

Meeting date: 27th NOVEMBER 2018
Report to: CABINET MEMBER FOR ENVIRONMENT AND HOUSING
Subject/report title: FLOOD RISK MANAGEMENT – ANNUAL UPDATE
Report from: HEAD OF HIGHWAY SERVICES
Report author/lead contact officer: EDWARD BRADFORD



Wards affected:

- All Wards | Bickenhill | Blythe | Castle Bromwich | Chelmsley Wood |
 Dorridge/Hockley Heath | Elmdon | Kingshurst/Fordbridge | Knowle |
 Lyndon | Meriden | Olton | Shirley East | Shirley South |
 Shirley West | Silhill | Smith's Wood | St Alphege

Public/private report: Public

Exempt by virtue of paragraph: N/A

1. Purpose of Report

- 1.1 To provide Cabinet Member with an annual update on Flood Risk Management related activities that have been undertaken since adoption of the Local Flood Risk Management Strategy in November 2015.

2. Decision(s) recommended

- 2.1 Cabinet Member is asked to:
- Note the contents of the report
 - Approve the proposed work plan to November 2019, as set out in Appendix A
 - Agree to receive a final report into the May 27th flooding in January 2019
 - Agree to receive a further update on the work of the service area in November 2019

3. What is the issue?

Why are we interested in and involved with flood risk management?

- 3.1 In 2007 we saw exceptional flooding across the country. 55,000 properties were

flooded, 7,000 people needed to be rescued by the emergency services and sadly 13 people died. Half a million people were left without mains water or electricity. It was estimated that the cost to the insurance industry would be £3 billion.

- 3.2 In response to the floods of 2007, an independent and comprehensive review was undertaken by Sir Michael Pitt and in response the Government laid the Flood and Water Management Act before Parliament, which received Royal Assent on 8th April 2010.

What are our roles and responsibilities?

- 3.3 As a result of the Flood and Water Management Act, the Council became the Lead Local Flood Authority (LLFA), a role that has been undertaken ever since by a dedicated team within Highway Services.
- 3.4 As the LLFA, the Council is required to:
- prepare and maintain a strategy for local flood risk management within the Borough, coordinating views and activity with other local bodies and communities through public consultation and scrutiny, and delivery planning.
 - maintain a register of assets – these are physical features that have a significant effect on flooding within the area
 - investigate significant local flooding incidents and publish the results of such investigations
 - issue consents for altering, removing or replacing certain structures or features on ordinary watercourses
 - play a lead role in emergency planning and recovery after a flood event.
- 3.5 Since April 2015, the team has taken on an additional role and responsibility as a statutory consultee for planning applications, helping to ensure that new development is located away from areas that are considered to be at high risk of flooding and to ensure that such new development does not cause additional risk to those living downstream or upstream of a site.
- 3.6 In addition to fulfilling the role of LLFA, the team within Highway Services are also responsible for the repair and renewal of the Borough's highway drainage system, the cleansing of which is undertaken by an in-house team of operatives and who operate an out-of-hours standby service. The Highway Services team are also responsible for carrying out duties under the Land Drainage Act 1991.
- 3.7 The team currently comprises a Principal Engineer who oversees the Drainage, Flood Risk Management and Tanker Services team, along with Street Lighting, a Drainage and Flood Risk Management Engineer with day to day responsibility for Tanker Services, two Assistant Engineers who were appointed in May 2018 and a student who is in the final year of an Environment Agency sponsored River and Coastal Engineering Degree programme. In order to provide resilience and specialist technical support, the team draws on the resources provided by external consultants appointed under the Council's Highway Professional Services Contract and the Environment Agency's Water and other similar frameworks.

What flood events have we experienced since November 2017?

