

Report for: Climate, Community and Culture Scrutiny Panel - 13th July 2023

Title: Update on Flood Water Management and Highways Gully Cleansing

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Ward(s) affected: All

1 Describe the issue under consideration

- 1.1 To provide the Climate, Community & Culture Scrutiny Panel an update on flood water management and the highways gully cleansing programme.

2 Recommendations

- 2.1 That the Climate Community & Culture Scrutiny Panel notes the content of this report.

3. Background

- 3.1 Haringey, like many London Boroughs, is vulnerable to surface water flooding. Our urban environment has reduced natural drainage. Heavy rainfall can swiftly overwhelm the drainage network, quickly leading to flooding of low-lying areas.
- 3.2 Intense rainfall events are becoming more frequent. Haringey, as well as other London boroughs, experienced flooding from extreme rainfall in July 2021 and August 2022. Climate change is projected to increase the frequency and intensity of heavy rainfall, which will increase the risk of flooding.
- 3.3 The Council is the 'lead local flood authority' (LLFA) working in partnership with the Environment Agency, Thames Water and other stakeholders managing the risks of flooding from surface water, ground water, and some of the culverted watercourses.
- 3.4 The Council, as a local highway authority, is responsible for the repair and maintenance of all assets that form part of the public highway. The Council has a statutory duty to maintain the public highway network and reduce the risk of flooding in the borough. The highway network includes approximately: 355 km of roads, 686km of footways, 15,700 highways gullies and 23 SuDS schemes

across the borough. A description of different types of SuDS, with their definitions, is detailed in Table 2. The borough SuDS locations are listed in Table 3.

- 3.5 The Flood Water Management Investment Plan was approved at Cabinet on the 8th of April. This set out the Council's programme for flood reduction measures and drainage improvement schemes for the coming fiscal year.
- 3.6 The 2023/24 investment plan is informed by data from actual flood events and hydraulic analyses, as well as the Council's emerging Highways Asset Management Strategy.
- 3.7 Most of the borough is drained by surface water sewers (which receive surface runoff from roofs, roads, and other areas of hard standing) or combined water sewers (which receive surface water and foul water/effluent), all owned and managed by Thames Water.
- 3.8 The main sewerage network was designed in the 1860s and has served London well. Over time, the areas connected to the sewer network has increased progressively, thus reducing its capacity to accommodate heavy rainfall. This presents challenges and risk of flooding in many parts of London, including Haringey.
- 3.9 Surface water flooding is likely to become a more frequent event due to climate change, and the scale of flood events may increase in the future. Extreme rainfall can overload existing drainage systems, rivers and watercourses and result in surface water flooding.
- 3.10 It is not possible to completely stop flooding, but steps can be taken to reduce the effect through measures, including that of highways drainage resilience works and schemes to prevent unmanaged flooding. The schemes within the 2023/24 programme are those considered as priority to reduce the risk of future flooding.

4 Response following extreme rainfall events in July 21 & August 22

- 4.1 No single organisation can effectively manage flood risk independently and co-operation is needed across the Council, public agencies, government bodies, the private sector, and the community to manage flood risk and respond to flooding when it occurs.
- 4.2 Many flooding lessons have been learnt and in response the Council has:
 - Updated its web page with useful advice.
 - Reviewed its sandbag policy and considered actions for other flood management features besides that of SuDS schemes.
 - Improved flood reporting where there are blocked highways drains and these highway flooding issues are directed to the Highways Team for any action. Other drainage issues are reported to the relevant authority e.g., Environmental Agency, drainage services authority, Haringey Housing.

- Increased resilience at the Council's Customer Service Team when heavy rain is forecast.
- The Emergency Planning Team and Resilience Team have strengthened links with other key teams to build on situational awareness.
- The Multi Agency Flood Plan is now updated, and this will allow responders to act to events outside of the official Meteorological Office Alerts and Warnings.
- To progress with the setting up of 'Leaf Angels' for sweeping off leaves from gullies in the autumn to prevent blockages when heavy rain can be forecast.

