LONDON BOROUGH OF HAMMERSMITH & FULHAM

Report to: Climate Change and Ecology Policy and Accountability Committee

Date: 06/02/2024

Subject: Flood risk and adapting to climate change

Report author: Jessica Bastock, Service Manager (Healthy Streets)

Responsible Director: Bram Kainth, Strategic Director of Environment

---

SUMMARY

This report outlines the current flood risk in Hammersmith and Fulham and the actions being taken by the council to help manage flood risk within the borough. This includes information on the climate change adaptation strategy and how this work supports the management of flood risk.

Finally, the report outlines actions being taken by Thames Water following the flooding event in July 2021 which caused flooding in homes and businesses in the borough.

RECOMMENDATIONS

1. For the Committee to note and comment on the paper and attached presentation

---

Wards Affected: All

Our Values	**Summary of how this report aligns to the H&F Values**
Building shared prosperity	Flooding has a negative impact on residents, communities, and businesses. Through identifying those most at risk, management of flood risk can be prioritised. The proposed actions and mitigations seek to manage the disruption from flooding, aiming to educate and protect communities from flooding.
Creating a compassionate council	Flooding impacts all but affects the most

	disadvantaged groups the most, therefore any measures to better manage the impact are important for protecting the most disadvantaged from the impact that flooding causes to lives and homes.
Doing things with local residents, not to them	All schemes will be developed, designed, and delivered with residents in mind. Residents are key to any successful flood risk scheme being implemented. The council is currently consulting local residents and organisations to feed into a climate risk assessment and adaptation strategy for the borough.
Being ruthlessly financially efficient	Whilst reducing the impact of flooding will require significant financial investment, through the identification of external funding and methods of cost saving strategies the investment will remain financially efficient. Working in partnership with external partners such as other risk management authorities to deliver mitigation to reduce the cost and increase protection.
Taking pride in H&F	The proposed mitigations will act to transform streets and neighbourhoods, through methods such as increasing green infrastructure. The process will allow residents to take an active part in shaping these plans, working with the Council to manage their space, fostering pride and shared equity in their borough.
Rising to the challenge of the climate and ecological emergency	Risk of flooding from adverse weather is increasing due to the impacts of climate change. Through better identification of those communities at risk and delivery of proposed flood mitigation measures, management of flood risk will directly combat the negative effects of climate change and mitigate against the risks presented by extreme weather events and flooding.

Background Papers Used in Preparing This Report

DETAILED ANALYSIS

Background on flood risk in H&F

1. Hammersmith and Fulham council (H&F) are the Lead Local Flood Authority (LLFA) for the borough. The duties include but are not limited to managing surface water, ordinary watercourses, and ground water within the borough.

2. Other risk management authorities who manage flood risk within Hammersmith and Fulham are the Environment Agency who manage the River Thames (major rivers), and Thames Water Utilities Limited (TWUL) who are the sewerage undertaker managing the sewer network.

3. The geography and land use within the borough shapes the flood risk of the borough. Bordering the river Thames means a large portion of Hammersmith and Fulham is within a flood risk zone with respect to fluvial (river) and tidal flooding, however because of protection along the river Thames and its tributaries, the risk of tidal and fluvial flooding within the borough is low.

4. Due to the geology of the borough the risk of groundwater flooding within the borough is low.

5. The highest risk from flooding in Hammersmith and Fulham is from surface water flooding, which occurs during heavy rainfall where water overwhelms the drainage and sewer network.

6. Factors that affect the risk from surface water flooding are urbanisation which has reduced the opportunity for natural drainage, an aging sewer system which was not originally constructed to operate for the large volumes of water we now experience, and the impacts of climate change which increases the occurrence of large storm events.

7. The last surface water flood event in Hammersmith and Fulham occurred on the 12 July 2021. The event lasted approximately 4 hours and resulted in over 600 flooded properties in the borough.

8. Most flooded properties were a result of sewer backsurging, whereby foul water entered properties through their drainage connections such as toilets and showers in lower ground floor or basement properties.

