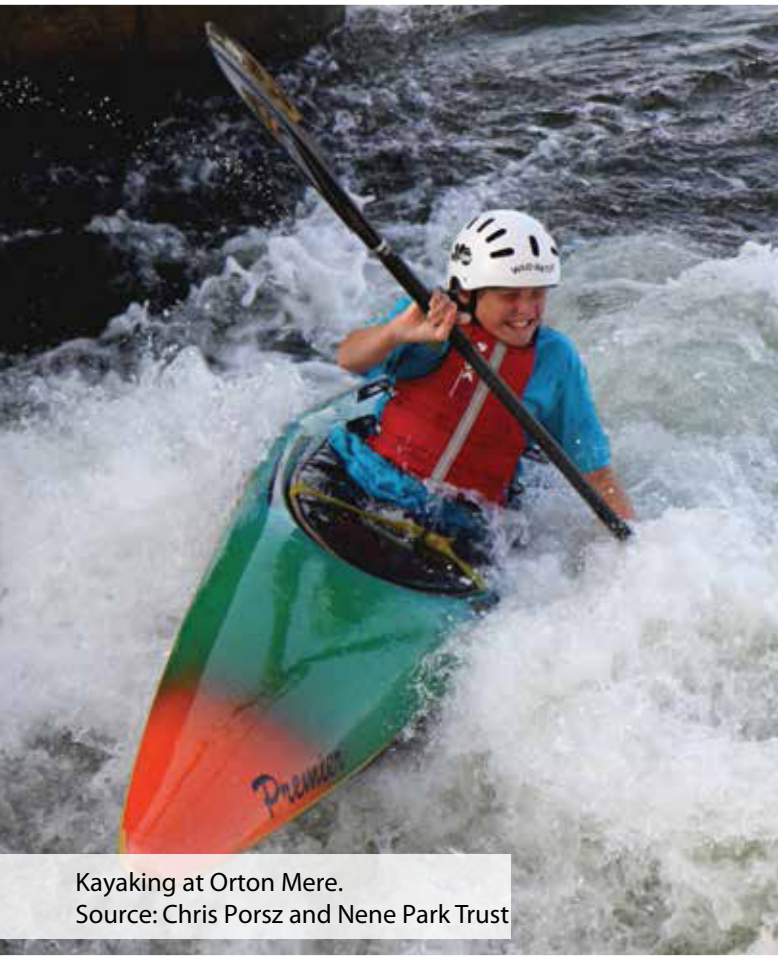
- Deliver targeted community engagement to raise awareness of flood risk
- Recruit more flood wardens
- Carry out further research into groundwater flood risk
- Undertake surveys of watercourses and sewers to improve our data
- Update the Strategic Flood Risk Assessment for new development
- Run Keep-it-Clear campaigns in areas experiencing sewer blockages
- Develop a severe weather recording system to enable analysis of the impacts of extreme weather events
- Install rain gauges around Peterborough to provide better rainfall data
- Deliver wider engagement campaigns to encourage community involvement in protecting watercourses and the environment.

Objective 2 - Establish efficient co-ordinated cross-partner approaches to flood and water management and response and recovery, including sharing and seeking new resources together.

- Maintain a register of important assets across Peterborough that affect flood risk
- Continue working together under the umbrella of the Peterborough Flood and Water Management Partnership to seek opportunities and resolve issues as they arise
- Work closely with other flood risk management organisations to find the most efficient ways of delivery services
- Update the Multi Agency Flood Plan for emergency response.

Objective 3 - Reduce flood risk to prioritised areas and strategic infrastructure, ensuring that standards of protection elsewhere are maintained .

- Continue to carry out maintenance of watercourses, pumps, sewers and other assets
- Improve the focus on surface water management through the planning process
- Work with the community within several wards to better understand the flood risk in those areas
- Reduce the risk from city centre combined sewers
- Brook Drain river and rail project
- Dogsthorpe flood alleviation project
- Paston Brook flood alleviation project - culvert improvements
- Whittlesey (Nene) Washes reservoir works to strengthen the south barrier bank
- Continue to engage with utility companies about infrastructure resilience projects
- Welland Flood Banks refurbishment scheme



Kayaking at Orton Mere.
Source: Chris Porsz and Nene Park Trust

Objective 4 - Improve the wider sustainability of Peterborough, ensuring an integrated catchment approach and proper consideration of the water environment and its benefits, in new and existing environments.

- Werrington Brook improvements programme – develop a programme of works to improve water quality, habitat and flood risk in the northern urban area of Peterborough. Will include business and community engagement, funding bids and channel works.
- Welland Flood Banks refurbishment scheme – combined scheme to ensure standards of flood protection are maintained in the Welland catchment and improve the river corridor habitat of Maxey Cut to make it more resilient to a changing climate.
- Prepare an Adaptation Plan to help Peterborough become more resilient to climate change and changes in natural resources.
- Review the Flood and Water Management Supplementary Planning Document in line with any future Local Plan reviews.
- Undertake a variety of actions within the city council to help deliver the sustainable water theme of the Environment Capital Action Plan.

