



London Borough of Tower Hamlets

Multi-Agency Flood Plan



Protective Marking & Version Control

I. Version Control

This plan is regularly reviewed and updated as and when necessary; it will be reviewed annually.

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II. Protective Marking

This document has no protective marking. However, some links may not be accessible for those outside of the Borough Resilience Forum.

III. Distribution List

This document is made available internally within the organisation and externally.

For ease of use upon detecting an emergency or suspecting that an emergency may unfold, go straight to:

[Section 1.5](#) – To determine the response level required

[Section 5](#) – Aide Memoir for use by Civil Protection Unit (CPU) or Duty Civil Protection Coordinator (CPC) during response phase

[Section 6](#) – Considerations for all levels of the Command Structure during response phase

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PART 1: Context

1.1 Introduction

The London Borough of Tower Hamlets covers an area of approximately 20 km² and is located to the East of the City of London, between the London Borough of Newham to the east and the London Borough of Hackney to the north. The River Thames runs along the southern boundary of the Borough for over 10km, and the River Lea flows from north to south along the extent of the eastern boundary, before discharging into the River Thames.

Tower Hamlets is heavily urbanised, with a variety of commercial, residential, and industrial land uses. The Borough accommodates a rapidly growing population, estimated at 310,300, (as of 2021 - Office for National Statistics), with approximately 37,000 properties located within areas defined as being at risk of flooding.

The financial centre of Canary Wharf is located on the Isle of Dogs and the historic Tower of London is situated in the south-west corner of the Borough. A network of strategic transport infrastructure traverses the Borough, including the Docklands Light Railway, London Underground and Overground, Network Rail and strategic road networks controlled by Transport for London (TfL).

The water utility provider is Thames Water Utilities Ltd.

With over 36695 properties within the borough at risk of flooding (almost 30% of the total number of properties), Tower Hamlets has tens of thousands of residents at risk of losing their homes and businesses.

Following the significant flooding event in the UK in 2007, local authorities were asked to develop Multi Agency Flood Plans to ensure that the responding agencies within each borough had a plan to tackle the specific and bespoke impacts that a flood incident would have their respective boroughs. This plan has been created and reviewed in consultation with members of the Tower Hamlets Borough Resilience Forum.

The plan covers a borough-based response; however, floods will not have regard for political and administrative boundaries. As such this plan must be shared and liaison arrangements made with agencies across the resilience fora and for this, an overview of London-wide Strategic information is included.

1.2 Purpose

This plan gives an overview of the flood risk in the London Borough of Tower Hamlets. The plan also includes the methods of communicating this risk to residents.

The plan suggests the groundwork and preparation work that partner organisations should complete.

The plan defines where a flooding incident meets the trigger to require a multi-agency response. This plan links to existing generic emergency plans, the LESLP Major Incident Principles Manual and the London Flood Response Strategic Plan.

Detailed plans (such as activation, shelter, or evacuation) and emergency contact lists are the responsibility of the individual partner organisations.

In the event of local flooding that is not deemed significant to activate the London wide flood response, the local responding partners may deem it necessary to activate local arrangements (such as borough wide discussion and implementation of LBTH partner flood plans).

1.3 Aims and Objectives

This document details the multi-agency activation, response and recovery of partners involved in the response to a flooding incident within the borough of Tower Hamlets.

- To provide information on the warnings that responding agencies can receive
- Identifies the trigger levels for a multi-agency response to a flood event
- Details the trigger points for the plan to be activated
- Identifies the locations of further information on the roles and responsibilities of responding partners
- Provide information to identify the wider impact of borough flooding events
- Support the Environment Agency (EA) in the dissemination of warnings to communities at flood risk.
- The plan does **not** include flood risks from foul sewage, burst water mains, and private lakes and canals

1.4 Related Plans

The multi-agency flood plan should be used in conjunction with the latest versions of the following documents:

Note: where no link is attached, the documents are available from the Civil Protection Unit (LBTH Internal staff only)

LB Tower Hamlets Documents:

- Borough Major Incident Plan Part 1: [Civil Protection Procedure](#)

- Borough Major Incident Plan Part 2: [Emergency Community Care Plan](#)
- Borough Major Incident Plan Part 3: [Business Continuity Incident Management and Escalation Procedure](#)
- Borough Major Incident Plan Part 5: [Recovery Plan](#)
- Tower Hamlets Multi-Agency Risk Register
- The Tower Hamlets Risk Register
- Tower Hamlets Resilience Forum Partnership Contacts List

A number of plans are available from London Resilience [here](#). Plans include:

- [Strategic Coordination Protocol](#)
- [London Recovery Coordination Framework](#)
- [London Strategic Flood Response Framework](#)
- [Strategic Reservoir Response Framework](#) (Resilience Direct link)
- [London Severe Weather and Natural Hazards Framework](#)
- [London Regional Flood Risk Appraisal](#)
- [LESLP: Major Incident Principles](#)
- [London Local Authorities Mutual Aid Guidance](#) (Resilience Direct link)

1.5 Triggers and Activation

There are several thresholds and triggers that can be used to assess the need to escalate a situation and activate this plan. Activating the plan will instigate a coordinated multi-agency response.

