Royal Borough of Kingston upon Thames
Local Flood Risk Management Strategy

Summary

2014 - 2020
Introduction

In response to the severe flooding across large parts of England and Wales in summer 2007, the Government has recently enacted the Flood and Water Management Act 2010 giving local authorities new powers to manage local flood risk in a more co-ordinated way. As a Lead Local Flood Authority, Kingston Council's responsibilities relate to ‘local’ flood risk from surface water, groundwater and small rivers, streams and ditches.

We have a legal requirement under the Flood and Water Management Act 2010 to develop, maintain, apply and monitor a Local Flood Risk Management Strategy ('Local Strategy') that:

- Provides an overview of flood risk management work being undertaken and planned throughout the borough;
- Explains how partners are working together to reduce flood risk; and,
- Clearly sets out which organisations are responsible for different types of flooding in the borough to ensure a common understanding of roles, responsibilities and priorities within the Borough.

The increase in extreme weather conditions, the presence of existing buildings in areas of flood risk and limited public funding, means that we cannot prevent all flood incidents happening in the borough. However, through the strategy we can coordinate our services so that flood risk is reduced and the impact of any flood incidents is minimised. The strategy also provides us with an opportunity to work together with local residents, businesses and stakeholders to minimise risk and prepare for the effects of climate change.

Nationally, around 5.2 million properties are at risk of flooding; 1.4 million are at risk from rivers or the sea, 2.8 million at risk from surface water and 1 million are at risk from both (Environment Agency, 2009)

This document is a summary of the Royal Borough of Kingston upon Thames Local Strategy, setting out our plan for the management of local flood risk across the Borough during the period 2014 - 2020.

For further information on the Local Strategy please visit our website at: http://www.kingston.gov.uk/info/200283/flooding_and_drainage

Development of the Strategy

The Strategy has been developed by Kingston Council in partnership with the Environment Agency and Thames Water, as well as local communities and neighbouring boroughs. It has been informed by local, regional and national policy, including the Environment Agency’s National Strategy for flood and coastal risk management, to ensure a coordinated approach to flood risk management within Kingston Borough.

A community engagement exercise was undertaken between January and April 2014. The outcomes from this have been used to shape the development of the Strategy and flood risk management priorities.

A further consultation of the final draft Strategy took place for six weeks between April and June 2015. Following the comments received a final version of the Strategy was produced for adoption.
The purpose of the Local Strategy

The aim of the Local Strategy is to work in partnership with local communities, and organisations responsible for managing flooding, in order to better understand and reduce local flood risk in Kingston Borough where it is economically, technically, socially, and environmentally feasible to do so. To achieve this aim a number of key objectives have been identified.

Royal Borough of Kingston upon Thames Local Strategy Objectives

1. Educate, encourage and empower local stakeholders to take action on reducing flood risk
2. Apply an intelligence-led risk based approach to the management of flood risk in the Royal Borough of Kingston upon Thames
3. Establish and maintain collaborative partnerships with key organisations, including Thames Water, neighbouring boroughs and the Environment Agency
4. Use planning powers to encourage sustainable solutions for the management of local flood risk which take account of the likely effects of climate change

How are we working with others?

Several organisations have a role to play in minimising the risk and impact of flooding in the Borough. The Strategy clarifies the responsibilities of the different organisations involved in flood risk management in the Borough including how they work together and what you should expect of them.

Kingston Council

We have a number of roles and responsibilities relating to flood risk management in the Royal Borough of Kingston upon Thames, including:

- **As the Lead Local Flood Authority and a Risk Management Authority** – we have legal duties and powers to investigate significant flooding events, maintain a register of significant flood risk assets and manage flood risk from ordinary watercourses,
- **As the Highways Authority** – ensuring that highways are drained of surface water and where necessary maintain all drainage systems,
- **Emergency Responder** - along with other organisations, developing emergency plans and business continuity plans for use during an emergency,
- **Local Planning Authority** - to consider flood risk in the development of the Local Plan, to be the decision maker on flood risk for planning application for development and to undertake a Strategic Flood Risk Assessment to inform strategic land use planning, and,
- **Asset Owner** – as the asset owner for flood risk assets, we have responsibility to manage and maintain these to ensure they operate as required and do not increase flood risk.
**Risk Management Authorities**
Risk Management Authorities, as defined by the Flood and Water Management Act (2010), include Kingston Council, other London Authorities, the Environment Agency, Thames Water (as the sewerage undertaker) and Transport for London.