- 3.8 On the afternoon of 27th May 2018, parts of the West Midlands experienced periods of high intensity rainfall, which led to rapid surface water and watercourse flooding. One person sadly lost their life and over 1,000 properties were heavily affected.
- 3.9 It was at a site in Tidbury Green, to the south west of the Borough, where we believe the largest rainfall event was experienced. Over 89mm was recorded in 2 hours and over 100mm for the day. This is against an average rainfall total for the month of May of just 53mm, measured over a period from 1981 to 2010. Effectively, we had over a month's rainfall in little under 2 hours.
- 3.10 Over 330 properties reported flooding to us following the 27th May, mainly across Blythe, Shirley West, Hockley Heath and Olton. 192 of these properties reported internal flooding. A further 75 properties saw water entering their garages and an additional 63 properties reported external or garden flooding. Many residents were forced to leave their homes temporarily and some have still not returned. An apartment block in Dickens Heath was left without running water.
- 3.11 The flooding also impacted the local road network. The main A3400 Stratford Road through Hockley Heath was impassable, as were key routes in and out of Cheswick Green, Dickens Heath and Shirley.
- 3.12 Small watercourses that feed into the River Blythe and River Cole quickly became overwhelmed and out of bank and in urban areas, such was the flow and depth of water that it was often unable to enter the surface water sewer network. Where it could, such networks quickly flooded or were unable to discharge into already flooded watercourses.
- 3.13 The canal network was not immune to the events of May 27th, with the feeder system at Earlswood Lakes being inundated with water from the River Blythe and becoming overwhelmed. We understand that this led to a surge of water passing along the Stratford Upon Avon Canal between Earlswood and Birmingham, overtopping at various points along its way.
- 3.14 In accordance with Section 19 of the Flood and Water Management Act, Officers have begun a formal investigation into the flooding that we experienced on May 27th. Through mapping of affected properties, Officers have identified 11 areas for investigation, as follows:
- Cheswick Green – Coppice Walk
 - Dickens Heath – Beech Lane/Dickens Heath Road/Rumbush Lane
 - Dickens Heath – Griffin Lane/Mereways/Cornwood Lane
 - Dickens Heath – Tythe Barn Lane
 - Earlswood – Wood Lane
 - Hockley Heath – Stratford Road
 - Olton – Brook Lane, Langley Hall Road and Swanswell Road
 - Shirley – Aqueduct Road, Corley Close and Green Lane

- Shirley – Colebrook Road and Nethercote Gardens
 - Shirley – Greenslade Road, Hexton Close, Pear Tree Crescent and Grove, Yardley Wood Road
 - Tidbury Green – Fulford Hall Road, Norton Lane, Rumbush Lane
- 3.15 At each of the locations listed we are investigating which risk management authorities have relevant functions and whether they have exercised or propose to exercise those functions in response to the flood.
- 3.16 We have been working in partnership with the Environment Agency, Severn Trent Water and the Canal and River Trust to check assets and networks across each of the affected areas and we have commissioned detailed modelling of some of these networks to help us understand the events of May 27th in more detail.
- 3.17 We have undertaken over 2,000 extra gully cleanses in areas affected by the flooding, spending time jetting and CCTV'ing assets where necessary. We have also been checking new developments to ensure compliance with approved plans.
- 3.18 Where necessary, we have commissioned specialist contractors to undertake such inspections, for example of confined spaces or of permanent storage areas. Although the responsibility of the relevant riparian landowners, we commissioned some specialist support to independently inspect approximately 10km of ordinary watercourses across those affected areas.
- 3.19 It is our intention that a final report into the flooding and an associated action plan will be brought to a decision session in early 2019. In accordance with the Flood and Water Management Act, for each of the identified locations we will publish a report which will set out:
- Who or what was affected on May 27th
 - What flooding mechanisms have been identified
 - How the existing system works at each location, what existing risk mapping shows us and what happened on May 27th
 - What might be possible in the future to reduce the risk from flooding
 - A summary of the concerns that we have received following May 27th and what we have done in response

What Flood Risk Management activities and projects have we undertaken since November 2017?

