



Environment Committee

4 June 2019

Title	Barnet Flood Risk Management
Report of	Councillor Dean Cohen, Chair of Environment Committee
Wards	All
Status	Public
Urgent	No
Key	No
Enclosures	None
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Summary

This report seeks Committee's approval for the submission of flood risk management projects to the Environment Agency's programme of Flood and Coastal Erosion Risk Management, for their consideration as part of their annual programme refresh cycle.

Recommendations

- 1. That the Committee agrees to support the submission of eight flood risk management projects to the Environment Agency's programme of Flood and Coastal Erosion Risk Management (FCERM) schemes, including:**
 - a. Three flood risk management projects to be delivered in-year**
 - b. A further five flood risk management projects to be included in the second tranche (post 2020/21) programme**
- 2. That the Committee agrees the proposed capital investment of up to £60,000 detailed in paragraph 5.2.1 of this report, subject to funding being received from the Environment Agency, to support the delivery of the three in-year flood risk management projects.**

- 3. That, subject to funding being received from the Environment Agency, the Executive Director for Environment is authorised to instruct Re to design and implement the schemes proposed in paragraph 2.10 by placing orders with the Council's term maintenance contractors or specialist contractors appointed in accordance with the public procurement rules and or the Council's Contract Procedure Rules as appropriate.**

1. WHY THIS REPORT IS NEEDED

- 1.1 The Flood and Water Management Act 2010 and the Flood Risk Regulations 2009 place duties on local authorities. This legislation designates the London Borough of Barnet as a Lead Local Flood Authority (LLFA) and as such the authority has a statutory responsibility for leading the co-ordination of local flood risk management within the borough. This includes ensuring that flood risks from local sources, including surface water runoff, groundwater and ordinary watercourses and their interactions, are identified and managed.
- 1.2 The Flood and Water Management Act 2010 (section 9) places a duty for all Lead Local Flood Authorities to produce and publish a Local Flood Risk Management Strategy (LFRMS) to manage all sources of local flood risks consistent with EU and national risk management approaches. The adoption of the Barnet Local Flood Risk Management Strategy was approved by this Committee on 28 November 2018. The Barnet Local Flood Risk Management Strategy lists local flood risk zones also known as Critical Drainage Areas (CDA) across the borough. These are the areas that are considered to be at the highest risk of surface water flooding.
- 1.3 Central Government funding for LLFA flood risk management projects is allocated from the Department of Environment, Food, Fisheries and Rural Affairs (DEFRA) by the Environment Agency. The mechanism for this is the Environment Agency's programme of Flood and Coastal Erosion Risk Management (FCERM). LLFA's must submit their flood risk management projects in adherence with the Environment Agency's annual project refresh deadlines. For the Thames catchment, applications for flood risk management project funding require approval from the Thames Regional Flood and Coastal Committee (TRFCC) in July 2019.
- 1.4 The Environment Agency's current six-year capital investment programme ends in 2020/21. The next programme starts in 2021/22. If the Council supports the submission of these projects, three of which are for consideration for in-year funding and five for funding from 2021/22 onwards, the Environment Agency will consider these programme additions.

2. REASONS FOR RECOMMENDATIONS

- 2.1 Across the borough we have experienced flooding incidents every year since 2010. This flooding is often localised, but these events highlight that flooding can occur at any time with potentially devastating consequences. The surface

water flooding experienced in 2012 further reinforces the risk faced by the borough from local sources. Climate change is predicted to result in more storm events and even greater levels of rainfall, and consequently the probability of flooding is increasing.