There are 4 Levels within this plan, and these levels can aid decision making in the event of a flood.

Level 1: represents the routine operations such as long-term flood mitigation, adaptation work, horizon scanning, monitoring, and forecasting services. There is no trigger for Level 1 as LBTH will continually operate at Level 1 as Business as Usual.

Level 2: represents the preparation and planning phase in the lead up to a potential flooding incident. It is activated on receipt of flood forecasting products from the Environment Agency, Met Office and Flood Forecasting Centre or reports from partner agencies of possible failing infrastructure that could cause flooding, for example a reservoir.

Level 3: represents the flood response phase. It is activated on receipt of flood warning from the Environment Agency. Level 3 can also be activated upon notification by another partner agency that has received reports of failing infrastructure that is causing flooding.

Level 4: represents the recovery phase. Recovery from an incident usually takes place following a handover from the emergency services leading initial incident response, to the local authority who act as the lead for the Recovery. However, preparation for recovery can begin at any stage following the incident and this should be considered at all stages of the response.

In most instances, this plan will be activated by the Civil Protection Unit with a 1- or 2-day lead time following a ‘Significant’ Flood Guidance Statement from the Flood Forecasting Centre, a Met Office ‘Amber’ or ‘Red’ warning of rain, or an Environment Agency ‘Flood Warning’ or ‘Severe Flood Warning’. In some cases, the Duty Civil Protection Coordinator (CPC) will take the decision to activate the plan, in consultation with the Director on Call.

Important to note: Each flood forecasting situation is different. Prescribed actions for one trigger is not realistic. The suggested actions below are a guide. There is a reliance on responders to evaluate the information they have themselves and take actions accordingly. For more clarification of flooding information please ring your local Environment Agency office/incident communication service.

Triggers should relate to levels of the response expected, as identified in Part 2 and Part 3 under ‘multi-agency response’.

Table 1: Levels/Triggers/Response

Level/Risk/Phase	Triggers	Outline of response expected
<p>Level 1 – Routine, Business as Usual</p>	<ul style="list-style-type: none"> • No triggers 	<ul style="list-style-type: none"> • Routine and/or preventative flood risk management. Horizon scanning of forecasts, flood warnings, climate change • Regular maintenance work; removing debris from watercourses, clearing out drainage systems, maintaining flood defences etc • Flood response planning, training and exercising • Encouraging sign up to flood and weather warnings • Homeowners’ preparedness, such as the implementation of property resilience measures

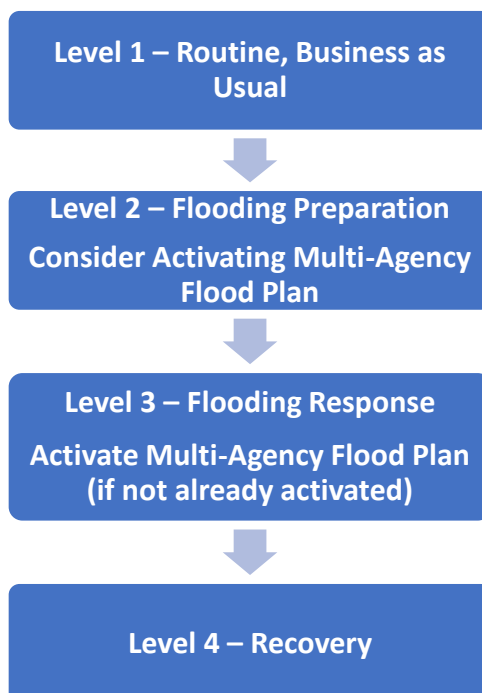
Level/Risk/Phase	Triggers	Outline of response expected
		<ul style="list-style-type: none"> • Promotion of flood risk within the borough and advice to residents • Watching brief over forecasts, Met Office weather warnings, Environment Agency flood alerts and warnings and the Flood Forecasting Centres Flood Guidance Statements
<p>Level 2 – Flooding Preparation</p>	<ul style="list-style-type: none"> • Amber or Red London Flood Guidance Statement is issued (medium or high risk, 1 or 2 day lead time) • The Met Office have issued a medium or high impact RAIN Warning or Alert for the London area, followed by a message from the Met Office Advisor (Civil Contingencies), confirming the likelihood of disruption • The Environment Agency issues a Flood Alert for a river in Tower Hamlets • Problems have been identified with a flood defence highlighting the possibility of a failure • Problems have been identified with a reservoir upstream of Tower Hamlets that could impact the borough but has not yet failed or started to fail 	<ul style="list-style-type: none"> • Communicate internally – give key operatives a heads up, start placing staff on standby or assess current staffing levels • Check your Business Continuity plan to ensure your organisation’s critical business activities can still be met, if flooding were to occur • Prepare for potential media interest. Allocate a media spokesperson and confirm key messages • Have ready to go public messages on how to prepare for flooding, how to stay safe during flooding and who to contact during flooding etc • Check your emergency control centre is in a state of readiness • Check stocks of equipment and supplies • Speak to the Met Office or the Environment Agency if flood forecasting information needs clarification • Keep a watching brief on the situation and up to date with your emails • Advise the public to call Floodline on 0345 988 1188 for up-to-date flooding information (be sure to have the quick dial numbers ready)