The multi-agency South West London Strategic Flood Group has been established that includes representatives from each of the six South West London boroughs, the Environment Agency and Thames Water. The Local Strategy has been developed through this Partnership Group to ensure that a joined up approach is adopted throughout South West London.

**Other flood risk management organisations**
There are a number of other relevant organisations that have a key role to play in managing flood risk in the borough. (such as Network Rail and Natural England). These organisations will be involved as required to support flood alleviation projects, or to provide information, support and input on a project-by-project basis.

**Public and community groups**
The public, community groups and businesses also have a role to play in the management of flood risk. The Local Strategy highlights that people and properties in known flood risk areas should be prepared for flood incidents. Anyone who owns land adjoining a watercourse also has certain responsibilities to ensure the unobstructed flow of water.

Our aim is that the public and local community groups are aware of the flood risks they face, take action to reduce their vulnerability to flooding, and are actively involved in flood risk management. To achieve this vision, we will:

- Raise awareness of local flood risk and encouraging local communities to take action, and,
- Target communities at greatest risk as part of flood studies or development of a flood alleviation scheme.

**Flood Risk in the Royal Borough of Kingston upon Thames**
Flood risk is the likelihood of a particular flood happening (probability) e.g. ‘there is a 1 in 100 chance of flood in any given year in this location’, multiplied by the impact or consequence that will result if the flood occurs.

The Council’s responsibility, and the focus of this Local Strategy, is the management of ‘local’ flooding. By this we mean flooding from:

- **Surface water** – this occurs when heavy rainfall cannot be absorbed into the ground or enter the drainage systems,
- **Ordinary watercourses** – this occurs when smaller watercourses, such as streams, ditches, drains, cuts, dykes and sluices cannot hold the volume of water flowing through them and overflow their banks onto surrounding land, and,
- **Groundwater** – this occurs when water levels in the ground rise above surface levels which is most likely to occur in areas underlain by permeable rocks, and is likely to occur after seasonal periods of prolonged rainfall.

However, the most severe flooding is often caused when different types of flooding sources combine. Whilst developing the Local Strategy we have considered the influence of river, sewer and other forms of flooding and we are working in partnership with the Environment Agency, Thames Water and other stakeholders where there are combined sources of flooding.
Other sources of flooding include:

- **Sea (tidal)** – this occurs when water levels from the sea overtop or breach flood defences. There is a semi-tidal influence on the River Thames within Kingston Borough despite Teddington Weir downstream of the borough. The Thames Tidal Defences protect areas downstream from tidal flooding through a combination of raised defences and the Thames Barrier.

- **Rivers** – this occurs when a watercourse cannot cope with the volume of water draining into it and overflows its banks onto surrounding land. Large (‘Main’) rivers in Kingston Borough include the River Thames, Hogsmill River and Beverley Brook.

- **Sewer** – this occurs when sewers are overwhelmed by heavy rainfall, which can be the result of where the rainfall event exceeds the capacity of the sewer or drainage system, the system becomes blocked by debris or sediment, and / or the system surcharges due to high water levels in receiving watercourses, and,

- **Reservoirs or artificial lakes** – this occurs when reservoirs which hold large volumes of water above ground water, overtop i.e. cannot contain the amount of water flowing into them, or when part of the reservoir fails resulting in a fast release of water. There are no artificial lakes or formal reservoirs within Kingston Borough.

**Historic Flooding**

Historically, Kingston Borough has been affected by flooding from surface water, rivers, groundwater and sewers.

Over recent years, severe surface water flooding has been experienced across the area causing damage to property and disruption to businesses and services. The most significant recent flooding event occurred January 2014 when sustained heavy rainfall caused flooding from surface water, rivers and sewers to combine to impact properties across the borough.

**Risk of Flooding**

Flood risk is based on the potential risk that might arise based on knowledge of known flooding hotspots and potential mechanisms for flooding. Kingston Borough is at greatest risk of flooding from surface water, sewers, main rivers and groundwater sources. It is predicted that this risk will increase in the future; influenced by climate change and increasing pressures on development and housing need. This does not, however, indicate that flood risk from other sources is insignificant.