- 2.2 The Barnet Surface Water Management Plan and consequently the Local Flood Risk Management Strategy delineated 33 local flood risk zones also known as Critical Drainage Areas (CDA) across the borough. These are the areas that are considered to be at the highest risk of surface water flooding (from sewers, drains, groundwater, run off from land, and small watercourses and ditches that occurs as a result of heavy or intense rainfall). Across these areas there are approximately 127,000 residential properties and 15,500 non-residential properties that could be at risk of surface water flooding of greater than 0.1 metre depth during a 1% Annual Exceedance Probability (AEP) rain fall event.
- 2.3 The Barnet Surface Water Management Plan set out a phased approach to identify and manage surface water flood risk across the borough, and identified that following the delineation of the 33 Critical Drainage Areas, the Council was required to develop and implement flood risk alleviation options. To address this duty, the Barnet Local Flood Risk Management Strategy considered the flood risk to residential and commercial properties and infrastructure assets to create a ranked list of the 33 Critical Drainage Areas based on their risk profile.
- 2.4 Flood risk management proposals were initially developed for the two highest risk Critical Drainage Areas, these being Mill Hill Circus and Decoy Brook. A detailed study for Mill Hill Circus was completed in 2014 that identified properties and a major road junction (A41 Mill Circus roundabout) are at risk from surface water flooding. The study and economic appraisals identified the preferred remedial option was the reinstatement of the existing drainage ditch running around the edge of the field to the south of St Joseph's College grounds and creation of a flood storage area. This project required partnership working with Transport for London (TfL), who are currently not progressing the project. Without TfL's support and partnership funding this project cannot be progressed by the Council. However, this scheme remains on the Environment Agency's programme.
- 2.5 A detailed study for the second highest risk Critical Drainage Area, Decoy Brook, was completed in 2017 and identified that the main source of flood risk is overland flow between the open channel sections of the Decoy Brook. The study and economic appraisals identified two flood risk management proposals, these being improved channel conveyance and upstream storage on Hampstead Heath. This project is not currently being progressed, due to both the stakeholder concerns for the Hampstead Heath proposals and the need to seek partnership funding from TfL, as the funding awarded by the Environment Agency is not sufficient to deliver the project. However, this scheme remains on the Environment Agency's programme.
- 2.6 Scoping studies for the next ten highest ranked Critical Drainage Areas have

now been completed. These areas are Bittacy Park, Childs Hill, Folly Brook, Friern Barnet, Hadley, Hendon Way, Longmore Avenue, Muswell Hill, Oak Hill and Underhill as shown in Appendix 1.

- 2.7 For each of these Critical Drainage Areas a scoping study was completed to determine the existing flood risk within each catchment and review all available historical flooding information, in preparation for the detailed hydraulic modelling study.
- 2.8 The detailed study considered potential flood risk management options for alleviating flooding in each of the catchments and hydraulic models were developed to accurately assess the surface water flow paths for each of the flood risk management options. The second part of the detailed study was the economic appraisal of remedial options, considering the number of properties damaged for each flood event (from a 1 in 5 year return period event, through to 1 in 1,000 year return period event). The table of remedial options considered for each Critical Drainage Area is shown in Appendix 2. The economic appraisal was carried out using the methodology defined in Flood and Coastal Erosion Risk Management Appraisal Guidance and in accordance with HM Treasury's Green Book 2. The economic appraisal considered the benefits achieved by alleviating the annual average damage to properties and offset these against the projects costs (construction, operation and maintenance) to produce a Benefit Cost Ratio (BCR) for each of the flood risk management options.
- 2.9 For eight of the ten Critical Drainage Areas, the economic appraisal identified one or more flood risk management options that are economically viable (defined as a BCR greater than or equal to 1.0). It is proposed that these eight Critical Drainage Areas are submitted to the Environment Agency. The economic appraisal is summarised in the table shown in Appendix 3.
- 2.10 For two of the Critical Drainage Areas, Oak Hill Park and Hendon Way, the economic appraisal concluded that these projects should not be taken forward. For Oak Hill Park, the proposal to lower the ground level within the green space in the Oak Hill Park would not address the flooding. For Hendon Way, due to the limited surface water runoff in the catchment area and the potential development of a Thames Tank for the Brent Cross development, no flood alleviation options were considered at this stage.
- 2.11 For a further three of the Critical Drainage Areas, Folly Brook, Friern Barnet and Hadley, the detailed studies have determined that the flooding in these catchments could be somewhat alleviated through the installation of trash screens to reduce the risk of blockages to the culverts downstream. These are relatively low-cost measures, and the Environment Agency has indicated that funding could be made available this financial year for design and implementation, if the Council would support the schemes with partnership funding.

3. ALTERNATIVE OPTIONS CONSIDERED AND NOT RECOMMENDED

- 3.1 No alternative options were considered, as the Council, as a Lead Local Flood Authority, has a statutory requirement to develop and implement flood risk alleviation options.

4. POST DECISION IMPLEMENTATION

- 4.1 Upon Committee approval of the recommendation to support the submission of flood risk management projects to the Environment Agency's programme of Flood and Coastal Erosion Risk Management (FCERM) schemes, officers will submit applications for the Critical Drainage Areas where the economic appraisals have identified flood risk management options that are economically viable.
- 4.2 Subject to the funding being made available in year, officers will take forward the design and implementation of the three trash screens, and if an instance arises where the community objects to a scheme being implemented, the Executive Director for Environment can take a decision to alter the programme under delegated powers.