Level/Risk/Phase	Triggers	Outline of response expected
	<p>WHEN ONE OR MORE OF THE TRIGGERS HAVE BEEN MET SEE OUTLINE RESPONSE EXPECTED</p>	<ul style="list-style-type: none"> • Report any flooding within your area to your local Environment Agency office. • Start communicating internally • Consider escalation and activating Multi-Agency Flood Plan or de-escalating back to Level 1
<p>Level 3 – Flooding Response</p>	<ul style="list-style-type: none"> • London region is coloured amber or red (medium or high risk) on the Flood Guidance Statement (less than 1 day lead time) • The Environment Agency issues a Flood Warning or Severe Flood Warning for a river in Tower Hamlets • The Met Office issues an Amber or Red RAIN Warning for the London area • Any organisation becomes aware of disruption to transport in Tower Hamlets due to flooding • Any organisation receives reports of flooding • A flood defence structure has been breached or has failed • A reservoir either upstream of Tower Hamlets is failing that could impact the borough 	<ul style="list-style-type: none"> • Activate Multi-Agency Flood Plan • Activate generic emergency response plans and/or Business Continuity plans • Prepare for transport and staff disruption • Prepare for a possible increase in calls from the general public • Open emergency control centres where appropriate • Check the situation of critical sites and infrastructure in flood risk areas • Agree local media messages - a flooding situation can change rapidly • Advise the public to call Floodline on 0345 988 1188 for up-to-date flooding information (be sure to have the quick dial numbers ready) • Report any flooding within your area to your local Environment Agency office. • Keeping a watching brief of weather and flood forecasts • Communicate externally (fellow category 1 and 2 responders) • Consider escalation and notifying London Resilience Group to implement Strategic Coordination of the incident • Consider activating Recovery Plan. Inform the most impacted council

Level/Risk/Phase	Triggers	Outline of response expected
	WHEN ONE OR MORE OF THE TRIGGERS HAVE BEEN MET SEE OUTLINE RESPONSE EXPECTED	service Director prepare to appoint a Head of Service as “Silver”
Level 4 – Recovery	<ul style="list-style-type: none"> Warnings no longer in place 	<ul style="list-style-type: none"> Activate the Recovery Plan. Coordinate clean-up effort. Consider timescale needed Coordinate clean-up effort Prepare for multi-agency debrief Capture lessons identified Assign actions

COMMAND AND CONTROL actions to <u>consider</u> :
<ul style="list-style-type: none"> Calling a TCG (Silver) meeting or teleconference. Consider the need for an SCG (Gold) meeting or teleconference to be established at the onset
<ul style="list-style-type: none"> If appropriate a battle rhythm should be established

Diagram 1: Showing trigger levels and activation.



There might a period of inactivity between the preparation phase above and the response phase. This could range from hours to days depending on the detail and confidence of the weather/flood forecasts.

There will be occasions when preparation phase (stage 2) is activated but response phase (stage 3) is not necessary. Activating the preparation phase ensures responders stay ahead of the incident, instead of trying to catch up during the response phase.