Risks from river flooding associated with the River Thames, Hogsmill River and Beverley Brook are relatively well understood and have been managed at a catchment level for many years by the Environment Agency. These risks are mapped and delineated into Flood Zones, which are available to view through the Environment Agency’s website and are used to guide planning decisions. The flood risk from local sources is less well understood; these typically result in more localised flooding events which are often difficult to predict and there are few historical records available to verify modelling outputs.

Parts of Kingston Borough have a particular susceptibility to surface water and sewer flooding due to the urbanised nature of the area and the complexity of the sewer system leading to a high potential for constrictions, blockages and failure.
Surface water flood maps published by the Environment Agency in December 2013 show that across Kingston Borough up to 1064 residential properties could be at high risk of surface water flooding. Fourteen Critical Drainage Areas (CDAs) within the borough were identified as a result of the modelling for the Royal Borough of Kingston upon Thames’ Surface Water Management Plan in 2011. Areas identified to be particularly susceptible to surface water flooding include Kingston town centre, New Malden and Hook.

Flood risk from groundwater is less well understood and can be particularly difficult to predict due to the ‘hidden’ nature of the source of flooding and relatively longer period as the water table rises and emerges, often several days or weeks after heavy rainfall has fallen and river levels have dropped. Based on available data the areas of New Malden and land close to the River Thames, Hogsmill River and Beverley Brook are predicted to be at greatest risk, where permeable deposits (which usually consist of sediments such as gravel, sand, silt and clay) associated with the river valley are located.

Within Kingston Borough, 2.7km of ordinary watercourses are culverted. Trash screens at the entrances to culverts and culverts themselves have the potential to become blocked by items such as plant debris and rubbish, increasing the chance of water flowing out of bank and causing local flooding.

Sewer flooding is recorded and mapped by Thames Water as the sewerage undertaker in Kingston Borough. Climate change is anticipated to increase the potential risk from sewer flooding as summer storms become more intense and winter storms more prolonged. This combination is likely to increase the pressure on the existing efficiency of sewer systems, thereby reducing their design standard and leading to more frequent localised flooding incidents.

How will we deliver local flood risk management?

The Strategy sets out how we will deliver the objectives of the Strategy over the next five years. A number of measures and actions have been identified to achieve this, and these are set out in the Action Plan that accompanies the Local Strategy. These will help us to improve our understanding of flood risk across the Borough and inform the way we reduce this and plan for resilience against the impacts of climate change.