9. In addition to flooded properties, some low-lying roads in the borough were also flooded. This occurred where rainfall on the road could not enter the highway drainage and sewer network due to them already operating at full capacity.

Climate change adaptation and flood risk

10. Flooding, along with other extreme weather including heatwaves and droughts, is becoming more frequent and severe as our climate heats up.

11. A climate risk assessment is currently being undertaken to identify the residents, services, buildings and infrastructure that are most at risk. This will be followed by an adaptation strategy which will examine the business case for implementing adaptation measures and identify the priority areas to focus these.

12. Average temperatures have already increased by around 1.7°C in Hammersmith & Fulham since 1890 as a result of human-induced climate change. Average summer maximum temperatures are projected to rise by a further 1.8°C under a medium greenhouse gas emissions scenario, or 2.3°C under a high emissions scenario. This increases the likelihood and severity of incidents such as the floods in 2016 and 2021, the heatwaves we have experienced in 5 out of 7 years since 2017, and disruptive storms.

13. The risk assessment underway is using flood and heat risk mapping, along with the knowledge of council teams and partners, to identify areas and infrastructure at heightened risk. These include:
    i. 4,257 basement properties (private and public) in the borough at risk from a very severe 1 in 1,000 year flood
    ii. Key routes like King Street and New King's Road at risk at lower thresholds of 1 in 30 year floods
    iii. Council estates in areas of surface water flood risk, including White City, Edward Woods, West Kensington, Lancaster Court and Clem Attlee
    iv. Council estates in areas vulnerable to overheating during heatwaves, including Aintree and Clem Attlee estates.

14. A survey of local residents and organisations is also underway to understand how extreme weather has affected the borough so far, which will inform the council's priorities for a climate adaptation strategy.

Thames Water response to flood risk

15. Following the flooding on 12 July 2021, whereby around 170% of average rainfall in July fell in a few hours, Thames Water have estimated that over 2000 properties across London were affected.

16. To further understand the event an independent review was commissioned by Thames Water to review the impact and causes of the flooding and long-term solutions.

17. The report concluded that the flooding was intensified by tidelock, whereby the sewers could not overflow into the river Thames. The report also noted that

whilst all risk management authorities acted quickly more work was required to work together.

18. In response to the flooding Thames Water initiated a Sewer Flooding Resilience Programme. This programme is London wide covering all areas affected by the July 2021 events. In H&F Thames Water are aiming to better protect 385 properties thorough installing non-return valves (NRVs), pumped non-return valves (FLIPs) and Wastops/Sewer flaps. This work is on-going with 195 properties already protected.

19. Thames Waters long-term strategy for alleviating flood risk includes the commission and operation of the Thames Tideway Tunnel, investment of up to £1.7bn in the north central catchment area (which includes H&F) which will include but is not limited to, the installation of SuDS, upsizing sewers, and creating a smart sewer network.

20. To address an outcome from the independent review commissioned by Thames Water, Thames Water have been working with London boroughs to initiate the London Surface Water Strategic Group. The group aim to deliver a strategy for better management of surface water in London. This work will be published in 2024.

H&F action plan for flood risk

21. The action plan appended to this report is an overarching plan that considers all the actions from key flood risk documents and additional actions following the flood event in 2021.

22. The actions are set to a time frame, with a department lead, and priority. Specifying these details, it ensures targets are specific, measurable, achievable, realistic, timely (SMART).

23. Actions are grouped by themes, which are LLFA statutory duty, communication, collaboration, training, funding, emergency planning and projects.

24. Actions include reducing hard surfaces through greening the grey, increasing the amount of area in the borough that is sustainably drained, collaborating closer with internal departments on flood mitigation, ensuring new development meets our drainage and flood risk policies as set out in the Local Plan.

25. The action plan is updated quarterly.

26. Additional KPIs are being drafted to determine the effectiveness of measures.

LIST OF APPENDICES

Appendix 1 – Climate Risk Assessment and Adaptation Strategy presentation
Appendix 2 – Flood risk in H&F presentation
Appendix 3 – Thames Water presentation
Appendix 4 – H&F Flood Risk Action Plan