PART 2: Tactical - Borough Information

The Borough is bounded to the South by the River Thames and to the East by the River Lea, See Appendix A1. Whilst the tidal Thames poses a potential risk of flooding to properties within the Borough, see Appendix A2, the Thames Tidal Defences (TTD) provide substantial protection from this source, up to the 1 in 1000-year event (0.1% AEP). See the table below for definition of risk and Appendix A3 for location of defences.

This protection is effective provided the Thames Barrier is operated to safeguard against storm surges from the North Sea and that there is sufficient storage behind the barrier to accommodate the River Thames when it is shut during extreme fluvial events at high tides. The River Lea is also defended; however, small areas of the Borough are at actual risk of fluvial flooding from this source, for events above a 1 in 50-year return period (2% AEP), see Appendix A4.

2.1 Flood Risk and Impacts

A potential risk of flooding from other (non-river related) sources exists throughout the Borough, including sewer surcharge and surface water flooding as a result of heavy rainfall (see Appendix A7). This is known to be an issue within the borough in particular, the Isle of Dogs. Areas of the Borough are also thought to be susceptible to elevated groundwater levels, which may additionally interact with and exacerbate other sources of flood risk. It is expected that changing climate patterns will have a substantial impact on the level of flood risk from all sources within the Borough.

The Environment Agency has undertaken national mapping of areas at risk of flooding. Three flood zones have been defined and are detailed in Table 2 below.

Table 2: Flood zones

Flood Zone	Risk of Flooding	Definition
1	Little or no risk	At risk from flood event greater than the 1 in 1000-year event (greater than 0.1% annual probability of flooding each year)
2	Moderate	At risk from a tidal flood event between the 1 in 200 and 1 in 1000-year event (between 0.5% and 0.1% annual probability of flooding each year), or a fluvial flood event between the 1 in 100 and 1 in 1000-year event (between 1% and 0.1% Annual probability of flooding each year).
3	High	At risk from a tidal flood event less than or equal to the 1 in 200-year event (greater than 0.5% annual probability of flooding each year), or a fluvial flood event less than or equal to the 1 in 100-year event (greater than 1% annual probability of flooding each year).

Both the River Thames and the river Lea are main rivers, as defined by the Environment Agency.

The River Lea originates near Luton, flowing through Bedfordshire, Hertfordshire, and London in a south easterly direction, draining a catchment area of approximately 1400km². It is a part of the Bow Back River System and has a connection to a network of canals which run through the Borough. These include the below watercourses which are artificial and managed by the Canal and Rivers Trust.

- The Limehouse Cut and the River Lea Navigation Canal, which are designated as Main Rivers
- The Grand Union Canal, which flows from the London Borough of Hackney and bisects the Borough from north to south, discharging in the Limehouse Basin
- Hertford Union Canal, which flows in an east-westerly direction between the River Lea and the Grand Union Canal

The River Network within the Borough is illustrated in Appendix A1.

2.2 Multi-agency Response

2.2.1 Roles and responsibilities

The following information outlines the responsibilities of some key partners involved in the local borough response. All partners should also have internal procedures alongside the pan-London strategic procedures to ensure a suitable response.

Table 3: Roles and responsibilities

Organisation	Emergency Response Phase	Recovery Phase
<p>Met Police</p>	<p>In the event of the agreed procedures for warning and informing communities at risk not being effective, then, where practicable, assistance will be given. The Met Police will:</p> <ul style="list-style-type: none"> • Support other Emergency Response Organisations • Advise property protection issues • Open/ run a Survivor Reception Centre • Identify those people most at risk • Coordinate evacuation • Advise traffic management scheme and incident cordons. 	<ul style="list-style-type: none"> • Support Local authority with recovery of the community • Attend a multi-agency debrief
<p>London Fire Brigade</p>	<p>The LFB will provide assistance with rescue from flooded environments, pumping operations, flood mitigation, warning and informing communities at risk. They hold a range of flood capabilities including rescue boats, pumps including high volume pumping and specialist flood mitigation equipment. The LFB will also:</p> <ul style="list-style-type: none"> • Identify/declare a major incident • Assist with breach mitigation actions • Assist with evacuation 	<ul style="list-style-type: none"> • Support Local authority with recovery of the community • Debrief and evaluate LFB response to the flooding incident and attend multi-agency debrief

