

London Borough of Waltham Forest

Addendum to the 2021 Section 19 Report

Information related to Flooding on 17th August 2022

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Report of:	Head of Highway Network Management
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Wards affected:	All
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Status:	Open

1. SUMMARY

This addendum report provides additional information regarding the borough-wide flooding on 17th August 2022 to the Lead Local Flood Authority's (LLFA) 2021 Section 19 report, which investigated the borough-wide flooding in July and August 2021.

2. RECOMMENDATION

It is recommended that the Director of Neighbourhoods, in consultation with other Risk Management Authorities (RMA's), notes progress to date and approves the Section 19 Addendum report for publication.

3. BACKGROUND

- 3.1 Waltham Forest Council is the LLFA for the London Borough of Waltham Forest (LBWF). As a LLFA the Council has a number of duties as set out in the Flood and Water Management Act 2010, including a requirement to investigate certain instances of flooding and to publish the findings.

- 3.2** Following an intense period of torrential rainfall events on 25th July 2021 and 7th/ 8th August 2021, LBWF has produced a Section 19 report and the final version of it has been published on the Council website. Since most of the areas flooded in the subsequent intense rainfall on 17th August 2022 are similar to 2021 events, the Section 19 report for the year 2022 will be an addendum to the report produced in year 2021.
- 3.3** This addendum report highlighted the specific information related to the flooding on 17th August 2022 which was not covered by 2021 Section 19 report.
- 3.4** The London Borough of Waltham Forest would like to acknowledge local residents and businesses, Thames Water and The Environment Agency for providing information and input into this addendum report.

4. FINDINGS

4.1 Rainfall

On 17th August 2022, within a 24-hour period, the London Borough of Waltham Forest experienced the range from 1 in 2-year to 1 in 170-year storm return periods. Rainfall intensity was varied from 35mm/hr to 104 mm/hr and recorded rainfall depth from 17mm to 82mm across the borough.

4.2 Surface Water Network

The feedback received from RMA's during the course of the investigation, indicated that the surface water network would have been overwhelmed in many places. The surface water sewer systems in the borough have been designed to withstand a maximum of a 1 in 30 years storm event. They are not designed to cope with extreme rainfall events and when these occur the capacity of the drainage network can be exceeded, leading to localised highway or property flooding. This would have been the overarching contributing factor to the widespread flooding on 17th August 2022.

4.3 RMA Functions

Of the RMA's the council contacted during the course of the investigation, several of them exercised their functions in response to the flooding.

LBWF Highways mobilised its Term Contractor, Rineys, supported by a team of LBWF officers. They prioritised known high-risk areas and the reported flooding areas for attendance. On Wednesday 17th August, immediately following the first storm, the Highways Service suspended its regular gully cleaning programme and diverted resources to the areas most affected by the flooding. Gullies were cleaned at a number of locations including the Wood Street area.

Post flooding, the Council waste collection teams attended many roads and removed waste as a result of the numerous flooded properties.

On 17th August 2022, 55 roads were flooded, and property flooding was recorded within 15 roads. These are shown in Appendix A and Appendix B in this report. Also, 17 schools were affected by this storm weather which is showing in Appendix C of this report.

Following the flooding events in 2021, LBWF revised the gully cleansing operations and carried out an extensive cleaning and maintenance programme. This review has led to changes in the current gully cleansing frequencies, in certain high-risk locations that have been affected by the flooding. This programme was able to clean almost three quarter of the gullies within the borough prior to the torrential rainfall event on the 17th August 2022.

Thames Water confirmed they have checked the sewer network at the affected areas and carried out necessary cleaning work. On 17th August 2022, Thames Water reported 98 flooding records within 38 roads. This is shown in Appendix D.

4.4 Public Engagement

The LLFA has actively been attending public engagement meetings following the flooding in 2022, with flood action groups such as Wood Street South, Brooke Road and Oliver Road, Wadley Road and Esther Road, Peterborough Road and West End Avenue, Greenway Avenue, Heron Close. Where new schemes are planned, public engagement meetings will continue so that residents and communities are kept abreast of flood mitigation projects in development.

The Council is continuing to work in partnership with Thames Water supported by the National Flood Forum to engage with community flood action groups and to work with local residents to seek funding to deliver community flood resilience schemes.

