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## Report of Flood Risk Manager

### Report to Scrutiny Board – City Development

Date: 18<sup>th</sup> November 2020

Subject: Local Flood Risk Management Strategy

Are specific electoral Wards affected?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, name(s) of Ward(s):		
Are there implications for equality and diversity and cohesion and integration?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the decision eligible for Call-In?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Does the report contain confidential or exempt information?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, Access to Information Procedure Rule number:		
Appendix number:		

### Summary of main issues

1. Under the Flood & Water Management Act 2010, Leeds City Council as the Lead Local Flood Authority is required to have a Local Flood Risk Management Strategy.
2. The Scrutiny Board (Infrastructure, Investment and Inclusive Growth) is allocated special responsibility for flood risk management as set out in Article 6 of Leeds City Council's constitution. Members of the Board are therefore asked to review and scrutinise the exercise by risk management authorities of flood risk management functions which may affect the Leeds City Council area.
3. The Scrutiny Board (Sustainable Economy and Culture) last refreshed the Strategy in December 2018.
4. This report examines the implementation of the Strategy over the last 12 months and provides a summary of the measures that are set out for the years ahead
5. *The 2020 review (This Report) has been delayed due to the disruption caused by the COVID-19 Pandemic. Although dates refer to 2019 data, the report has been updated to note schemes which have been completed.*

## **Recommendations**

1. That the Board review the implementation of the strategy and provide comments to help inform its further development and be considered at the next strategy refresh due to take place in late 2022.

### **1 Purpose of this report**

- 1.1** Allow scrutiny of the implementation of the Council's Local Flood Risk Management Strategy.

### **2 Background information**

- 2.1** Following major floods during 2007, Government set up the Pitt Review to look into the way flood risk management agencies dealt with such a major event. This review came up with 93 recommendations, which Government accepted.

- 2.2** A number of these recommendations needed legislation to give local authorities and agencies the necessary powers or duties and hence the introduction of the Flood & Water Management Act 2010 (F&WMA). One of these duties was for all Lead Local Flood Authorities (Leeds City Council for this area) to prepare a Local Flood Risk Management Strategy (LFRMS).

- 2.3** The Strategy was last refreshed and reviewed by Scrutiny Board (Sustainable Economy and Culture) in December 2018 and adopted by Full Council on 27<sup>th</sup> March 2019.

- 2.4** *This 2020 update has been delayed due to the disruption caused by the COVID-19 Pandemic. Although dates refer to 2019 data, the report has been updated to note schemes which have been completed.*

### **3 Main issues**

#### **3.1 Leeds Local Flood Risk Management Strategy**

The Strategy outlines the approach the Council and other agencies will take with regard to flood risk management. The Strategy contains:

- a. The objectives for managing flood risk.
- b. The measures proposed to achieve those objectives.
- c. Timeframe for any measures.
- d. Costs and benefits of the measures and how they are to be funded.

The specific measures are contained in Appendix C of the Strategy, which is to be updated regularly to ensure it is reactive to latest priorities.

Updated Progress against priority measures identified in Appendix C of the Strategy is included in Appendix 1.

Other actions that have been taken and continue to be taken are

- Ongoing maintenance of watercourses and flood alleviation features
- Partnership working with other key agencies, notably the Environment Agency (EA) and Yorkshire Water Services (YWS)
- Close working with community flood groups – increase awareness of flood risk
- Develop and maintain a comprehensive register of flood risk features
- Manage flood risk generally
- Investigate flooding events – where necessary producing a Section 19 Report
- Promote sustainable development – particularly with regard to Sustainable Drainage Systems (SuDS)
- Support planning with determining the impact of development on flood risk and securing contributions from developers to support the delivery of flood risk management measures.

### **3.2 Major Storm Events**

#### **3.2.1 Storm Eva 26<sup>th</sup> December 2015**

Significant infrastructure damage was sustained across Leeds as a result of Storm Eva leaving railway lines, roads and bridges closed for many days and even months in the case of Linton Bridge. Linton Bridge reopened on 2<sup>nd</sup> September 2017 after an extensive rebuilding of the main structure within the existing historic structure had been completed, costing £5.1m. The construction of Leeds Flood Alleviation Scheme Phase 1 (LFAS1) was also very badly affected and subsequently required repairs and additional works totaling £3.8m. Now completed the work on LFAS1 has greatly reduced flood risk in the City Centre.