Organisation	Emergency Response Phase	Recovery Phase
	<ul style="list-style-type: none"> • Rescue of persons trapped in properties/ vehicles • Provision of high-volume pumps, boats and flotation devices • Communicate with the public via media channels 	
<p>London Ambulance Service</p>	<p>The LAS may assist with the evacuation of vulnerable persons and supporting the local authority on a clinical need's basis. Whilst the LAS does not possess any boats, they have a number of water rescue sleds and staff trained to work on boats and in water environment. The LAS will also:</p> <ul style="list-style-type: none"> • Carry out waterborne rescue via LAS HART (alongside LFB, RNLI and Marine Police Unit) • Set up rendezvous and casualty landing points • Identify/declare a major incident • Act as gateway to wider health partners • Consider implementation of LAS Capacity Plan (Surge) 	<ul style="list-style-type: none"> • Ongoing identifying best practices – producing final report • Organising LAS debrief • Attending Multi-agency debriefs
<p>Local Authorities</p>	<p>Local Authorities lead for local flood risks as defined by the Flood and Water Management Act. These include surface water and groundwater.</p> <p>Operating, monitoring, and inspecting Local Authority owned assets within watercourses, including ensuring trash screens are clear to minimise the risk of potential blockages.</p>	

Organisation	Emergency Response Phase	Recovery Phase
	<p>Provision of general advice and information in support of the Environment Agency to the public on flood prevention measures and environmental health issues, including encouraging those at potential risk of flooding to sign up to the Environment Agency’s flood alert scheme.</p> <p>Local authorities may also provide further assistance to the public if resources permit, e.g., drying-out facilities or potential provision of flooding mitigation measures.</p> <p>Co-ordination of the recovery phase following a flooding incident.</p>	
<p>Environment Agency</p>	<ul style="list-style-type: none"> • The EA will lead the response to fluvial (river) and tidal (Thames) flooding. If resources allow the EA will support local authorities and others in the response to surface water, ground water and other types flooding as well • Provide a flood warning service for fluvial, tidal and in some areas ground water flooding • Operating, monitoring and inspecting flood defences, including ensuring trash screens on main rivers are clear to minimise blockages • Helping partners to pump flood water away from flooded areas where resources allow. • Alongside the Met Office helps to escalate the partnership multi-agency preparation and response 	<ul style="list-style-type: none"> • Collect data, record and report • Inspect flood defences • Support flooded communities by attending ‘flood surgeries’ • Carry out post-flood surveys with affected communities and professional partners

Organisation	Emergency Response Phase	Recovery Phase
	<p>by triggering teleconferences on certain forecasts</p> <ul style="list-style-type: none"> • Have the strategic overview for all types of flood risk from rivers, sea, groundwater, reservoirs and surface water. Their priority is to ensure we respond to and recover from river and sea flooding. However, they will often support other partners, especially the lead local flood authorities (London Boroughs) who lead on response to surface water and groundwater flooding • Attend and provide advice at multi-agency Tactical and Strategic Coordinating Groups • Send support officers out to impacted communities to record data and talk to members of the public • Assist emergency services and London Boroughs where resources allow 	
<p>Transport for London</p>	<ul style="list-style-type: none"> • Undertaking the management and operational continuity of transport infrastructure such as roads and rail and the provision of public transport. • The provision of engineering and plant equipment at the request of the pan London Gold Coordinating Group or affected local authority Golds including the provision/filling or placing of sandbags where danger to life or infrastructure is foreseen. 	<ul style="list-style-type: none"> • Attend Multi-agency debriefs

Organisation	Emergency Response Phase	Recovery Phase
Canary Wharf Group	<ul style="list-style-type: none"> • Warn and inform all Estate residents via Canary Wharf messaging system • Activate • Manage phased evacuation of the Estate-wide evacuation plan • 	<ul style="list-style-type: none"> • Attend Multi-agency debriefs • Continued engagement with Evacuated Estate organisations and residents
Inter Faith Forum	<ul style="list-style-type: none"> • Provide advice and guidance on community cohesion • Warn and inform messaging for faith groups • Provide temporary shelter to displaced residents • Providing counselling and promoting wellbeing to local communities 	<ul style="list-style-type: none"> • Continued community engagement • Attend Multi-agency debriefs

All organisations:

- Assess the severity for their own organisation and decide whether response should be escalated to Level 4
- Activate emergency response plans and/or BCM plans where appropriate
- Communicate any concerns or issues over critical infrastructure early so London Fire Brigade (LFB) or Environment Agency (EA) can assess whether they can help by deploying temporary barrier equipment
- Scale up. Open control centres / incident rooms where appropriate to provide coordination for your organisation and a central point of contact
- Check the status of key sites and infrastructure that are known to be in flood risk areas
- Media and public messages need to be agreed and circulated on a regular basis, coordinated with Tower Hamlets Communications Team channelling the London Resilience Communication Group (LRCG) messaging. A flooding situation can change rapidly
- Report all details of any flooded properties or infrastructure and pass them to the Environment Agency and relevant London Borough or London Local Authority Coordination Centre (LLACC) (if open) on a regular basis

2.3 Historic Flooding

Information on known and recorded historic flooding events within the Tower Hamlets is shown in Appendix A5 and broadly summarised in the sections below. However historical information of flooding is limited and should not be interpreted as indicating a low probability of future flooding. Conversely, some of the recorded historical events might have been as a result of issues that have now been addressed and, therefore, an indication of historical flooding affecting a particular location does not necessarily mean that the locality affected remains prone to flooding.