5. IMPLICATIONS OF DECISION

5.1 Corporate Priorities and Performance

- 5.1.1 The Council's Corporate Plan – Barnet 2024, states in its strategic objectives that it will work with partners to achieve a pleasant, well maintained borough that we protect and invest in.
- 5.1.2 In particular, the Barnet Local Flood Risk Management Strategy and the associated flood risk management projects aim to put in place measures to reduce the risk of flooding, which will help to improve the local environment and the quality of life for the residents and help create conditions for a vibrant economy.

5.2 Resources (Finance & Value for Money, Procurement, Staffing, IT, Property, Sustainability)

- 5.2.1 The total approved Network Recovery capital budget for 2019/20 is £7.191 million, which includes an allowance for capital drainage improvements. Subject to in-year funding being received from the Environment Agency, it is proposed that a £60,000 allocation is made from this budget as partnership funding for the trash screen proposals as set out below:

CDA Area	Total capital cost	LBB contribution	EA contribution
Folly Brook	£62,500	£20,000	£42,500
Friern Barnet	£62,500	£20,000	£42,500

Hadley	£62,500	£20,000	£42,500
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5.3 **Social Value**

5.3.1 The Public Services (Social Value) Act 2013 requires people who commission public services to think about how they can also secure wider social, economic and environmental benefits. This report does not relate to the procurement of service contracts.

5.4 **Legal and Constitutional References**

5.4.1 The Flood and Water Management Act 2010 and the Flood Risk Regulations 2009 place duties on local authorities. This legislation designates the London Borough of Barnet as a Lead Local Flood Authority (LLFA) and as such the authority has a statutory responsibility for leading the co-ordination of local flood risk management within the borough. This includes ensuring that flood risks from local sources, including surface water runoff, groundwater and ordinary watercourses and their interactions, are identified and managed.

5.4.2 Council Constitution (Article 7, Committees, Forums, Working Groups and Partnerships) sets out the responsible body and their functions. For the Environment Committee it's functions include: Responsibility for all borough-wide or cross-constituency matters relating to the street scene including, parking, road safety, lighting, street cleaning, transport, waste, waterways, refuse, recycling, allotments, parks, trees, crematoria and mortuary, trading standards and environmental health.

5.5 **Risk Management**

5.5.1 The Council has an established approach to risk management, which is set out in the Risk Management Framework.

5.6 **Equalities and Diversity**

5.6.1 The Equality Act 2010 outlines the provisions of the Public Sector Equalities Duty which requires Public Bodies to have due regard to the need to:

- a) Eliminate discrimination, harassment and victimisation and other conduct prohibited by the Equality Act 2010.
- b) Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it.
- c) Foster good relations between persons who share a relevant protected characteristic and persons who do not share it. The broad purpose of this duty is to integrate considerations of equality into day to day business and keep them under review in decision making, the design policies and the delivery of services. There is an on-going process of regularisation and de-clutter of street furniture and an updating of highway features to meet the latest statutory or technical expectations.

5.6.2 Any flooding event tends to disadvantage people with mobility problems and places more strain on the emergency services in the case of an evacuation. The LFRMS identifies objectives to reduce the risk of flooding and this will, therefore, reduce the impact on the community.

5.7 Consultation and Engagement

- 5.7.1 The Council, as a Lead Local Flood Authority (LLFA), in order to fulfil its duties, needs to coordinate with all stakeholders and partner organisations. It is recognised that much of the local knowledge and technical expertise necessary for the Council to fulfil their duties as LLFA lies with partner organisations. It is therefore crucial that the Council works alongside these partner organisations to ensure the effective and consistent management of local flood risk and the provision of a coordinated and holistic approach to flood risk management.
- 5.7.2 Subject to the funding being received from the Environment Agency for the identified flood risk management projects, officers will consult with internal and external stakeholders and partner organisations as part of the project delivery.

5.8 Insight

- 5.8.1 Not applicable.

6. BACKGROUND PAPERS

- 6.1 Barnet Local Flood Risk Management Strategy available on the Council's website
<https://www.barnet.gov.uk/citizen-home/planning-conservation-and-building-control/flood-risk-strategy.html>