Knowing where and when it will flood

- 3.20 Improving our knowledge of where and when it will flood has continued to be an important focus of the team. The team are currently undertaking the following pieces of work:

(a) Surface Water Management Plan, Borough Wide

- 3.21 In order to provide a Borough wide plan for surface water flooding, we commissioned a desktop study from one of our partner consultants to look at all such risk across Solihull. The plan will provide us with a prioritised list of locations that we can then consider and see what measures could be put in place to reduce future risk.

Reducing the risk of flooding and its impact

(a) Development Control

- 3.22 In its role as the Lead Local Flood Authority, the Flood Risk Management Team is a statutory consultee to the development control and planning process. Whilst principally concerned with major planning applications and surface water drainage, the team work to ensure that flood risk is managed on all development sites so as to ensure that it is not increased within the site, or up or downstream.
- 3.23 A vast proportion of the Flood Risk Management work that the team undertakes is in fulfilling our duties as a statutory consultee to the planning process. Over the past 12 months the team have responded to over 1,500 consultation requests, helping to ensure that new development does not increase flood risk elsewhere and to ensure that new development is not at risk of flooding itself.
- 3.24 Due to the large number of the applications received, Officers check the planning portal on a daily basis, providing comments on applications as appropriate. Where necessary, the team also draw on the expertise of the Council's partner consultants. When being consulted on major developments, Officers will typically meet the applicants at pre-application stage to discuss site specific flood risk management strategies and to agree the principles upon which detailed design will be undertaken, e.g. sustainable drainage systems. On application, such detail will then be checked to ensure that development is appropriate and acceptable from a flood risk perspective and that any betterment to surrounding area and communities is secured where possible.
- 3.25 Building on previous work to produce a brief design guide to help those wishing to develop in the Borough, we have now added a commuted sums calculator to the Council's website. This calculator can be used by those developers proposing the adoption of any Sustainable Drainage System by the Council.

(b) Asset blockage risk assessment

- 3.26 Following previous work to identify all existing culverts within the Borough and to model the impact of any blockage, Officers commissioned asset condition surveys of 86 highway culverts. For each location we will receive information on the structure itself, a visual survey, identification of any defects and recommendations, a health and safety check, an action plan and associated photographs.
- 3.27 Any work that is identified as a result of the asset condition surveys will form part of our work plan for 2019.

(c) Ordinary watercourse consenting, maintenance and enforcement

- 3.28 The ordinary watercourse network within Solihull, particularly in the rural area, plays an important role in the safe disposal of surface water and contributes towards reducing flood risk. Throughout the year, Officers carry out various roles and responsibilities around consenting, maintenance and enforcement. Work has continued this year to record and inspect many of the roadside ditches that exist, liaising with the relevant riparian landowners. Further training is planned for the team so that they can undertake more detailed inspections of assets.

Being rescued and cared for during an emergency

- 3.29 Being rescued and cared for during a flood is primarily the responsibility of the Council's Emergency Planning and Resilience Team (CSW Resilience).
- 3.30 The team continue to use the Environment Agency's Extended Floodline Service (EFS). EFS is intended to provide a 'one stop shop' for flood advice and combines the Environment Agency's advice on river and coastal flooding with local authority information on surface water and drainage flooding.

Maintaining power and water supplies and protecting essential services

- 3.31 Maintaining power and water supplies and protecting essential services is the responsibility of the Local Resilience Forum and is dealt with by CSW Resilience through its Multi Agency Flood Plan, which was reviewed earlier in the year.

Better advice and help for people to protect their families and homes

(a) Community self-help facilities

- 3.32 Whilst we have continued to provide self-help resources for the residents of Cheswick Green, Dickens Heath and Nethercote Gardens in the event of a flood, it is clear from May 27th that further work can be undertaken to better support our communities, such as through the additional provision of road closure barriers and signs.
- 3.33 Whilst the current provision of sandbags can help communities to provide some initial response to flooding, which can often occur with little warning, they can only deal with a limited amount of water and do not protect all of the entry points to a property that water could enter through.