2.3.1 Historic flooding from tidal Thames

Severe flooding affected central London in 1928 when the defences along the River Thames were breached, causing inundation of much of the Isle of Dogs and the other areas of the Thames frontage.

A further notable historic tidal flooding event occurred in 1953, when a storm surge impacted the east coast of the UK, causing high tidal levels to breach flood defences and resulting in extensive flooding across London and the Thames Estuary. Within Tower Hamlets, the event predominantly impacted the confluence of the River Lea and River Thames, causing flooding in the Docklands area.

2.3.2 Historic flooding from rivers

The Borough was severely impacted by flooding in March 1947, when a combination of rainfall and snowmelt caused a rise in water levels within the River Lea and its tributaries. The subsequent flooding inundated areas across the East India Docks Basin, South Bromley and Canning Town. Following this event, defences were implemented along the Lower Lea. Since this time, flooding has been largely confined to the upper catchment and has not have a significant impact on the Borough.

2.4 Flood Risk from all Sources

2.4.1 Flood definitions

- **Fluvial flooding** - When the flow of a watercourse exceeds the capacity of the channel whether defended or otherwise, causing an overtopping or breach.
- **Surface water flooding** - The result of intense rainfall (usually but not exclusively after a summer thunderstorm), which exceeds the capacity of the in-place drainage system.
- **Groundwater flooding** - When the water table rises to ground level.
- **Reservoir flooding** - When water which is usually held by a reservoir, is released.
- **Sewer flooding** - When foul water leaks from the sewer system.

Table 4: BRF flood risk and impacts

Source/ Risk I. D	Risk Register Rating	People & Properties	People & Properties	People & Properties	Infrastructure
		Properties at risk	Known vulnerable	Potential vulnerable	
R83 – Surface Water Flooding	Very High	Basement flats borough - wide	N/A	N/A	N/A
L21 – Fluvial Flooding	Very High	Residential & commercial basements Major Road Networks	N/A	N/A	Limehouse Link Blackwall/ Rotherhithe Tunnels Greenwich Foot Tunnel
L19 – Groundwater Flooding	High	N/A	N/A	N/A	N/A
HL19 – Coastal & Tidal Flooding	High	N/A	N/A	N/A	N/A
R93 – Storms & Gales	Medium	Borough-wide	N/A	Vulnerable impacted by longer hospital response times	Overcrowded hospitals

2.4.2 Tidal flood risk

The primary flood risk mechanisms associated with the Thames are:

- Daily tidal fluctuations
- Surge Tides
- Fluvial mechanisms due to prolonged rainfall within the upper reaches of the Thames catchment during times of high tide cycle

The greatest overall flood risk from the Thames occurs when tidal surges coincide with particularly high tide levels and/or fluvial flooding in the upper reaches of the catchment. See the section below on Tidal Defences for more information regarding risk from the Thames.

2.4.3 Tidal flood defences

The risk of flooding within the borough from both tidal and fluvial is shown in Appendix A2, this map uses the flood zones referred to in Table 2 above (section 2.1). Flood zones are shown as undefended, so do not take into account the influence of defences, such as the

Thames barrier and walls. Therefore, the actual risk is lower than shown, under normal circumstances. The Thames Tidal Defence system, including the Thames Barrier and Thames River Walls provide the Borough with a significant standard of protection against tidal flooding, up to the 1 in 1000-year event (0.1% AEP). Areas protected by defences are shown in Appendix A3.

2.4.4 Breaching of tidal flood defences

Whilst defences provide a significant standard of protection to the Borough, it is essential to appreciate that they are engineered structures which can only protect to a certain point, may malfunction and have a finite design life.

There will always therefore be a residual risk of flooding from this source, associated with overtopping (during a larger event than defences have been planned for) or breach of the defences, due to structural or operational failure. Modelling has been undertaken to determine the extent of flooding in key locations during the Maximum Likely Water Level (MLWL) the outputs can be seen in Appendix A6.