#### **3.2.2 Storm Ciara 9<sup>th</sup> February 2020**

Our monitoring points recorded rainfall during the 24 hour period ranging between 37mm and 73 mm. Met Office records for West Yorkshire show this area to have been the worst hit and the rainfall in this 24 hour period exceeded the previously recorded average total monthly rainfall for February since 1981. Storm Ciara caused widespread flooding across the City. The recorded levels on the Aire and Wharfe were at their highest since Boxing Day 2015. The Leeds FAS was fully operated for the first time. Fire crews in Leeds dealt with 700 calls in a 6 hour period and attended over 100 emergencies. Bus and Train services were severely disrupted, highways were seriously affected and police had to close several roads.

#### **3.2.3 Storm Dennis 15<sup>th</sup> February 2020**

Storm Dennis had a variety of impacts across the north of England. 20-30 mm of rain fell widely, with over 40 mm on some higher parts of West Yorkshire and 50-80 mm recorded widely in the west of North Yorkshire (81.2 mm at Scar House Reservoir in upper Nidderdale). Reports of flooding from the Ciara event were still coming in after Storm Dennis arrived so the statistics for both of these events have had to be combined. A total of 388 flooding related reports have been received including 24 reports of internal flooding and 157 incidents where internal flooding was imminent.

### **3.3 Flood risk management in 2019**

2019 was a comparatively quiet year in terms of flooding incidents in the city, 522 flooding incidents were reported and investigated during 2019 which is close to the annual average across the last decade (1857 in 2015). Graphs showing incidents in 2020 and previous years are included in Appendix 2.

In the period from 1<sup>st</sup> April 2018 to 31<sup>st</sup> March 2019 teams carried out 2337 trash screen grid clearances at flooding “hot spots” and 184 routine beck inspections. During the period 1<sup>st</sup> April to 31<sup>st</sup> December 2019 we undertook 1926 grid clearances and 141 inspections. In response to flood incident reports and defects found from inspections we carried out works to repair and clear damaged culverts and drainage assets. Reactive and planned maintenance is essential to managing flood risk and protecting residents and businesses. Surface water flood risk remains a complicated source of flooding to residents and businesses in Leeds, with the responsibility for assets and infrastructure that affect this spread across a number of council departments and other organisations, as well as also being privately owned in many places.

The experiences of storms Ciara and Dennis have demonstrated that the city is still vulnerable to a wide range of flooding impacts. A number of properties, roads and businesses were badly affected. The council is working closely with partner organisations, in particular the EA and YWS, to deliver improvements to natural and engineered networks and to install new and improved flood alleviation measures. However more work is needed to address current and future flood risk and to mitigate the increasing impact of climate change.

### **3.4 Proposed and recently completed Capital Works**

Appendix C – The List of Measures in the Strategy (included as Appendix 1 in this report) has been refreshed and includes new priorities already identified following the flooding events and investigations in 2019/20.

### **3.5 Capital Works Completed in 2019/20**

In 2019/20, 2 major schemes were completed:

- Hawthorn Terrace near Garforth Flood Alleviation Scheme (FAS) Phase 2 and 3 £240k

Phase 1 was completed in 2016. Phases 2 and 3 are now completed to provide a higher level of protection for residential and business properties and Phase 3 provides a higher level of protection for the highway. This scheme has been funded from Leeds CC capital programme, Flood Defence Grant in Aid and a £158k grant from Highways England in recognition of the reduction in risk of highway flooding on the A63, this being their main planned and reactive diversion route for traffic using the M1 motorway and to reduce the risk of traffic backing up on exit slip roads.

- Wyke Beck Phase 1; Killingbeck Meadows Naturalised Flood Management Scheme £3.0m

This scheme is part of the £4.75m Wyke Beck Phase 1 project in which Arthurs Rein and Halton Moor schemes have already been completed in previous years. Construction of flood water storage at Killingbeck Meadows commenced in January 2019. The scheme provides natural flood water storage comprising a dam bund retaining a large raised reservoir, flood defence walls and attenuation ponds with associated weirs, connection pipework and outfalls. The dam bund is approximately 180m long with a maximum height of approximately 2.6m.

### **3.6 Capital Works under Construction and Proposed**

- Mickletown (Pit Lane) Flood Embankment £1.2m

This scheme is mainly funded by developer contributions to reduce flood risk in the Methley and Mickletown area. It consists of an earth embankment and concrete piped culvert. Planning permission has been granted and the works are expected to be completed in late 2020.

- Otley FAS £3.37m

This scheme will reduce flood risk from the river Wharfe in Otley. Planning permission has been approved and Defra has approved the business case for government funding. Outline design is complete and it is now in the detailed design stage. Works are expected to be completed in 2020/21.

