

Flood Risk Management Annual Report

Report of the Interim Flood Risk Manager January 2018

1. Introduction

A scrutiny review of Flood Risk Management and Response was published in June 2010. This set out 12 recommendations which were completed in 2010. In June 2010, The Flood and Water Management Act 2010 passed into law conveying new responsibilities and making Birmingham City Council a Lead Local Flood Authority (LLFA). This report highlights progress in addressing these new statutory responsibilities and provides an update on other flood risk management related issues.

2. Flood and Water Management Act Duties

The following work has been undertaken to fulfil the LLFA duties under the Flood and Water Management Act.

2.1 Local Flood Risk Management Strategy

Following a 12 week consultation period on Be Heard, the Local Flood Risk Management Strategy for Birmingham was published in October 2017 having gained the approval of Cabinet. The Strategy sets out the objectives for managing local flood risk and the measures proposed to achieve those objectives. One of the main aims of the strategy is to make it clearer to the public who is responsible for flood risk, their level of flood risk and measures that can be taken to manage that risk.

The Local Flood Risk Management Strategy is required to consider the impact and consequences of local flood risk (from small watercourses, surface water runoff and groundwater) together with the interface between the larger rivers and local flood risk sources.

The overarching aim of the strategy is to ensure that local flood risk is understood and managed in a coordinated way in Birmingham. The strategy sets out seven objectives and twenty policies in relation to:

- Identifying stakeholder responsibilities and partnership arrangements;
- Understanding and communicating local flood risk;
- Outlining arrangements for flood asset management;
- Defining the criteria and procedures for responding to and investigating flooding events;
- Setting out how flood risk management measures will be promoted;
- Minimising the impact of development on flood risk; and
- Considering the environmental implications of local flood risk management

2.2 Cooperation with other Flood Risk Management Authorities

The LLFA continues to cooperate extensively with other risk management authorities (RMAs) at various levels as established in the 3 tiered flood risk management governance structure.

2.2.1 Strategic Flood Risk Management Board

The Strategic Board met in December 2017 and will meet again in July 2018. The strategic Board acts as the focus and political driver for partnership activity.

2.2.2 Birmingham Water Group

The Birmingham Water Group met in November 2017 and will meet again in June 2018. The Birmingham Water Group is the officer led partnership working to deliver flood risk management improvements across the City.

2.2.3 Project Groups

The LLFA has worked with partners on a number of projects as follows:

River Rea Partnership

The River Rea Partnership, led by the Environment Agency is currently delivering two flood risk management schemes in the City:

- **Selly Park North Flood Risk Management Scheme:**

Work has started on the Selly Park North Flood Risk Management Scheme. The Environment Agency has worked in partnership with Calthorpe Estates, Birmingham City Council and other organisations to develop the Selly Park Flood Risk Management Scheme to help reduce the risk of flooding.

The area of Selly Park North has a history of flooding from the Bourn Brook severely affecting the area in 2008 and more recently in June 2016. This scheme will help reduce flood risk to 150 properties in the area.

The scheme involves deepening and widening an existing flood water storage area near the Bourn Brook Walkway on Harborne Lane, Harborne. This will increase the capacity of the storage area and offer wildlife and ecology improvements. Flow improvement works are also being carried out at the Pebble Mill development site creating an overland flow route to direct flows into a new bypass culvert running underneath the Pershore Road. This will reduce the risk of flood water getting onto the highway and into properties.

- **Selly Park South Flood Risk Management Scheme**

Work is nearing completion on the Environment Agency's £2.4 million flood risk management scheme in Selly Park South. The Environment Agency has worked in partnership with St Andrew's Healthcare, Birmingham City Council and other organisations to develop the Selly Park Flood Risk Management Scheme to help reduce the risk of flooding.

The area of Selly Park South has a history of flooding from the River Rea, most notably in 2008 when some residents were forced to move out of their homes as a result of flood damage. This scheme will help protect more than 200 properties in the area.

The scheme includes plans to build an embankment on public open space, immediately upstream of Dogpool Lane bridge that will help hold water during extreme heavy rainfall events. Bank levels will also be raised downstream of the bridge to reduce the risk of flood water getting into properties.

River Tame Strategy

The Perry Barr and Witton scheme is to be delivered over 2 phases. Phase 1 has been completed which increases the level of protection to Perry Barr and Witton but not to the design standard. Phase 2 will increase flood storage in Sandwell Valley, a contractor has been appointed to undertake this work but works are yet to commence on site.