2.4.5 Flood risk from rivers

The River Lea system includes the River Lea Navigation Channel and is also hydraulically connected to the Limehouse Cut. The River Lea is additionally tidally influenced along much of its extent within Tower Hamlets.

Aside from the River Lea system, there are no other watercourses within the Borough known to present a risk of fluvial flooding. It should be noted that limited information is available on the level of flood risk associated with any ordinary watercourses (canals). However, there is no known flood history associated with these sources, and the perceived risk is therefore considered to be low.

The risk of flooding from Rivers and the Sea across the Borough is shown in Appendix A2.

This map depicts the main areas at risk of flooding from the River Lea, according to the Flood Zones, as located in the north-eastern corner of the Borough, close to the border with Hackney and Newham. This is due to overtopping of the banks of the River Lea Navigation Canal. The highest risk of flooding is shown in Appendix A4.

2.5 Flooding from other Sources

2.5.1 Flooding from surface water

Flooding from surface water occurs when high intensity rainfall generates runoff which flows over the surface of the ground and ponds in low lying areas. Appendix A7 shows the risk of this type of flooding in the area.

2.5.2 Flooding from canals

There are a number of canals present within Tower Hamlets, which are owned and operated by the Canal and River Trust, including Regents / Grand Union Canal, Hertford Union Canal, Limehouse Cut and the River Lea Navigation Canal.

Whilst the Limehouse Cut and Lea Navigation are owned and maintained by the Canal and River Trust; they are also classified as Main Rivers and hydraulically influenced by the River Lea system.

There are many docks and basins present across Tower Hamlets. These are predominately connected to the River Thames by lock gates (listed below) these structures are all maintained by the Canal and River Trust. It is understood that there is a very low risk of flooding associated with these structures, provided active management and regular maintenance is undertaken. They are listed in the plan should any issues arise from them.

- St Katherine Docks, Wapping
- Shadwell Basin, Shadwell
- Limehouse Basin, Limehouse
- West India Docks, Isle of Dogs
- Poplar Dock and Blackwall Basin, Isle of Dogs
- Millwall Docks (outer and inner), Isle of Dogs
- East India Docks, Blackwall

2.5.3 Reservoirs

There are no reservoirs located within Tower Hamlets; however, areas of the borough are shown to be within the extent of flooding anticipated by breach of the Willing Girling, King George V and Lockwood Reservoirs, to the North of the Borough (LB Enfield). Areas at risk from reservoir flooding are in Appendix A8. Further details about the above reservoirs are contained in the [Strategic Reservoir Response Framework - King George V and William Girling Reservoir](#) which is available on Resilience Direct.

Tower Hamlets will receive a Reservoir Emergency Alert Notification in the following circumstances:

- Level 2 Reservoir Event - a limited and contained event, possible escalation
- Level 3 Reservoir Event - unstable/severe or uncontained event – dam breach possible
- Level 4 Reservoir Event - emergency dam breach imminent or dam has failed

Although the direct impacts of a level 2 to 4 Reservoir Event are likely to be limited within Tower Hamlets, there will be numerous secondary impacts to transport, the road network and local and neighbouring communities. A requirement for mutual aid and temporary re-housing of resident from the higher risk areas nearer to the reservoirs is highly likely. In this instance, there may be a need to invoke the Borough Major Emergency Plans [Part 1](#) and [Part 2](#) as well as setting up a Borough Emergency Control Centre (BECC).

2.6 Response Equipment

Resources and support can be requested from across the London Resilience Partnership through the strategic coordination structures.

Table 5: Resources and support

Resource / Support	Provider(s)
Temporary barriers / demountable	EA / LFB
Pumping equipment	EA / LFB / Contractors
Military aid	Military
Mutual aid (equipment or people)	Any agency providing mutual aid
Sandbags/Gel bags	LAs / LFB / EA
Boats	LFB / LSR
Flood Rescue Team assets	HM Coastguard

Note: Availability of the above resources is not guaranteed and is dependent numerous factors. Should it be required, the London Resilience Group can access the Defra Flood Rescue National Asset Register which is a comprehensive listing of all flood rescue assets who maintain availability for national deployment.

2.7 Communication and Information Exchange

Requests from and information to the news and social media is the responsibility of the Tower Hamlets Communications Directorate in line with the London Command, Control and Information Sharing Protocols and working closely with the Civil Protection Unit who will aim to provide the most up-to date information to ensure adequate situational awareness. It is important that all Category 1 partners' Communications/Press teams deliver a single consistent message to the public and communicate effectively to do this.