5 Summary of progress on 2023/24 Flood Water Management Investment

- 5.1 Marlborough Highways (the Council's current highways service contractor) is delivering the schemes proposed in 2023/24.
- 5.2 In addition to the delivery of those schemes, the Council is carrying out several studies and investigations into flood alleviation project proposals.
- 5.3 At Turnpike Lane, the Council installed new road gullies and worked with Thames Water to facilitate the cleansing of its drainage assets. A feasibility study has commenced on concept proposals for a flood alleviation scheme and, if viable, these proposals should be built in future years, in line with proposed regeneration works in this area.
- 5.4 It should be noted that the Council will soon have completed a major SuDS improvements scheme at the junction of the Muswell Hill/Priory Road. This scheme is constructed to mitigate flooding from high intensity rainfall events.
- 5.5 A flood mitigation scheme at Larkspur Close has commenced with major maintenance cleansing works to the Muswell Brook. Further SuDS works are planned for construction later in the fiscal year.
- 5.6 The floodwater management investment programme is listed in Table 1 of this report and shows an update on progress to date. The schemes programme for 2023/24 includes for gully cleansing works across the borough highways network and further details are given in Items 5 of this report.
- 5.7 Our parks and green spaces provide the greatest opportunity for flood alleviation measures. They cover around 26% of the borough providing scope to build resilience against future flooding risk and this is reflected in the flood mitigation studies that are being carried out.

6 Gully Cleansing

- 6.1 The cyclical gully cleansing programme for 2022/23 was completed in May 2023 and the new cleansing programme commenced in June 2023.
- 6.2 The cleansing regime often identifies gully repairs and blockages in the outlet pipes and these works are then programmed separately from the cleaning

works. These maintenance/repair works are then prioritised and are carried out throughout the year.

- 6.3 The Council has risk assessed the drainage assets based on flood risk and, using this, has prioritised its gully network cleaning. This prioritisation, or gully hierarchy, enables the Council to efficiently target its assets for cyclic gully cleansing and for any planned works prioritisation.
- 6.4 Prioritisation in the gully cleansing programme is undertaken in line with a ruleset based on the risk associated with each individual asset, i.e., the likelihood and consequence of failure. Gullies have been classified into high, medium, and low priorities to enable the resources to be allocated to manage the flood risk more efficiently.
- 6.5 Gully cleansing activities are as follows:
- High priority - 6 monthly
 - Medium priority - annually
 - Low priority – every 2 years

7 Contribution to strategic outcomes

- 7.1 The Flood Water Management Investment Plan proposals supports the 'Responding to the Climate Emergency' theme in the Corporate Delivery Plan 23/24 for "Improved flood defences and community resilience". This is achieved through robust gully cleansing, increase in SuDS schemes, enhanced flood defences, robust delivery to flooding incidents and the delivery of the Flood Water Management Investment Plan.
- 7.2 The implementation of sustainable drainage schemes (SuDS) on the public highway reduces surface water runoff. It also provides the wider benefits of additional greening and makes the streets more pleasant for the public.