The Bromford reach of the Tame is subject to ongoing discussion to seek to align budgets for flood risk management and housing development on the Bromford Estate. Discussions also continue with the EA and HS2 to ensure any opportunities in this area are not missed.

2.3 Investigation and Publication of Reports of Flooding Incidents

2.3.1 Significant Flood Events

A number of storms occurred in Birmingham during June 2016, with the most significant storms occurring on 8th, 10th and 16th June. These storms caused widespread flooding across Birmingham, most notably affecting Sutton Coldfield, Perry Barr, Handsworth, Selly Park, Selly Oak, Woodgate, Bartley Green, Quinton and Harborne.

During the Flood Event

Birmingham City Council received a high number of calls during the event, which reported flooding of properties, gardens and highways.

During the flood events, the LLFA coordinated with multiple RMAs to ensure that flooding was managed effectively and the risk to people and properties was mitigated as far as reasonably practicable

Initial Investigations

Through the use of call records, flooding investigation questionnaires, drop in events and site visits, the LLFA identified the locations where flooding occurred and distributed 'Flood Surveys' to all property owners and residents directly affected by flooding and those within the surrounding area.

Over 700 responses were received, providing personal accounts of the flood event including the estimated time, duration, extent and depth with any other information which was felt pertinent.

Following receipt of the Flood Survey responses, the LLFA identified 23 areas where at least one property experienced internal flooding.

Detailed Investigation and Analysis

The LLFA conducted detailed investigation and individual location analysis of each of the 23 areas where a minimum of one property experienced internal flooding.

These investigations typically included a review of existing infrastructure and topography, identification of predominant flow paths, site visits and local knowledge gathering

Through a detailed analysis, the LLFA have identified the types of flooding that occurred at each location during the events of June 2016.

Step 4: Recommended Actions

Following the analysis of the 23 affected areas, the LLFA have worked in collaboration with other RMAs to identify opportunities and options to mitigate the potential that a similar rainfall event will result in similar outcomes.

2.3.2 Section 19 Flooding Investigation Report

The Flood and Water Management Act places a duty on Lead Local Flood Authorities to investigate incidents of flooding. This is set out in Section 19 of the act and the investigations are

therefore typically termed '*Section 19 Reports*.' A report was published on the Council website in May 2017 outlining the causes of the flooding and the appropriate actions that may be undertaken by the relevant RMAs

2.3.3 Flooded Sites Action Tracker

Flood events are tracked in the Flooded Sites Action Tracker. A copy of the most recent tracker is attached in Appendix A. As a result of the June 2016 the number of locations on the tracker has increased substantially. However plans are in place for the majority of locations, but solutions range from works in the current year, through to proposals for longer term national and regional grant funding.

2.4 Register of Flood Risk Management Assets

LLFAs are required, under Section 21 of the FWMA, to 'establish and maintain a register of structures or features which, in the opinion of the authority, are likely to have a significant effect on a flood risk in its area. The Act also requires that the LLFA must arrange for the register to be available for inspection at all reasonable times.

Birmingham City Council has developed a web-based system that is accessible to the public at all times, it brings together information about flood risk assets that are managed by Birmingham City Council and third parties.

The asset register shows structures and features that are important to managing flood risk (such as flood defence walls, storage tanks, balancing ponds, land drainage, highway drainage) along with the relevant Flood RMA responsible for their maintenance.

All owners of assets that have been included on the register have been notified and advised that they should have an inspection and maintenance regime in place to ensure that it is operating as designed.

Assets on the register, both Birmingham City Council and third party, are inspected by the Flood Risk Management Team. The frequency of the inspection is dependent on the type of asset and the risk of blockage, varying between 18 months and 15 years. Where an asset inspection identifies an issue with an asset the asset owner is notified and asked to undertake the necessary maintenance works.

2.5 Consenting Works on Ordinary Watercourses

Birmingham City Council as LLFA is the Authority responsible for regulating activities on ordinary watercourses in Birmingham. As a result Birmingham City Council is legally responsible for dealing with applications for ordinary watercourse land drainage consents.

Any person planning to carry out work that may affect the flow or storage of water in an ordinary watercourse must seek consent from the relevant Authority before any work is commenced.

An ordinary watercourse is defined as any watercourse which is not a main river. A watercourse includes all rivers and streams and all ditches, drains, cuts, culverts, dikes, sluices, sewers (other than public sewers i.e. being vested in a sewerage undertaker etc.) and passages through which water flows, but may not hold water all the time.