- Leeds FAS Phase 2 £122m

This second phase will be delivered in two stages and uses natural flood management techniques to help slow the flow of the River Aire. Alongside engineering works such as flood walls and a flood storage area, this will reduce flood risk and provide better protection for 1,048 homes and 474 businesses. It will also help to increase employment and make tourist attractions more accessible. Works started in January 2020. The first stage of Phase 2 is fully funded, however the second stage of Phase 2 has a £22.5m shortfall.

### **3.7 Ongoing Studies and Potential Future Schemes**

- Wyke Beck Programme Phase 2

A continuation of a programme of works along the Wyke Beck Corridor which consists of two phases. Phase 1 included Arthurs Rein watercourse de culverting completed in 2018, Halton Moor environmental enhancements completed in 2019 and Killingbeck Meadows flood storage reservoir and environmental enhancement due for completion in 2020/21. Phase 2 of this project will include further ecological enhancements and natural flood management at Halton Moor.

- Potternewton Surface Water FAS

At feasibility stage, modelling is completed and a shortlist of options have been produced for assessment. The strategic outline case is proposed for 2020.

- Guiseley Surface Water FAS

An agreement has been signed with YWS and data received to prepare an integrated flood study. The strategic outline case is proposed for 2020.

- Wortley Beck FAS

Phase 2 of the modelling study is almost completed and a number of strategic options have been identified. The economic benefits are currently the subject of further evaluation. Stakeholder engagement was undertaken in 2019 and preparation of an outline design of the preferred options and an outline business case is now under consideration.

- Farnley Wood Beck FAS

Phase 2 of the modelling study is completed and a final version of the study report should be available by the summer 2020. A strategic option has been identified to de-culvert the watercourse near Old Close. The scheme is to be mostly funded from S106 deposits with a contribution from the LCC capital programme. The design and build phase is proposed for 2020/21 and 2021/22.

- Lyn Dyke Garforth FAS

The modelling is completed and strategic options have been identified. Further work is required to evaluate economic benefits before progressing to preparation and submission of outline business case in 2020. Further consultation is being undertaken with Yorkshire Water Services to consider possible collaboration and consideration is being given to property level protection.

- Lyn Dyke Kippax FAS

The modelling is completed and strategic options have been identified. Further work is required to evaluate economic benefits before progressing to preparation and submission of outline business case in 2020. Further consultation is being undertaken with Yorkshire Water Services to consider possible collaboration and consideration is being given to property level protection.

## **4 Sources of Funding**

### **4.1 Flood Risk Management Minor Works Capital Budget**

In 2015 Leeds CC included £1m in the Council's Capital Programme to deliver flood mitigation works that would not be eligible for other funding and to provide partnership funding as leverage to attract external contributions. This continues to prove an extremely useful way to maximise the council's ability to deliver schemes and has helped to attract over £4 million of external funding that would not otherwise have been available. Subsequent to this a further application has been approved as part of the recent capital funding review and this will provide a further £1 million over the next 4 years to keep the flood risk management programme progressing and provide the partnership funding contributions that are essential to help lever in external funds.

### **4.2 Flood Defence Granting Aid and Local Levy**

Flood Defence Grant in Aid (FDGiA) is provided by DEFRA and allocated locally by the Environment Agency and is subject to submission of an acceptable business case. Local Levy (LL) is raised from annual contributions from councils within the region and allocated through the Regional Flood and Coastal Committee (RFCC).

The most significant LL contribution in 2019/20 was £664,000 secured in June 2019 to help protect 53 residential properties and 3 commercial properties from flooding in Otley, this provided a quarter of the funding for the overall project in the town. This runs parallel with the government's commitment of £2 million towards a scheme to protect the properties flooded in December 2015, made up of any eligible FDGiA the project can attract and then additional government funding to bring the total to £2 million.

In 2019/20 LCC submitted requests to the EA to draw down £1,091,856 of the approved FDGiA and LL funding.

### **4.3 West Yorkshire Combined Authority**

The Combined Authority have set out updated plans for addressing the challenges following the end of the current six-year capital flood programme (up to 2020). This focuses on a request for £123 million of government investment which will unlock local contributions and private funding. This investment can accelerate delivery of 27 priority Flood Risk Management schemes with a total capital value of £245 million. The programme includes a dedicated £6 million Natural Flood Management Programme. The programme includes funding for 6 schemes within Leeds with a total funding request of £30 million. This will support delivery of the flood alleviation capital programme including phase 2 of the Leeds FAS. These schemes will protect properties and businesses within Leeds and safeguard existing jobs.

