

CABINET

19 September 2017

Title: Local Flood Risk Management Strategy	
Report of Cabinet Member for Environment and Street Scene	
Open Report	For Decision
Wards Affected: All	Key Decision: Yes
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Accountable Director: Jonathon Toy, Operational Director, Enforcement Services	
Accountable Strategic Director: Claire Symonds, Chief Operating Officer	
Summary	
<p>It is a statutory requirement of the Flood and Water Management Act 2010 that all Lead Local Flood Authorities publish a Local Flood Risk Management Strategy (Section 9, sub-section 7). Barking and Dagenham Council is the Lead Local Flood Authority for its municipality.</p>	
<p>It has been estimated that there are more than 11,000 properties across the Borough at risk of surface water flooding and flooding from ordinary watercourses.</p>	
<p>The key aim of the Local Flood Risk Management Strategy is to set out a long-term vision to reduce the likelihood and detrimental consequences of flooding. The way the Strategy will help to achieve this is by providing support and direction for local residents, businesses and other stakeholders to understand the risks and offer best practice advice in the steps they can take to reduce the risk of flooding.</p>	
<p>The strategy has been produced through a working group involving the Cabinet Member for Environment and Street Scene. The working group included internal council services such as Planning, Parks, Ambition2020, Civil Protection and Housing. Key stakeholders, such as the Environment Agency, Thames Water, neighbouring Boroughs of Redbridge and Havering have been consulted and their responses incorporated into the document. A public consultation exercise has also been undertaken although no representations were received. It should be noted that the strategy is intended to be a living document so may be amended if valid representations are received from any persons or organisations.</p>	
<p>The final draft Local Flood Risk Management Strategy is attached at Appendix A and included within that is the Action Plan (Annex C). A one-page summary of the impacts of the Strategy can be found at Appendix B. A risk assessment is at Appendix C.</p>	
<p>The overall themes of the Strategy are to:</p>	
<ul style="list-style-type: none">• Continue to improve understanding of flood risks within the Borough, both within	

the Council and general public;

- Ensure a clear understanding of the risks of flooding and erosion, nationally and locally, so that investment in risk management can be prioritised more effectively;
- Form links between the Local Flood Risk Management Strategy and local spatial planning;
- Continue to reduce flood risk to communities and business within the Borough, through fair and transparent means;
- Set out clear and consistent plans for risk management so that communities and businesses can make informed decisions about the management of the residual risk;
- Ensure good communication and coordination between the relevant risk management authorities for the management of flood risk;
- Encourage innovative management of flood and coastal erosion risks, taking account of the needs of communities and the environment (natural and historic);
- Ensure that emergency plans and responses to flood incidents are effective and that communities are able to respond properly to flood warnings; and
- Help communities to recover more quickly and effectively after incidents.

It will do this by acting as the evidence base for the decisions and actions required for managing flood risk. The minimum requirements for a local Strategy are summarised below:

- Identify Risk Management Authorities (RMAs) in the Local Authority's area;
- Describe the Flood and Coastal Erosion Risk Management functions that may be exercised by those Authorities in relation to the area;
- Set objectives for managing local flood risk;
- Describe the measures proposed to achieve those objectives;
- Define how and when the measures are expected to be implemented;
- Estimate the costs and benefits of those measures, and how they are to be paid for;
- Complete an assessment of local flood risk for the purpose of the Strategy;
- State how and when the Strategy is to be reviewed; and
- Show how the Strategy contributes to the achievement of wider environmental objectives.

Recommendation(s)

The Cabinet is recommended to:

- (i) Adopt the Local Flood Risk Management Strategy and Action Plan at Appendix A to the report; and
- (ii) Authorise the Operational Director of Enforcement Services, in consultation with the Cabinet Member for Environment and Street Scene, to make any appropriate amendments to the documents arising from best practice initiatives or valid representations from the general public and/or risk management authority partners.

Reason(s)

It is a statutory requirement that every Lead Local Flood Authority publishes a Local Flood Risk Management Strategy. This requirement is stipulated in the Flood and Water Management Act 2010 (Section 9, sub-section 7).

The document should be regularly reviewed and updated in order to maintain its relevance and integrity.