If the watercourse is classed as Main River consent will need to be obtained from the Environment Agency for any works or structures in, under, over or within 8 metres from the top of the bank.

This ordinary watercourse consenting process is in place to ensure that any works carried out do not have a detrimental effect on other people or the environment. It also ensures that any works which may affect flood risk are properly designed. If works are carried out without consent, Birmingham City Council has enforcement powers to remove or modify them.

In 2016, 6 applications were received and approved. To the 31st October 2017, 4 applications have been received in 2017.

2.6 Works to Manage Flood Risk

The LLFA has delivered a number of capital and revenue schemes. These works are funded from a variety of funding mechanisms and a considerable number of flood risk management works have been delivered for internal departments. Most notably the flood risk management team works routinely with Leisure to provide consultancy services for drainage and environmental improvement works as well as arranging statutory inspections under the Reservoir Act 1975 in order that the Council's large raised reservoirs are managed in accordance with the Act.

The following works have been delivered since January 2016.

2.6.1 Grant Funded: Flood Defence Grant in Aid and/or Local Levey

Property level resilience measures:

- **Bean Croft, Woodgate**
- **Pensby Close, Springfield**
- **Overdale Road, Quinton**
- **Nesfield Close, West Heath.**

2.6.2 Works Funded by Flood Risk Management Revenue Budget

Routine clearance to all strategic grill structures (frequencies vary from weekly to 6 monthly depending on how critical the asset is) & additional grill clearance following severe weather:

- **City Wide**

Sandbag and Aqua Snake distribution to Flood Action Groups.

- **Selly Park**
- **Northfield**
- **Frankley**
- **Sparkhill**

Restoring flood channel/culvert capacity by excavation, cutting back vegetation and removing major blockages:

- **Brosil Avenue to Sunningdale Close, Handsworth**
- **Nesfield Close, West Heath**
- **Silvercroft Avenue, Handsworth**
- **Beaumont Road to Arosa Drive, Harborne**
- **Mill Lane to Adams Hill, Bartley Green**
- **Springfield Road to Falcon Lodge Crescent, Falcon Lodge**
- **Acheson Road to Skelcher Road, Yardley Wood**
- **Beeches Road, Perry Barr**

Inspecting strategic culvert structures:

- **Mill Lane, Bartley Green**

- **Perry Brook culvert, Perry Barr**
- **Tyburn Road, Tyburn**
- **Churchill Road, Falcon Lodge**
- **Hill Hook Road, Hill Hook**
- **Hollie Lucas Road, Kings Heath**

Inspection & maintenance work to flood defence assets:

- **Nineveh Road, Hockley**
- **Park Lane, Castle Vale**
- **Kingswood Road, Longbridge**
- **New Road, Rubery**
- **Adams Hill, Bartley Green**
- **The Fordrough, Northfield**
- **Kingsbury Road, Tyburn**
- **Gospel Lane, Acocks Green**
- **Haybrook Drive, Acocks Green**
- **Acheson Road, Yardley Wood**

2.6.3 Works funded by Other Departments

On behalf of Housing:

- **Oberon/ Miranda, Frankley** - inspection & maintenance of flood assets
- **Fisher Close, Frankley** - inspection & maintenance of flood assets
- **Hawthorne Brook, Kingstanding** - Restoring flood channel/culvert capacity

On behalf of Education:

- **Stephens Road, Walmley** - bund in school playing field to mitigate flooding to properties in Stephens Road
- **Broadmeadow School, Kings Norton** – Bunding and associated drainage work

On behalf of Leisure:

- **Alexander Stadium, Perry Barr** - storm water attenuation tanks
- **Spark Brook, Sparkhill** - Restoring flood channel/culvert capacity
- **Kitwell Lane, Kitwell** - Restoring flood channel/culvert capacity
- **Leys Allotments, Longbridge** - Restoring flood channel/culvert capacity
- **Woodlands Park, Bournville** - Restoring flood channel/culvert capacity
- **Perry Park, Perry Barr** - Emergency repair work to culvert collapse on behalf of Leisure.
- **Manor Farm Depot, Northfield** - Flow routing, construction of new drainage system and bunding works to prevent flooding to properties

On behalf of Local Engineering:

- **Sir Johns Road, Selly Park** - surface water flow routing

On behalf of Transportation:

- **Upper Holland Road, Sutton Coldfield** - Restoring flood channel/culvert capacity

On behalf of Highways

- **A38 Sutton Coldfield By-Pass** – routine maintenance of gullies, drainage system and ditch clearances