Table 1

2023/24 Flood Water Management Investment Update July 2023

Project Name	Ward	Project Brief / Overview	Current Status
Queen's Wood Natural Flood Management Scheme	Muswell Hill	Fundamental review of the Natural Flood Management Scheme scope and programme to align with the Queen's Wood's 'Woodland Management Plan.'	<ul style="list-style-type: none">• Feasibility studies to understand what needs to be done with the existing wall to enable this to be structurally stable and enhanced for it to act as a Parks flood wall.• Any works need to support an updated Woodland Management Plan• Natural Flood Management Scheme now aborted.
Chestnuts Park Rainscape Masterplan	St Ann's	To investigate the possibility of opening the Stonebridge Brook culvert, create new wetlands and swales to reduce flooding of downstream properties.	<ul style="list-style-type: none">• Public consultation is in progress.• Detailed design to follow for a detention basin.• Scheme to be constructed this financial year subject to high level support and also with Friends Group backing.
Larkspur Close (IUD) - Phase II	Bruce Castle, White Hart Lane	Complete construction of SuDS works at Larkspur Close, Fryatt Road and Jellicoe Road to reduce the flooding incidents in Larkspur Close.	<ul style="list-style-type: none">• Cleansing locally of brook completed.• Detailed design is in progress following public consultation.• Outline business case is in progress for further funding from the EA.• Scheme to be constructed this financial year.
Muswell Hill Flood Mitigation Scheme	Muswell Hill, Alexandra Park and Hornsey	Complete SuDS improvements within the area of the junction of Muswell Hill, Priory Road, Park Road, Etheldene Avenue and Farrer Mews.	<ul style="list-style-type: none">• The scheme is under construction and is proposed to be completed in July 2023.• Planting works to go ahead in October 2023.
Priory Park Flood Alleviation Scheme Phase 1	Hornsey	Completion of design and commencement of drainage works outside and within the park.	<ul style="list-style-type: none">• The Parks Service is progressing a MUGA and pétanque facilities in lieu of locations where flood attenuation basins in this park were originally proposed.• Scheme progress only in development stage.
Turnpike Lane – Duckett's Common Flood Alleviation	Noel Park, Harringay	Feasibility study to explore the flood alleviation concept and ideas as proposed to complement the planned regeneration works.	<ul style="list-style-type: none">• Feasibility study is ongoing.• Report to be published in August 2023.• The scheme to be constructed in future financial years, subject to viability and funding.

Project Name	Ward	Project Brief / Overview	Current Status
Risk of Flooding from Surface Water (RoFSW) grant funding	Borough - wide	Grant funding for carrying out a boroughwide Surface Water Modelling and Mapping.	<ul style="list-style-type: none"> • Inception report completed. • Modelling and mapping progressing and proposed to be completed in November 2023
Broad Lane, Spondon Road SuDS Scheme	South Tottenham	Possible Flood storage basin to take runoff from surrounding roads	<ul style="list-style-type: none"> • Feasibility study is ongoing. • Report to be published by August 2023. • Any scheme to be constructed next financial year subject to funding.
Section 19 Flood Investigation Reports	Borough - wide	Any further use of S19 of Flood & Water Management Act to investigate flooding.	<ul style="list-style-type: none"> • Funding designated in case of extreme rainfall event and further S19 reports are then required.
London Lee Catchment Partnership - Thames 21	Borough - wide	Annual contribution to Thames 21.	<ul style="list-style-type: none"> • Annual contribution to Thames 21. • Use its contact network including corporates, government, academic, charitable trusts, and any other contacts to develop and apply on behalf for funds along with engagement of local communities.
Gullies civils works	Borough - wide	Repairs to gullies and their connection, new covers and frames as identified through cleansing works.	<ul style="list-style-type: none"> • Repairs to gullies and their connection, new covers and frames as identified through cleansing works.
External Funding Bids	Borough - wide	Drafting proposals for a government fund for innovative projects	<ul style="list-style-type: none"> • Funding for development of projects for any external funding bids
Management and Maintenance of Existing SuDS	Borough wide	Management and maintenance of existing SuDS schemes.	<ul style="list-style-type: none"> • Funding for existing SuDS maintenance.
Haringey Flood & Water Management Asset Register	Borough wide	As a part of Flood & Water Management Act (2010) – up to date asset register and site surveys.	Publishing the Asset Register in accordance with the F&WM Act 2010
Borough wide Strategic SuDS Pilot Study and Schemes	Borough - wide	Borough wide Strategic SuDS Pilot Study based on S19 reports and implementation of retrofit SuDS within highways corridor.	<ul style="list-style-type: none"> • Feasibility study is ongoing. • Report to be published in August 2023. • Schemes to be constructed next financial year.