For further information on actions please consult the **Action Plan** and Chapter 10 of the full FMS provides a description of the proposed projects and the full action plan table is included in Appendix F.

Enjoying the outdoors.
Source: Chris Porsz and Nene Park Trust

HOW IS IT FUNDED?

There are many different sources of funding contributing towards flood management actions proposed in Peterborough. The main sources are discussed below with a brief description of their applicability:

Government Grant in Aid - Will fund 45% of large capital schemes. It is essential that local contributions are also put forward to match fund.

Regional Flood and Coastal Committee Local Levy and IDB precepts - Can top up applications for government grant in aid or fund smaller schemes or preliminary studies. Counted as a local contribution.

Contributions from organisations such as Peterborough City Council, Anglian Water and the Internal Drainage Boards - Can fund or top up the funding for any type of project. The schemes have to be in the organisation's business plans in advance and internal business case approval will still be required. Counted as local contributions.

Development related funding such as Community Infrastructure Levy - Can fund or be used to top up funding for projects. Project must have benefits for new growth in Peterborough.

Community contribution - Financial contribution provided by a local business and/or community benefitting from the scheme.

In-kind funding eg in the form of hours spent maintaining a feature - Can be used as part match funding. Demonstrates support of a project by the organisation/community group proposing to contribute their time.

Staff time provided by all organisations - Officers carrying out research, data compilation, report writing or preparing funding applications etc.

WHAT HAPPENS NEXT

Monitoring and review

The FMS will be reviewed every 5 to 6 years but the **Action Plan** will be monitored and updated annually as projects evolve.

New text goes here.

WHAT CAN I DO TO HELP REDUCE FLOOD RISK?

- Prepare a personal flood plan yo protect yourself and your property. Guidance is available from: **https://www.gov.uk/prepare-for-a-flood/make-a-flood-plan**
- Keep your drains at home clear of fats, oils, greases, baby wipes and other 'unflushables' which can also cause flooding
- Become a flood warden - if you live in or near a flood risk area and would be happy alerting and supporting other residents when a warning is issued as well as being a central point of contact for the Environment Agency and the city council
- Help to keep local watercourses free of blockages which can cause flooding, for example, don't drop litter or tree cuttings into them
- Join a local community RiverCare group in Peterborough to get involved in caring for your local river. Find out more on the RiverCare website (part of the Keep Britain Tidy campaign): www.keepbritaintidy.org/rivercare/551

- Tell us what you know - if you live in the Peterborough area and have seen or experienced flooding in the past we would like to hear from you. We want to improve our records of historic flood events to help us better understand flood risk.

Late afternoon sunset along the Nene.
Source: Patricia Taylor

For further information you can:

Email: watermanagement@peterborough.gov.uk

Telephone: 01733 452650 , or

Write to: Flood and Water Management
Growth and Regeneration
Peterborough City Council
Town Hall, Bridge Street
Peterborough PE1 1HF


Cambridgeshire & Peterborough
999
Local Resilience Forum


middle level
commissioners


HIGHWAYS
AGENCY


in partnership with
Environment
Agency


NORTH LEVEL DISTRICT
INTERNAL DRAINAGE BOARD


Welland & Deepings
Internal Drainage Board


love every drop
anglianwater

ADDITIONAL TEXT TO BE INSERTED INTO THE PREVIOUS DRAFT DOCUMENT WHEN THIS MOCK UP IS FINALISED FOR PUBLICATION

PAGE 7 INSERTION

The following nationally standardised flood warning codes are used to alert communities to river flooding:

 FLOOD ALERT Meaning: **Flooding is possible. Be prepared.**	Flood Alerts are issued for locations that are at risk of flooding. Advice: • Remain vigilant. • Monitor local forecasts and water levels. • Be prepared to act on your personal or community flood plan. • Prepare flood kits of essential items.
 FLOOD WARNING Meaning: **Flooding is expected. Immediate action required.**	Flood warnings are issued to specific communities that are at risk from flooding or for specific stretches of coast and river. Advice: • Put flood protection equipment in place. • Move valuable belongings and pets upstairs.
 SEVERE FLOOD WARNING Meaning: **Severe flooding. Danger to life.**	Severe warnings are used in extreme conditions when flooding is posing significant risk to life or significant disruption to communities which could also cause risk to life. Advice: • Ensure you are in a safe place with a means of escape. • Be ready should you need to evacuate. • Co-operate with the emergency services. • Dial 999 if you are in immediate danger.
Flood Warnings no longer in force The Environment Agency issues a message to tell people that the flood threat has passed. Flood water could be around for several days so take care. Contact your insurance company as soon as possible if you have been flooded.	

PAGE 9 INSERTION - Under the heading 'Monitoring and review':

Each of the actions will need to be worked up in more detail and funding sources secured. The city council and their partner organisations will seek to develop projects by working with the local community to identify potential funding sources and the full range of benefits that can be achieved.

All actions have a number of dependencies and risk associated with them such as gaining business case approval, landowner permission, flood defence consent and/or planning permission.