(b) Monitoring and warning systems

- 3.34 Officers have continued to explore ways of installing local monitoring and warning systems that can be used by local residents and businesses to warn of potential flooding. Discussions are currently underway with the Environment Agency to determine what options exist and how we can work in partnership to provide a suitable service across the Borough.

Staying healthy and speeding up recovery

- 3.35 Looking after the health and well-being of communities affected by flooding is vital and it is crucial that homes are dried out as quickly and effectively as possible so that people are able to return home.
- 3.36 The Flood Risk Management Team plays its part in directing those affected by flooding to appropriate health advice as well as ensuring that systems are in place locally for providing help for individuals affected by flooding.

3.37 Following the flooding in May, CSW Resilience have been approached to help local communities produce their own tailored flood plans.

What will our Flood Risk Management priorities be for the next 12 months?

3.38 Notwithstanding the need to respond to any new emergency or flood event that may occur, the Flood Risk Management Team intend to focus work on the following areas over the next 12 months, and as summarised in Appendix A:

(a) Investigation into the floods of 27th May 2018

3.39 Investigating the flood event of May 2018 is the team's highest priority. We expect this to remain the case into the new year and beyond as we consider what options can be implemented to reduce the likelihood and impact of any future flooding in those areas that were affected.

(b) Recruitment, development and retention of staff

3.40 A post currently filled by a student via the Environment Agency Foundation Degree programme will become vacant in May 2019. Work in 2019 will look at whether the current shape of the Drainage and Flood Risk Management Team is appropriate, given our future priorities.

(c) Development Control

3.41 As set out previously, the Flood Risk Management Team is a statutory consultee to the development control and planning process. Responding to planning enquiries will remain a key priority for the team over the next 12 months.

(d) Supporting Major Projects

3.42 Work to support HS2 is beginning to come through, with defined turn around times for responses and approvals to be given. Appropriate time will need to be given to check any applications that are made for consents on watercourses within the Borough to ensure that works associated with HS2 are suitable.

(e) Development and Delivery of Flood Risk Management Team Projects

3.43 To progress proposals and business cases to obtain funding to look at how we can reduce the likelihood and impact of flooding for:

- the community of Meriden
- the communities affected by flooding in and around Elmdon, Silhill and St. Alphege wards in September 2015
- the communities affected by flooding in May 2018

3.44 To deliver any necessary works to watercourses and culverts that have been identified through work undertaken by our partner consultants.

3.45 To review the provision of community self help facilities and look at how we can expand this into other areas, such as the provision of road closure barriers and signage.

3.46 To continue discussions with the Environment Agency as to how we can install viable local monitoring and warning systems that can be used by local residents and businesses to warn of potential flooding.

4. What options have been considered and what is the evidence telling us about them?

4.1 Not applicable as part of this report.

5. Reasons for recommending preferred option

5.1 Not applicable as part of this report.

6. Implications and Considerations

6.1 Delivery of key themes in the Council Plan:

How will the options/proposals in this report contribute to the delivery of the key themes in the Council Plan?

Improve Health and Wellbeing -

Managed Growth –

- Delivering the Growth and Sustainable Development Strategy for the Borough
- Shaping places with Communities
- Delivering our Green Prospectus
- Driving our Economic Success

Build Stronger Communities -

Deliver Value -

6.2 Implications for children and young people, vulnerable groups and particular communities:

6.2.1 None.

6.3 Consultation and Scrutiny:

6.3.1 The Stronger Communities and Neighbourhood Services Scrutiny Board received a presentation on the May 2018 flooding at its November 2018 meeting.

6.4 Financial implications:

6.4.1 Various sources of finance fund the Flood Risk Management Team.

6.4.2 The day to day running of the team to allow it to undertake its statutory duties is now funded through the Ministry of Housing, Communities and Local Government.