1. Introduction and Background

- 1.1 The key aim of the Local Flood Risk Management Strategy is to set out a long-term vision to reduce the likelihood and detrimental consequences of flooding.
- 1.2 The way the Strategy will help to achieve this is by providing support and direction for local residents, businesses and other stakeholders to understand the risks and offer best practice advice in the steps they can take to reduce the risk of flooding.
- 1.3 The Flood and Water Management Act 2010 (FWMA) places a responsibility upon Local Authorities, as Lead Local Flood Authorities (LLFAs), to develop, maintain, apply and monitor a strategy for local flood risk management (a 'local strategy').
- 1.4 The local strategy forms the framework within which communities have a greater say in local risk management decisions.
- 1.5 In combination with the National Strategy, published by the Environment Agency, the local strategies encourage more effective risk management by enabling people, communities, business and the public sector to work together to:
 - Ensure a clear understanding of the risks of flooding and erosion, nationally and locally, so that investment in risk management can be prioritised more effectively;
 - Set out clear and consistent plans for risk management so that communities and businesses can make informed decisions about the management of the residual risk;
 - Encourage innovative management of flood and coastal erosion risks, taking account of the needs of communities and the environment;
 - Form links between the local flood risk management strategy and local spatial planning;
 - Ensure that emergency plans and responses to flood incidents are effective and that communities are able to respond properly to flood warnings; and
 - Help communities to recover more quickly and effectively after incidents.

It will do this by acting as the evidence base for the decisions and actions required for managing flood risk.

- 1.6 The minimum requirements for a local strategy are summarised below:
 - Identify Risk Management Authorities in the Local Authority's area;
 - Describe the flood and coastal erosion risk management functions that may be exercised by those Authorities in relation to the area;

- Set objectives for managing local flood risk;
- Describe the measures proposed to achieve those objectives;
- Define how and when the measures are expected to be implemented;
- Estimate the costs and benefits of those measures, and how they are to be paid for;
- Complete an assessment of local flood risk for the purpose of the Strategy;
- State how and when the strategy is to be reviewed; and
- Show how the strategy contributes to the achievement of wider environmental objectives.

1.7 The Strategy is an important new tool to help understand and manage flood risk within Barking and Dagenham. The management of flood risk in the borough will be marked by better knowledge of the risks in the region, better co-operation between organisations involved in flood risk management and better communication with the public about those risks and what can be done.

1.8 One of the key purposes of this Strategy is to highlight the steps that are to be taken to ensure the above points are established and are operational.

1.9 Our Local Flood Risk Management Strategy Objectives:

- 1) Improve knowledge and understanding of local flood risk
- 2) Manage and reduce flood risk
- 3) Communicate with communities and work together to manage flood risk
- 4) Develop, maintain and implement emergency response and recovery plans
- 5) Make sustainable policy and planning decisions informed by flooding issues

1.10 The Council has a number of roles and responsibilities relating to flood risk management in the borough, 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 any 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.

1.11 The number of properties in Barking and Dagenham that are potentially at risk from surface water flooding (based on a 1 in 100 chance of flooding in any given year):

Residential	9,770
Non-residential	1,230
Critical Services	42

- 1.12 Barking and Dagenham 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.
- 1.13 This Strategy enables the Council to engage with our partner Risk Management Authorities to address the long-term flood issues this Borough faces.
- 1.14 There are steps that the Council can take to reduce flood risk, such as having proactive, cyclical gully cleansing and ditch/watercourse maintenance programmes and these form part of the Action Plan that can be found in Annex C to the main Strategy document.
- 1.15 The predicted consequences of flooding to property, businesses and infrastructure have been analysed and those areas identified to be at more significant risk have been delineated into Areas of Critical Drainage (AoCD). Seven AoCD's have been identified in Barking and Dagenham which are spread across the Borough.
- 1.16 The Strategy identifies the measures that the Barking and Dagenham Council will adopt to achieve the local objectives. Measures are activities that will be undertaken to manage risk and achieve the stated objectives. Wherever possible, measures which achieve multiple benefits, such as water quality, biodiversity and amenity benefits will be promoted.
- 1.17 Proposed timescales for delivery of the measures is recommended for the short (0 – 3 years), medium (3 – 10 years) and longer term with a view to managing the effects of climate change
- 1.18 It should be noted that the Council, as a Lead Local Flood Authority, is only responsible for management of Local Flood Risk. Local Flood Risk is defined as surface water flooding, ordinary watercourse flooding and groundwater flooding. This area of responsibility is defined by the Flood and Water Management Act. Therefore, this Local Flood Risk Management Strategy only addresses Local Flood Risk and the interactions it might have with other sources of flood risk. More households are at risk from this form of flooding than any other but, until now, there has been little co-ordinated work to address these forms of risk.