5. Flood Mitigation schemes within the borough

Following the intensive rainfall events in 2021, LLFA/ LBWF was able to secure funding for two new Sustainable Drainage System (SuDS) projects and flood mitigation schemes within the borough. Brooke Road/ Oliver Road area which was highly affected during these recent flooding events is one of those schemes and the construction of this scheme started on 24th October 2022. Wadley Road/ Esther Road/ Kings Passage scheme is at the detailed design stage and statutory consultation period, due to the changes in the parking within the area.

During 2021 – 2022, LBWF successfully completed three flood mitigation schemes in South Chingford area at Larkwood Playing Field, Rolls Sports Ground and Memorial Park. In addition, there are schemes at Eatons Mead and Chestnuts Showground which are at the detailed design stage.

The Council is also trying to build community flood resilience by supporting community led funding bids to increase network capacity by installing rainplanters, introducing soft landscaping and permeable surfacing in private residential areas. We have secured some funding from the Ofwat innovation fund to install rainplanters at Wadley Road, Esther Road and Greenway Avenue.

Currently, LLFA's flood consultants are undertaking hydraulic flood modelling of four new flood study areas which will provide coverage for the whole borough. These studies should identify potential sites to deliver strategic flood mitigation schemes within the Thames RFCC's current 6 year programme, subject to available funding from the Environment Agency.

6. Recommended Actions

A number of recommended actions have been made within the 2021 Section 19 report, to aid all risk management authorities to work collaboratively and to reduce the impacts of future flood events within the borough. LBWF as the LLFA will continue to monitor these actions with our partner RMA's and complete its own actions wherever possible and resources allow.

7. Next Steps

LBWF will continue to work closely with Thames Water and the Environment Agency, to pursue options for capital drainage schemes within the borough and our Critical Drainage Areas (CDA's), subject to scheme viability and budgets being made available.

The recommended actions within the Section 19 report will be monitored by LBWF in collaboration with other RMA's.

There will also be a need for strong community engagement to highlight flood mitigation options available to our residents and businesses. Building a resilient community will require a catchment-wide approach and the LLFA will work closely with flood action groups, residents and businesses, to achieve the maximum possible benefit in flood risk reduction.

It is also clear that building long-term, borough-wide, community resilience is imperative to combat the future threat of climate change and severe weather events. As suggested in the Section 19 report produced in 2021, the LLFA, LBWF will continue to support this approach by working with our communities at risk wherever possible.

Appendix A: List of the flooded roads reported on 17th August 2022 to LBWF

Ward	Roads Affected
Cann Hall	Cann Hall Road, E11
	Gnome House
	Odessa Road
Cathall	Nutfield Road E15
	Westdown Road E15
Chapel End	Chingford Rd, E17
	Billet roundabout E17
	Cheshire Close E17
	Farnan Avenue, E17
	Junction of Aveling Park Road and Evesham Ave E17
	King Edward Rd, E17
	Kitchener Road, E17
Victoria Road, Waltham Forest, London, E17	
Chingford Green	Essex road north Chingford E4
	Lee Valley Road to Sewardstone road E4
Endlebury	Waltham Way, E4
	Greenbank Close E4
	Old Church Road E4
	The Ridgeway, Chingford E4
Grove Green	Sidmouth Park - Dawlish Road entrance E10
Hale End & Highams Park South	Fulbourne road opposite Frederick Bremer school. E17
	Wickham Road, E4
Hatch Lane & Highams Park North	The Charter Road, E4
	Waterhall Avenue E4
High Street	Palmerston Road E17
Higham Hill	Heron Close E17
	Chamberlain Place, E17
	Higham Street junction with Higham Hill E17
	Priory Court Rd, Higham Hill E17
	Valognes Avenue, London E17
Hoe Street	Turner Road, E17
Larkswood	Mead Crescent E4
	Alpha Road E4
Lea bridge	South Access Road E17
Leytonstone	Kings Road, E11