2.6.4 Major Reservoir Works funded by Leisure

Blackroot Reservoir, Sutton Coldfield - Construction of auxiliary spillway & new penstock for reservoir safety works

Lifford Reservoir, Kings Norton - Maintenance work to spillway

Trittiford Reservoir, Yardley Wood - Construction of auxiliary spillway & flood wall for reservoir safety work

Small Heath Pool, Small Heath - Construction of new penstock and outfall structure

Longmoor Reservoir, Sutton Coldfield - Penstock failure, emergency works to provide & replace existing with new penstock

3. Flood Risk Regulations Duties

The Flood Risk Regulations implement the EU Floods Directive in England. They provide a framework for managing flood risk over a 6 year cycle, comprising:

- preliminary flood risk assessment (PFRA)
- identification of areas of potential significant risk, referred to as flood risk areas (FRAs)
- mapping of flood hazards and risk and
- Flood Risk Management Plans (FRMPs), setting out measures and actions to reduce the risk

Lead Local Flood Authorities (LLFAs) worked with the Environment Agency to publish the first set of FRMPs, covering the 10 river basin districts in England, on 17 March 2016. These plans set out how RMAs are working together, and with communities, to manage flood and coastal risk over the next 6 years up to December 2021.

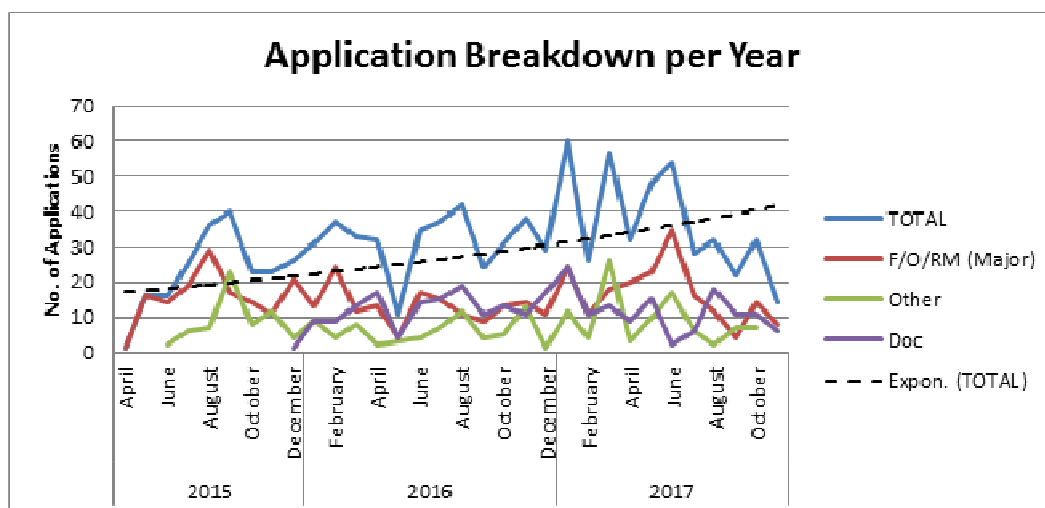
The second round of the cycle commenced in 2017, with an updated PFRA produced in June 2017.

4. Statutory Consultee Role for Planning

The LLFA is a statutory consultee for surface water on major developments (10 dwellings or more; or equivalent non-residential or mixed development). Local planning decisions are expected to ensure that SuDS for the management of runoff are put in place unless demonstrated to be inappropriate and that the sustainable drainage system should be designed to ensure that the maintenance and operation requirements are economically proportionate.

The number of applications, discharge of conditions and pre-app enquiries in 2016 and 2017 is as follows:

Year	Total No. of Applications	Major Planning Applications	Pre-App/General Enquiries	Discharge of Condition
2016	380	156	72	152
2017	405	185	94	126



Since the introduction of the statutory consultation role in April 2015 there has been rising trend in the numbers of applications received. Consultant support is used to fulfil the statutory consultee role and is currently equates to 4 days work per week to meet the demand.

5. Funding

5.1 Funding Streams

Funding for Lead Local Flood Authority

Funding for LLFAs to meet the duties under the FWMA is provided to Birmingham City Council as part of its annual settlement. The money is not ring fenced so individual authorities decide how much of the grant to spend and where.