2. Proposal and Issues

- 2.1 Barking and Dagenham have drafted a Local Flood Risk Management Strategy, in line with current guidance and best practice, that has been peer-reviewed. The Strategy requires formal adoption by Cabinet as it is a statutory requirement of the Flood and Water Management Act 2010.
- 2.2 There is a reputation risk to Barking and Dagenham Council if we fail to publish a Local Flood Risk Management Strategy.
- 2.3 The Strategy document provides a system to establish flood risk issues and to prioritise them according to set criteria. The strategy also suggests potential funding mechanisms. Without this Strategy in place, there is no agreed system to ensure the Council responds to flood risk issues in a consistent and appropriate manner.

- 2.4 An Action Plan has been developed alongside the Strategy with measures identified to tackle surface water flood risk across Barking and Dagenham and in specific Areas of Critical Drainage. Actions include establishment of policy positions on restricting surface water runoff in new developments and increasing residents' ability to protect themselves in times of flood.
- 2.5 A project is also underway to produce a computer model of the drainage / gully system, providing evidence of flood risk to support future bids for funding for measures to improve drainage infrastructure, addressing the effects of future climate change.
- 2.6 The risks associated with any schemes that are derived through the application of the Strategy would be considered in detail at individual scheme level. Primarily these will relate to the risk of the projects not being funded, or delivered on time or to budget.

3. Options Appraisal

- 3.1 It is a statutory requirement to publish this document, there are no alternative options available.

4. Consultation

- 4.1 The strategy development has been overseen by a steering group consisting of the Lead Cabinet Member for Environment and Street Scene together with officers from the following services: Flood Risk Management, Planning, Emergency Planning, Parks, Housing, Ambition 2020 and Public Health. Below is a table showing all levels of consultation:

Date	Activity	Group
28 th November 2016 – January 2017	Consultation	Key stakeholder (RMA's)
29 th March 2017 – 29 th April 2017	Public Consultation	General Public
20 th June 2017	Key internal stakeholders	DMT
20 th July 2017	Key internal stakeholders	CSG
24 th August 2017		CGP
19 th September 2017		Cabinet

- 4.2 The strategy has been distributed to our partner risk management authorities (RMAs) for comment. These RMA's are: London Borough of Havering, London Borough of Redbridge, Transport for London, Network Rail, London Councils (DCLG), Thames Water, the Thames Regional Flood and Coastal Committee, the Greater London Authority, Historic England, English Heritage, London Fire Service, Metropolitan Police and the Environment Agency.
- 4.3 The Strategy has been published on the Barking & Dagenham Council website. A consultation exercise was undertaken between 29th March and 29th April for members of the public to comment on the Strategy. While no representations were made during the formal consultation process, the document is deemed to be 'living' and can therefore incorporate representations, if necessary, at any time. These comments would be considered within the wider context of the Strategy and it is

recommended that the Strategic Director Customer, Commercial & Service Delivery, considers the validity of any amendments and additions in consultation with the Cabinet Member for Environment and Street Scene.

5. Post Consultation

- 5.1 **Website:** A series of webpages are currently being developed to assist interested parties with understanding our Strategy and what, if any, implications may affect them. Particularly, how partnership working within the wider community will help reduce flood risk. The webpages will provide transparency in the issues we face as a Borough and explain areas of responsibility. The website is currently being drafted and will go live later this year.
- 5.2 **Hydrological Modelling:** The Council has recently let a contract to undertake flood risk modelling for the Borough. The outputs from the modelling exercise will be a series of hypothetical rainfall events applied to the Borough and its infrastructure to highlight flow paths taken by surface water, areas where water ponds and the impacts on rivers, with particular interest in tidal lock scenarios. From this process, the exact areas at risk of flooding can be identified and utilising this information, funding can be sought from the Environment Agency to progress mitigation schemes.
- 5.3 **Community Groups:** In certain areas of the Borough it can be expected that insufficient numbers of property would be affected and the cost to protect these properties is prohibitive. In these instances, the drainage team will work with that community to offer advice and support on property level protection measures and evacuation plans.

6. Financial Implications

Implications completed by: Lawrence Quaye, Accountant

- 6.1 This Cabinet paper is seeking approval of the Local Flood Risk Management Strategy at Appendix A, which describes the extent and range of activities undertaken by the Council and its partners to reduce flood risk locally.
- 6.2 The present version of the Local Flood Risk Management Strategy is a draft version that will be subject to public consultation after Cabinet approval before it is finalised and adopted. The Strategy sets out how the Council will work collaboratively with other key stakeholders to input into the management of all sources of flood risk and ensure that investment decisions are made according to levels of risk.
- 6.3 Section 11 of the Strategy outlines the various funding options available to the Council for flood risk management. A cost / benefit appraisal will be completed for proposed flood risk management schemes to help ensure the measures are proportionate to the level of risk presented and in some cases to help prioritise schemes and secure funding.
- 6.4 Any flood risk management measures that need to be implemented will need to consider the whole life benefits of the measure (both tangible and intangible), the associated implementation costs, ongoing maintenance costs and also ensure that funding is in place.