This programme will strengthen the region's response to the Climate Emergency by reducing carbon emissions and improve resilience to the effects of climate change. The work in the programme is being undertaken in a way that is minimising carbon emissions through changing construction practice, incorporating low carbon materials and using Natural Flood Management (NFM) alongside hard engineering. It will support delivery of our City Region strategies relating to energy and green and blue infrastructure. Delivery of this programme will allow the City Region to make further progress toward our objective of becoming a net contributor to the UK economy and achieving our ambition of becoming a net zero carbon economy by 2038.

#### **4.4 Section 106 agreements**

Section 106 of the Town and Country Planning Act includes enabling powers for legal agreements between the Local Planning Authority and developers to provide improvements to local services and infrastructure. In 2016 a Section 106 agreement was put in place with the developers of a new housing estate in Methley, including a sum of £1.1m for a flood alleviation scheme. These funds are now available and the scheme is expected to be completed in 2019/20. Further S106 deposits are available, e.g. £1.74m is being used to help fund the scheme at Killingbeck Meadows and £300k is available for a scheme in the Wortley Beck catchment.

#### **4.5 Highways England**

In 2019 Highways England provided £158k of funding towards the Hawthorn Terrace FAS project near Garforth, this provided the necessary funds to help alleviate flooding problems on the A64 Selby Road.

#### **4.6 European Regional Development Fund**

In 2020 a £4m bid has been submitted under the Sustainable Urban Development Strategy: Leeds City Region – Integrated Actions for Sustainable Development. This project focusses on the Wortley Beck Catchment, covering a range of activities designed to provide an enhanced and more resilient catchment for people and wildlife. The main impacts are new and enhanced habitat for people and wildlife, in a more flood resilient catchment.

## **5 Corporate Considerations**

### **5.1 Consultation and Engagement**

A wide consultation was carried out for the adoption of the Strategy. Further local consultation will be undertaken on individual schemes. The 2022 review and update of the LFRMS for Leeds will be provided for consideration by Area Committees.

### **5.2 Equality and Diversity / Cohesion and Integration**

It should be noted that by carrying out flood alleviation works the Council will be ensuring the safety of the local community and particularly those residents that have children and members of the families that have a disability, where these benefits will be greater – as currently these individuals may struggle to get to safety if flooding occurred. Included as Appendix 3

### **5.3 Council policies and City Priorities**

The approach to flood risk management is in keeping with Council Policies and City Priorities - to reduce the risk of flooding to various communities, commercial premises and the environment.

### **5.4 Resources and value for money**

The implementation of the LFRMS will potentially have an impact in the Council's budgets but the Strategy will ensure that any expenditure is prioritised. Furthermore it will allow stronger cases to be built for future grant applications.

### **5.5 Legal Implications, Access to Information and Call In**

The F&WM Act places a requirement on Leeds to prepare and manage the LFRMS. The Act requires Scrutiny of the Council's activities in this area.

### **5.6 Risk Management**

The Strategy allows the Council to prioritise its work on Flood Risk, leading to reduced overall risk of flooding.

### **5.7 Climate Emergency**

The Council declared a Climate Emergency in March 2019, with the stated ambition of working towards a net zero carbon city by 2030. The Council has accepted that very urgent action is required to make our contribution to containing global temperature rises within 1.5C. Beyond this limit, there is a strong scientific consensus that there will be catastrophic consequences for both humanity and the natural world. Since the declaration the Council has adopted a new way of working, changing its own structures and governance processes to incorporate the new climate emergency priority. Delivery of the LFRMS will help to reduce the impacts of flooding and therefore deliver managed adaptation to the future impacts of climate change. In delivering the capital programme for flood alleviation the carbon impact of these schemes will be considered to promote lower carbon solutions.

## **6 Conclusions**

- 6.1** Flood Risk is a key threat to the wellbeing of the residents across Leeds and in order to ensure action is taken it is important that Council continues a proactive approach to mitigating the impact of flooding.
- 6.2** There has been good progress in the delivery of projects identified in the Strategy in 2019/20.
- 6.3** The allocation of £1 million capital funding in 2015 helped to lever in over £4million of external funding and it is expected that the allocation of a further £1 million capital budget for the period 2020/21 to 2023/24 will continue to support the delivery of additional flood alleviation measures.

## **7 Background documents**

Leeds Local Flood Risk Management Strategy.

## **8 Appendices**

- 8.1** Appendix 1 – Updated version LFRMS Appendix C (i) Measures (2019/20)
- 8.2** Appendix 2 – FRM Incidents up to 2020
- 8.3** Appendix 3 - Equality, diversity, cohesion and integration screening form