6.4.3 Funding for studies and schemes (projects) is available via the submission of bids for Flood Defence Grant in Aid (FDGiA) funding. Schemes need to be buildable, environmentally acceptable and cost beneficial. They also clearly need to reduce the risk of flooding to homes, with the amount of funding being dependent on the number of properties moved from a higher level of risk to a lower level of risk and the environmental benefits of the project. As part of a very first step, we've submitted some initial expressions of interest for FDGiA funding to support those communities affected by flooding in May 2018.

6.4.4 Where FDGiA does not cover the whole cost of the project then a bid for Local Levy can be submitted. Local Levy is a form of income raised by Regional Flood and Coastal Committees which is used for flood risk management projects that are not considered to be national priorities and which do not attract full funding through FDGiA.

6.5 Legal implications:

6.5.1 The Flood and Water Management Act 2010 places a duty on Local Authorities to prepare and put in place strategies for managing flood risk from groundwater, surface water and ordinary watercourses in their areas.

6.6 Risk implications:

6.6.1 None.

6.7 Statutory Equality Duty:

6.7.1 A Fair Treatment Assessment was undertaken of the service in May 2016. A number of actions were identified as a result of the assessment and which are monitored through the Managed Growth and Communities Directorate Fair Treatment Action List.

7. List of appendices referred to

7.1 Appendix A – Proposed work plan to November 2019.

8. Background papers used to compile this report

8.1 None.

9. List of other relevant documents

9.1 Solihull Local Flood Risk Management Strategy, 2015.

Flood Risk Management – Annual Update November 2018**Proposed work plan to November 2019**

<u>Ref</u>	<u>What work are we planning to undertake?</u>	<u>What issue are we addressing?</u>	<u>What is our target date for completion?</u>	<u>What will success look like?</u>
1	Investigation into the floods of 27 th May 2018	Over 330 properties reported flooding following the 27 th May.	January 2019	Publication of a formal report into the floods of May 2018, under Section 19 of the Flood and Water Management Act 2010.
2	Recruitment, development and retention of staff	One post within the structure currently filled by a student via the Environment Agency Degree programme will become vacant in May 2018.	June 2019	Creation of a staff structure that enables the Drainage and Flood Risk Management Team to continue to deliver over the short and medium term future.
3	Responding to consultation requests associated with the development control planning process	Ensuring that the Flood Risk Management Team complies with its duties under the Flood and Water Management Act as a statutory consultee to the planning process	Throughout 2019	Ensure that 100% of planning enquiries are responded to within the required deadlines
4	Supporting major projects	Ensuring that the delivery of major projects in and around Solihull, particularly HS2, mitigates the likelihood and impact of flooding and secures betterment for the wider Borough	Throughout 2019	Sustainable proposals are developed for major projects from a flood risk management perspective

<u>Ref</u>	<u>What work are we planning to undertake?</u>	<u>What issue are we addressing?</u>	<u>What is our target date for completion?</u>	<u>What will success look like?</u>
5	Development and Delivery of Flood Risk Management Team Projects	<p>Progress proposals and business cases to obtain potential funding to look at how we can reduce the likelihood and impact of flooding for:</p> <ul style="list-style-type: none"> • The community of Meriden • the communities affected by flooding in and around Elmdon, Silhill and St. Alphege wards in September 2015 • the communities affected by flooding in May 2018 <p>To deliver any necessary works to watercourses and culverts that have been identified through work undertaken by our partner consultants</p> <p>To review the provision of community self help facilities and look at how we can expand this into other areas, such as the provision of road closure barriers and signage.</p> <p>To continue discussions with the Environment Agency as to how we can install viable local monitoring and warning systems that can be used by local residents and businesses to warn of potential flooding.</p>	<p>Throughout 2019</p> <p>Throughout 2019</p> <p>January 2019</p> <p>April 2019</p>	<p>Proposals submitted for all locations and business cases completed.</p> <p>Completion of any necessary maintenance works on the ordinary watercourse network. Costed plan for any necessary works to identified culverts.</p> <p>Appropriate and accessible provision of community self help facilities in areas recognised to be at risk of flooding.</p> <p>Identification and installation of a viable scheme to introduce local monitoring and warning systems.</p>