Project Name	Ward	Project Brief / Overview	Current Status
Revenue Gully Cleansing programme	Borough - wide	Borough wide highways gully cleansing programme	<ul style="list-style-type: none"> <li data-bbox="874 331 1401 421">• New cyclical gully cleansing throughout the borough, as commenced in June 2023

Table 2

Different types of SuDS with corresponding explanations

- **Rain Gardens**

These are a combination of planted native shrubs, flowers and perennials in a small depression surrounded by brick wall, concrete kerbs, Corten steel or natural. These bioretention facilities are designed to reduce the flow rate, water quantity and to treat the polluted stormwater runoff from nearby public highways, footways and any adjacent soft landscaping.



- **Swales**

Swales are shallow channels covered by grass and vegetation in places. They are generally constructed to store and convey water between various rain gardens and detention basins. These are designed to maximise the water quality treatment benefits.



- **Detention Basins**

Detention basins are surface storage basins or facilities that provide flow control through attenuation of stormwater runoff. They also facilitate some settling of particulate pollutants. Detention basins are normally dry and in certain situations the land may also function as a recreational facility. However, basins can also be mixed, including both a permanently wet area for wildlife or treatment of the runoff and an area that is usually dry to cater for flood attenuation.



- **Retention Basins**

Retention basins can provide both stormwater attenuation and treatment. They are designed to support emergent and submerged aquatic vegetation along their shoreline. Retention basins are permanently wet area. Runoff from each rain event is detained and treated in the pool. The retention time promotes pollutant removal through sedimentation and the opportunity for biological uptake mechanisms to reduce nutrient concentrations.



- **Trees**

Trees play a vital role in managing storm water. They aid in water interception, storage and infiltration while increasing an evapotranspiration potential. Unarguably, the largest living things on earth. They also bring birds and other wildlife into the borough.



- **Permeable Paving**

Permeable paving surfaces are made of either a porous material that enables stormwater to flow through it or nonporous blocks spaced so that water can flow between the gaps. Permeable paving can also include a variety of surfacing techniques for roads, parking, and pedestrian walkways. Permeable pavement surfaces may be composed of pervious concrete, porous asphalt, paving stones, or interlocking pavers.



- **Soakaways**

Soakaways are square or circular excavations either filled with rubble or lined with brickwork, pre-cast concrete or polyethylene rings/perforated storage structures surrounded by granular backfill. They can be grouped and linked together to drain large areas, including highways.



- **Green Roofs**

A green roof or living roof is a roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane. It may also include additional layers such as a root barrier and drainage and irrigation systems. Green roofs serve several purposes for a building, such as absorbing rainwater, providing insulation, creating a habitat for wildlife, increasing benevolence,



Table 3

List and Location of SuDS within Haringey					
No	Location	Swale	Basin	Permeable Paving	Rain Gardens
1	91-115 Stonebridge Road				YES
2	Adams Road SuDS scheme			YES	YES
3	Blaydon Walk / Willoughby Park Road			YES	YES
4	Boyton Road	YES			YES
5	Chestnut Road	YES		YES	YES
6	Crescent Gardens	YES	YES		YES
7	Eade Road Near Link Way				YES
8	Fairbanks Road			YES	
9	Ferry Lane			YES	YES
10	Latimer Road			YES	
11	Love Lane			YES	YES
12	Mayes Road				YES
13	Park Road, Dale Court				YES
14	Priory Road N8	YES	YES		YES
15	Rectory Gardens	YES	YES		YES
16	Roadway Allotments [Larkspur Close]		YES	YES	
17	Shepard's Close				YES
18	Stapleton Hall Road	YES			YES
19	The Lindales / Cooperage Close				YES
20	Victoria Crescent		YES		YES
21	West Green Road by Avenue Road				YES
22	White Hart Lane			YES	YES
23	Wightman Road			YES	YES