



Policy and Scrutiny Committee

Date:	28 th November 2022
Classification:	General Release
Title:	Final Section 19 Report Investigating the July 2021 Surface Water Flooding
Report of:	Phil Robson – Acting Director City Highways
Cabinet Member Portfolio	Cabinet Member for City Management & Air Quality
Wards Involved:	All
Policy Context:	Resilience against surface water flooding, meeting the council's statutory obligation as a Lead Local Flood Authority (LLFA)
Report Author and Contact Details:	Andy Foster afoster1@westminster.gov.uk

1. Executive Summary

On the 12th and 25th July 2021, surface water flooding affected over 1,000 properties across London. In Westminster, the 12th of July event affected approximately 250 properties and 64 roads, mainly in the Maida Vale/Paddington area. Additionally, one primary school, three libraries, three community centres were affected and seven of London Underground's lines were delayed or closed due to flooding. The event of the 25th had less of an impact in Westminster compared to the 12th July event, however enough properties were affected to trigger a Section 19 Investigation Report for both events.

The production of the Section 19 Report is a legal obligation on Westminster as a Lead Local Flood Authority (LLFA) under the Flood & Water Management Act 2010. The final report was approved for publication in November 2022 an interim Section 19 Report was presented to P&S in October 2021.

The purpose of the investigation is to provide information regarding the flooding including the flooding mechanisms and set out recommendations for future work or activities to minimise the impact of surface water flooding. The report brings together data from risk management authorities such as Thames Water into whose sewers surface water discharges.

More detail on the Section 19 report is provided in Section 3 of this report.

2. Key Matters for the Committee's Consideration

The Section 19 report lists a number of actions identified by the council and Thames Water's Independent Flood Review, (see Page 27). With respect to those actions, the following points are brought to the P&S Committee's attention for their view/steer:

- 1) The council has recommended a series of actions to improve resilience against surface water flooding, these are a combination of strategic measures such as improving the surface water flood model using real time data from the July 21 event, and tactical actions, such as implementing a SUDS programme to reduce the rate of surface water run-off. What is the Committee's view on the approach being taken by the council.
- 2) Since the flooding in July 2021, Thames Water have launched a sewer resilience programme whereby properties that were affected by last year's flooding, can apply for non-return valves or FLIPS to be fitted to their properties by Thames Water. If a property is considered suitable, the introduction of a FLIP will significantly reduce the risk of flooding internally from foul water entering a property from the sewer network. Thames Water recently reported that only 30 per cent of households who reported flooding last year, have booked a survey with Thames Water to see if their property can be fitted with a FLIP. Officers propose to engage with Thames and provide support to try and encourage residents to take up Thames Water's offer, is the Committee content with this approach?

3. Background

In the immediate aftermath of last year's flood events, an interim Section 19 Report was prepared in October 2021 which provided some preliminary detail, including the impact of the flooding on the local community and businesses, this report was presented to Policy and Scrutiny in October 2021.

Since the interim Section 19 report was prepared, Thames Water published the outcome of their Independent Flood Review (IFR) which they published in four stages:

- Stage 1 - Investigation of reported flooding
- Stage 2 - Investigation into the catchment response and root causes that led to flooding
- Stage 3 - Assessment of the performance of TW assets, including flooding alleviation schemes, critical pumping stations and operational performance of the network
- Stage 4 - Recommendations to improve resilience to future flooding events

The IFR can be viewed in full using the following link [London Flooding – Independent Review \(londonfloodreview.co.uk\)](https://londonfloodreview.co.uk).

The final Section 19 Report was approved for publication in November 2022.

The 12th of July 2021 event was a more extreme event in Westminster compared to the 25th July event. Very high intense levels of rain were experienced in a very localised area, rainfall exceeded a 1 in 100-year event at a number of locations in Westminster over a 6 hour time period, at times the 1 in 200-year event was exceeded at some locations for durations up to 3 hours. Full details of the intensity of both rainfall events can be viewed on pages 10 and 21 of the Section 19 Report.

The flooding mechanism of both July 21 events were broadly similar, the primary flooding mechanism appears to be an overload on the sewerage system, with surface water runoff not being able to enter the sewer network creating a secondary flooding mechanism.