In delivering flood risk management, we have the opportunity to deliver wider environmental objectives and requirements, as set out in European Legislation including the Water Framework Directive. A Strategic Environmental Assessment and a Habitats Regulations Assessment Screening exercise have been undertaken to inform the Strategy development.
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<th>Objective</th>
<th>Actions to achieve the objective</th>
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| Educate, encourage and empower local stakeholders to take action on reducing flood risk | - Identify the best methods to communicate the risk of flooding to residents across the borough  
- Review Kingston Flood Management webpages to ensure they include all relevant information on flood risk for the borough and links to external websites where guidance is available on managing flood risk, e.g. National Flood Forum  
- Set up webpage / web reporting facility to allow the public to report flooding incidents  
- Utilise enforcement powers to block inappropriate use of the drainage system  
- Consolidate records of flooding to compile a list of local areas at risk so as to provide guidance on managing local flood risks.  
- Produce a Flood Risk Management Communications Plan  
- Prepare community specific emergency plans which are regularly reviewed and updated  
- Identify the demand for having a contact network of key individuals in community groups, to be used in the event of a flooding incident and/or to organise coordination of flood risk management.  
- Encourage residents and businesses to register with the Environment Agency to receive flood warnings and flood alerts  
- Contact all community groups to understand their current flood response role, outline Kingston’s LLFA duties and responsibilities and the current flood risk information available.  
- Carry out incident exercises in high risk areas. Following the exercises carry out a review and feedback improvements to LLFAs and RMAs.  
- Carry out a review of flood depths / hazards from all local source of flooding across Kingston that could benefit from Individual Property Protection.  
- Utilise enforcement powers to block inappropriate use of the drainage system  
- Establish and maintain collaborative partnerships with key organisations, including Thames Water, neighbouring boroughs and the Environment Agency  
- Undertake catchment wide studies and promote benefit to other RMAs.  
- Hold meetings with RMAs to discuss flood risk management in the borough, including combined risk of flooding.  
- Review opportunities for collaborative working through the Kingston Flood Risk Management Team meetings and raise opportunities to South West London Strategic Flood Group, as appropriate.  
- Maintain regular contact with the Flood Risk Managers in neighbouring boroughs to ensure awareness of cross-boundary projects or initiatives  
- Provide Thames Water with evidence of locations within their infrastructure that require maintenance.  
- Continue to work with and request information on Thames Water’s current priorities  
- Maintain regular contact with the Environment Agency to share knowledge and ideas.  
- Develop a check list for both non statutory consultee duty from 15 April 2015 and planning.  
- Incorporate the investigation of CDAs and build upon the results of previous investigations  
- Continue to develop and review an Asset Register. Ensure it is fully up to date and fully mapped.  
- Continue work on the current drainage investigation and maintenance programme.  
- Use planning powers to encourage sustainable solutions for the management of local flood risk which take account of the likely effects of climate change  
- When considering potential capital works an assessment should be made of the socio-economic environment. This will then form part of any future application for Grant in Aid funding for flood and coastal erosion risk management projects.  
- Review existing best practice drainage guidance, generating local drainage standards where necessary, to assist developers in reducing flood risk to and from schemes.  
- Develop a check list for both non-technical staff and specialist drainage staff for reviewing SAB applications.  
- Review local planning policy to ensure the relevant content of RBK flood risk documents (SWMP, PFRA, SFRA, LFRMS) is included and the policy is up to date.  
- Work with developers to maximise green space and biodiversity benefits.  
- Ensure and encourage early pre-application dialogue between Kingston and developers.  
- Implement a procedure for the assessment of planning applications for SuDS in line with new statutory consultee duty from 15 April 2015.  
- Develop a procedure for how to inspect and promote SuDS features which best suit local ground conditions.  
- The LLFA should work with and share knowledge across departments, including building control, highways and planning.  
- Where appropriate work towards providing training for individuals or departments. |
How will we prioritise flood risk management actions?

It is not possible to prevent all flooding, and with limited resources and funding it is not possible to carry out work in every area with flood risk. The approach must be proportionate and risk based and all authorities have to ensure that environmental consequences are taken into account.

Projects are likely to fall under three broad categories:

- Schemes with highest eligibility for national funding,
- Local priorities with lower eligibility for national funding, and,
- Ongoing programmes of work and maintenance schedules.

As our understanding of flood risk improves and evidence is forthcoming specific mitigation schemes and activities will be developed to address flood risk in those areas at greatest risk, where funding is available.

How will flood risk management be funded?

To date, flood risk management activities in the Borough have primarily been funded through central government grants. However, the current economic climate places significant pressures on these funding sources and in the future there will be greater emphasis on Lead local Flood Authorities to fund activities and schemes from their own or alternative local sources of funding.

Since April 2012, flood risk management projects funded by Government, relate directly to the number of households protected, damage prevented and other benefits such as the environmental or business benefits that will be delivered. We are developing our understanding of areas in Kingston Borough that have the highest eligibility for national funding such as the Flood and Coastal erosion Risk Management Grant in Aid (FCRM GiA).

In the future we will need new ways of working to make sure we can successfully reduce the risk of flooding as well as finding new ways to pay for the improvements. Whilst it may be possible to fully pay for some projects using available national sources of funding, it is likely they will require a wider range of funding sources (including contributions from local communities and businesses). The Strategy provides detail on the additional funding options that will be considered in the Borough, including seeking contributions from developers.

What happens next?

Although there is no formal deadline for the Strategy to be produced or updated, we believe that continued monitoring and review are essential to ensure that local flood risk management is responsive to changes. This will be especially important when there are substantial changes in the planning system regarding requirements for sustainable drainage, changes in funding and design of flood management schemes and improvements in our knowledge of flood risk across the Borough. Internal reviews are proposed to occur at least on an annual basis and following 2020 it is proposed that the Strategy will be updated at least every six years.

The final draft Strategy was publicly consulted on in April 2015 via our website, offering the opportunity for residents, businesses and risk management authorities to provide feedback. The consultation ended on 9th June 2015 and comments from a total of 20 respondents had been received. All of the objectives and actions of the Strategy were ranked as been either satisfactory or excellent by the majority of the respondents. Following the consultation some minor amendments were made to the Strategy where necessary.