7. Legal Implications

Implications completed by: Dr. Paul Feild, Senior Lawyer

- 7.1 As set out in the body of the Local Flood Risk Management Document the London Borough of Barking and Dagenham is a Lead Local Flood Authority (LLFA) under the Flood and Water Management Act 2010. The Council must therefore prepare a Local Flood Risk Management Strategy that sets out the approach that has been adopted within the Borough to manage flood risks. The present version of the Local Flood Risk Management Strategy is a final draft version that follows a key stakeholder review and public consultation exercise.
- 7.2 The Strategy is a living document and following formal adoption it may from time to time require amendments and modification, so it is proposed that the Strategic Director Customer, Commercial & Service Delivery, in consultation with the Cabinet Member for Environment and Street Scene will have the power where there are operational or services reasons to so make such amendments as appropriate.

8. Other Implications

- 8.1 **Risk Management** - A risk matrix is attached at Appendix C.
- 8.2 **Contractual Issues** - There are no specific implications at this stage.
- 8.3 **Staffing Issues** - The implementation of the Strategy will be overseen by the Borough's drainage team. Capital projects, funded through external grant processes, will be managed and implemented by temporary project engineers.
- 8.4 **Corporate Policy and Customer Impact** - The Strategy is an inclusive document relevant to all who interact within the Borough of Barking and Dagenham. Equality impact assessments are undertaken on an individual project basis and are included in the relevant Decision Audits or reports to Cabinet, as required. The projects are borne out of the Strategy objectives and action plan.

The publication of a Local Flood Risk Management Strategy, by Lead Local Flood Authorities, is a statutory requirement of the Flood and Water Management Act 2010 (FWMA). As the London Borough of Barking & Dagenham is the Lead Local Flood Authority for the Borough, we are responsible for the production and publication of this document.

Flooding and sustainable drainage systems are currently considered within our core development management policy. This Local Flood Risk Management Strategy is consistent with that policy.

- 8.5 **Safeguarding Children** – There are no specific implications at this stage.
- 8.6 **Health Issues** - The Strategy sets out a summary of the local flood risk and helps to inform planning and sustainability policy. It also contributes to the achievement of wider environmental objectives.

The Strategy sets the objectives for managing local flood risk, the measures proposed to achieve those objectives, how and when the measures are expected to be implemented, the costs and benefits of those measures and how they are to be paid for.

Sustainable drainage solutions that involve bio-retention introduce wider benefits to the communities in which they are constructed. These include improvements to air quality, local habitat and streetscape vistas.

A neighbourhood that incorporates easily accessible green spaces into its design may also improve social cohesion and interaction. As a result, the mental health of individuals may also remain positive due to a decreased chance of depression and feelings of isolation and increased self-esteem.

A report for the Houses of Parliament evidences the benefits to health provided by high-quality green space in the urban environment.

There is also evidence that those affected by flooding are at an elevated risk of developing post-traumatic stress disorder.

- 8.7 **Crime and Disorder Issues** - There is anecdotal evidence that crime in the form of vandalism and looting can increase in areas affected by serious flooding. This is due to vacated properties and access difficulties for security forces. There is evidence that suggests that for certain criminal activity, the impact of flooding causes it to be displaced into other areas. Burglaries particularly can increase in the areas surrounding floods as the target availability remains high in these areas – where the thief may suffer the same access problems as the security forces. [Disasters and crime: The effect of flooding on property crime in Brisbane neighbourhoods (2017) - Zahnow, Wickes, Haynes & Corcoran].
- 8.8 **Property / Asset Issues** - The Council is a substantial landowner and asset holder in the Borough. We must ensure that the flood risk for these assets is mitigated to an appropriate level.

Public Background Papers Used in the Preparation of the Report:

- Houses of Parliament POSTnote 538: Green Space and Health (<http://researchbriefings.parliament.uk/ResearchBriefing/Summary/POST-PN-0538#fullreport>)

List of appendices:

- **Appendix A** – Local Flood Risk Management Strategy document
 - Annex A - Local Flood Risk Management Strategy Action Plan
 - Annex B – Map of Rivers
 - Annex C - Example of Investigation Priority
- **Appendix B** – One-page summary of the impacts of the Strategy
- **Appendix C** – Risk Assessment