Revenue Budget

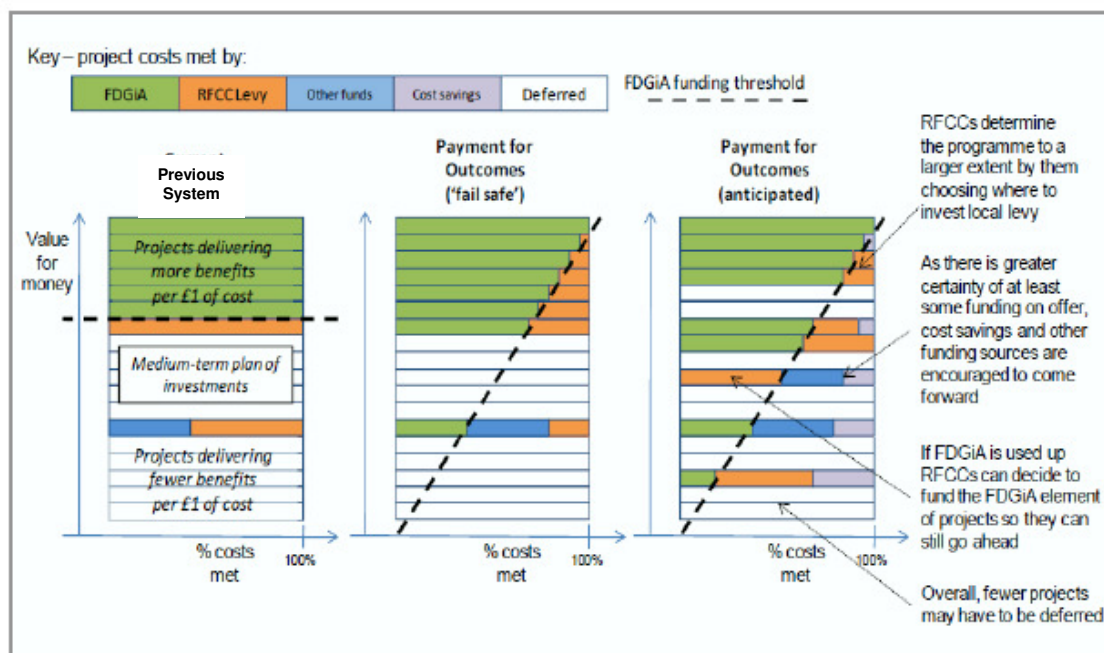
A small budget is provided to support flood management responsibilities, these include land drainage, maintenance of ordinary watercourses and emergency response. This budget has reduced over recent years in line with City Council budget cuts.

Flood Defence Grant in Aid - Partnership Funding

In the past, flood risk management schemes were generally funded by central government through the Flood Defence Grant in Aid (FDGIA) process which allocated funding to projects nationally based on cost/benefit prioritisation. This led to only schemes that scored highly in terms of benefits outweighing costs being taken forward.

From 2012 a revised approach has been undertaken. Funding levels for each scheme, paid by central government as FDGIA, relate directly to the benefits the scheme delivers, including number of households protected, damages prevented, deprivation, environmental benefits and amenity improvement. If the FDGIA does not cover the cost of the scheme, in order to proceed

the scheme cost can be reduced and/or local contributions would need to be found. This approach is outline below.



Local Levy

The City Council pays levies to the Environment Agency as Local Levy. The Local Levy is raised by the Regional Flood and Coastal Committee (Birmingham sits within the Trent RFCC) and is used as a locally-raised source of income to fund projects within the Trent region. It can be used to fund projects that might not be eligible for national funding or as a regional contribution to scheme costs under the partnership funding approach.

5.2 Funding Pressures

Year on year budget cuts make it increasingly difficult to fulfil the duties under the Flood and Water Management Act, carry out the statutory consultee role for planning and undertake maintenance of flood risk management assets and provide emergency response.

In 2013/14 a total budget of £966,000 (including salaries, charges, overheads, maintenance works and new duties) was available, in 2016/17 the total budget has decreased to £644,000.

The Partnership Funding process has resulted in a range of funding sources being required to promote flood risk management schemes. For some schemes this includes an element of FDGiA together with an element of Local Levy but for many schemes this still leaves a shortfall which needs to be provided as third party contributions. This approach puts significant pressure on limited resources to foster agreements and collaborations to facilitate schemes. In order for these schemes to progress local contributions or contributions from beneficiaries of the schemes need to be sought.

Aligning funding sources and facilitating the promotion of projects as well as seeking new funding opportunities continues to be a major priority for the Strategic Flood Risk Management Board going forward.