Both events coincided with high tides in the River Thames, this prevented storm water sewerage from discharging into the Thames, which is referred to as tide-locking. The Section 19 Report makes reference to the workshop held on the 28th September 2021 where Thames Water confirmed that tide-locking had a significant effect along the North West Storm Relief Sewer (Maida Vale to Hammersmith) impacting on the capacity of the network, see Page 19 of the report. The impact of tide-locking in July 21 still needs to be fully understood through additional flood modelling work.

The Section 19 Report confirms that assets intend to drain or perform a flood alleviation function, such as Thames Water's Maida Vale's Flood alleviation scheme, all worked well within their design parameters (generally to cater for a 1:30 year event) with no major issues. The events of the 12th July were in the order of 1 in 100 and for shorter periods peaked at 1 in 200 years.

A summary of what improvements have been made since July 2021 is provided in Appendix 1 attached to this report.

If you have any queries about this Report or wish to inspect any of the Background Papers, please contact Report Author Andy Foster
afoster1@westminster.gov.uk

APPENDICES:

Appendix 1- Summary of Improvements since the flood events of July 2021

BACKGROUND PAPERS

Section 19 Report (Final Nov 22) v 1.4

APPENDIX 1

SUMMARY OF IMPROVEMENTS SINCE THE FLOOD EVENTS OF JULY 2021

1. **Drainage Improvements** – An additional £600,000 of funding has been made available to accelerate the programme of gully replacements, this is to replace gullies which are age expired or have known defects which could impair their function.
2. **SuDs Programme** – Westminster has made funding available for Sustainable Urban Drainage Systems (SUDs). SUDS schemes will help to reduce run off from paved areas, slowing down the surface water trying to enter the sewer system. SUDS will have additional benefits including improving air quality and reducing carbon emissions.
3. **Flood Modelling** – the rainfall events of July 21 have provided an opportunity to update the Westminster Flood Model with rainfall data from a real event. This will help to improve the accuracy of the model and understand the most vulnerable areas across the borough which are susceptible to the impact of surface water flooding and allow action to be taken to reduce the risk.
4. **Body set up to look at London Surface Water Flooding** - Following July 2021 intense rainfall events, there has been a considerable amount of work taking place, both locally and strategically, to ensure London is as resilient as possible to future events.

A number of strategic and tactical meetings with the Mayor, London Resilience Forum, Ministers, MPs and others have taken place. Consequently, a Task and Finish Group representing London partners has been set up to consider what is required to ensure London is as well prepared as possible to manage surface water. The work being done does not supersede any local strategies, plans, or actions, but looks to strengthen the existing good work already happening, support others who haven't been able to do as much as they would like to and ensure that flood risk is managed holistically across London.

5. **Thames Water Sewer Resilience Funding** - Thames Water have introduced a Sewer Resilience programme to help residents affected by the flooding in July 21 to help them protect their properties (if they qualify) from wastewater backing up into properties through the introduction of non-return valves known as FLIPS. Thames Water have confirmed that they will soon commence surveying of over 500 properties to see if they are eligible for FLIPS
6. **Emergency Planning** – In the immediate aftermath of the flooding in July 2021, an external Emergency Planning Consultant was commissioned to conduct a review to identify any urgent improvements required to improve confidence in the service. The Westminster multi-agency Flood Plan is based on the London flood response framework and is owned by the Borough Resilience Forum. The final plan will be signed off at the Forum meeting in December 2022. The wider

management and organisational structures are being considered as part of the Emergency Preparedness Review. An internal Resilience Hub has been created, bringing together organisational resilience and business continuity, emergency preparedness and humanitarian assistance into a single place. This is being used to engage and encourage staff to volunteer for training enabling them to support our response to major incidents. This includes strategic and tactical controllers, emergency centres, crisis support and borough emergency control centre staff. This will continue as an ongoing piece of work.

- 7. *Gully Sensor Trial*** – The council has installed 20 Gully sensors in Westminster in 2021/22, The gully sensors measure water depth, blockages and can also sense tampering. It is unlikely sensors will be installed in all of Westminster’s gullies, the aim is to install up to fifty more in challenging (at risk) locations across the borough to improve our overall response to our residents/customers.