Ward	Roads Affected
Markhouse	Yunus Khan Close E17
St James	Coppermill Lane, E17
	Haroldstone Road E17
	Hazelwood Road E17
	Blackhorse Lane E17
Upper Walthamstow	Chestnut Avenue North E17
	Forest Rise E17
	Greenway Avenue E17
	Morgan Avenue E17
	Radbourne Cres, E17
Valley	Marmion Avenue, Chingford, London, E4
	Templeton Avenue & Mount Ave, Chingford E4
William Morris	Bedford Rd, E17
	Elphinstone Road, E17
	Winns Avenue E17
Wood Street	Brooke Road E17
	West End Avenue E10
	Wood Street E17
	Barrett Road E17
	Shernhall Street E17

Appendix B: List of the flooded properties reported on 17th August 2022 to LBWF

Road Name	Properties flooded
Bedford Road, E17	59, 78, 91, 92, 93, 94, 119
Brook Road, E17	1,3,5, 12 to 92 inclusive (even's only) TBC.
Haroldstone Road	20, 8, 10, 88
Heron Close E4	2,4
Fullbourne Road	Spring House
Hazelwood Road E17	83 & 82
Wood Street Shops only	112, 116,135 141, 155, 167, 175, 176 and 176b
West End Avenue E10	57,55,59,63, 58,60
Palmerston Road	26, 28, 30
The Chantry, The Ridgeway	10 properties flooded, 5 require temp accommodation
Turner Road	88

Appendix C: List of Schools flooding reported on 17th August 2022 to LBWF

School Name	Type	Address
Chapel End Infant School	Primary School	3 Beresford Rd, London E17 4LN
Chingford CofE Voluntary Controlled	Primary School	Kings Rd, London E4 7EY
Davies Lane Primary School	Primary School	74 Davies Ln, Bushwood, London E11 3DR
Greenleaf Primary School	Primary School	80 Greenleaf Rd, London E17 6QW
Mission Grove Primary School	Primary School	Buxton Rd, London E17 7EJ
Parkside Primary School	Primary School	21 Wellington Ave, London E4 6RE
Roger Ascham Academy	Primary School	1 Wigton Rd, London E17 5HU
St Joseph's Infant School	Primary School	Marsh Ln, London E10 7BL
St Mary's Catholic Primary School	Primary School	Station Rd, London E4 7BJ
St Mary's Walthamstow CofE	Primary School	Brooke Rd, London E17 9HJ
The Winns Primary School	Primary School	Fleeming Rd, London E17 5ET
Heathcote School & Science College	Secondary School	96 Normanton Park, London E4 6ES
Holy Family Catholic School	Secondary School	Wiseman House Site, 34 Shernhall St, London E17 9RT Walthamstow House Site, 1A Shernhall St, London E17 3EU
Kelmscott School	Secondary School	245 Markhouse Rd, London E17 8DN
Leytonstone School	Secondary School	159 Colworth Rd, London E11 1JD
South Chingford Foundation School	Secondary School	Stadium Close, London E4 8ES
Walthamstow School for Girls	Secondary School	Church Hill, London E17 9RZ

Annex D: List of the roads reported on 17th August 2022 to Thames Water

Road Name		Number of properties reported
Adelaide Road	E10	1
Ainslie Wood Road	E4	2
Aveling Park Road	E17	3
Bedford Road	E17	2
Blackhorse Lane	E17	1
Boundary Road	E17	1
Bromley Road	E17	1
Brooke Road	E17	25
Chamberlain Place	E17	1
Chestnut Avenue South	E17	10
Clacton Road	E17	1
Crofton Grove	E4	1
Downsfield Road	E17	4
Eastfield Road	E17	1
Endlebury Road	E4	1
Haldan Road	E4	2
Haroldstone Road	E17	2
Hazelwood Road	E17	2
Heron Close	E17	2
High Street	E17	1
Larkswood Road	E4	1
Mansfield Hill	E4	2
Maynard Road	E17	1
Melford Road	E11	1
Oakfield Road	E17	1
Oliver Road	E17	5
Pembroke Road	E17	1
Sewardstone Gardens	E4	1
Shernhall Street	E17	2
Station Road	E4	1
Turner Road	E17	1
Waltham Way	E4	1
Wellington Road	E17	4
West End Avenue	E10	2
Winns Avenue	E17	7
Wood Street	E17	1
High Road Leyton	E10	1
Nesta Road	IG8	1