During an incident, Tower Hamlets have a legal duty to communicate with or “warn & inform” residents who will be in various states of distress. Communication will be via numerous channels including the Environment Agency’s resident engagement team and their floodline service, our own external comms team, the Borough Resilience Forum (BRF) whose membership includes the inter-Faith Forum, voluntary services and Canary Wharf Group with direct links into the community.

Tower Hamlets operate a 24/7 Comms Duty Manager whose rota details and phone number are available to the Civil Protection Unit and the Duty Civil Protection Coordinator should a flood event occur.

2.7.1 Floodline

The Environment Agency has a 24-hour telephone information service called Floodline.

Table 6: Environment Agency flood services

Phone Line	0345 988 1188 <ul style="list-style-type: none"> ● Press option 1 ● Enter the quick dial number (for Tower Hamlets quick dial numbers see appendix B)
Website	https://fwd.environment-agency.gov.uk/app/olr/home
Check For Flooding in England	https://check-for-flooding.service.gov.uk/
Live flood warning map	Environment Agency - Live Flood Warning Map

Though primarily for use by members of the public, to find out details of the flood warnings in force, to report flooding or to request help on what to do before, during and after a flood, Floodline may also be used by responding agencies to receive updated information and to become aware of the information being provided to members of the public.

Whenever any Flood Alerts, Flood Warnings or Severe Flood Warnings are in force, information which is specific to each flood warning area is recorded to. This information is updated at least every 8 hours, but more frequently if a situation changes rapidly. (The same information is also uploaded to the Environment Agency website at the same time).

For easy access to the messages on Floodline that relate to a specific area, a system of 'quick dial numbers' is used. This enables a user to type in their 'local' code to take them straight to the information about their local river, as opposed to going through a menu system.

Information on river levels (and sea levels where required) can be found on the EA Flood webpage's (Professional Partners should contact EA via provided contact numbers for more detail).

2.7.2 Faith / minority groups

Where appropriate, faith groups and minority groups may be asked to assist with communications to their communities. This will enable appropriate religious and ethnic community leaders to ensure messages are passed to the community and to ensure customs and beliefs are respected. The Council have contacts for local faith / community groups with a dedicated team that oversees the working relationship between the Council and the Inter-Faith Forum. The Inter-Faith Forum are also members of the Borough Resilience Forum who meet quarterly with oversight of resilience in the borough and are a part of the consultation process for this plan.

2.7.3 Businesses

The council regularly engages with local businesses via services such as the Communications Directorate and Community Safety newsletters and meetings such as the Borough Resilience Forum. We will liaise with local business owners, in the preparation for, response to and recovery from a flood event. Further information on steps businesses can take to make themselves more resilient to flooding, can be found here: [EA - A guide to preparing your business for flooding](#).

2.8 Recovery

During the recovery phase of a flood event, the Council will often take the lead role in overseeing the return to normality or business as usual. For Tower Hamlets, the Director from the most heavily impacted service will usually act as the Gold Recovery Lead. Guidance on how to manage the recovery process is provided in the [Borough Major Incident Plan Part 5: Recovery Plan](#).

For large scale pan-London incidents, reference can be made to the [London Recovery Coordination Framework](#) which scales up the processes found in the Borough plan.

It may be the case that Borough Major Incident Plan Part 2: [Emergency Community Care Plan](#) has already been invoked to provide humanitarian assistance to residents who may have been displaced as a result of flooding. Refer to Emergency Community Care Plan for greater details on Rest Centres, Resources and capabilities of the Council to support the humanitarian needs of its residents.

2.8.1 Mutual aid

In certain circumstances, the Council may not have sufficient resources to adequately manage an incident. In such instances, the following procedures for mutual aid may be invoked. Further details can be found in the [London Local Authorities Mutual Aid Guidance](#), available on Resilience Direct

Local or sub-regional requests for mutual aid

- Duty CPC (or Council Silver) and Director on Call (or Council Gold) agree that mutual aid is required
- Duty CPC (or their delegate) contacts neighbouring boroughs for support
- Neighbouring boroughs either confirm or deny their ability to provide support
- A mutual aid request form and risk assessment is completed by Hackney and sent to those who are able to assist. **Note:** if the London Local Authority Coordination Centre (LLACC) is stood up LRalerts@London-Fire.gov.uk should be informed of the request

London Local Authority (LLA) mutual aid requests

Should local options be exhausted/ineffective, London Local Authority (LLA) mutual aid requests should be made to London Resilience Group (LRG)

- Duty CPC (or Council Silver) and Director on Call (or Council Gold) agree that mutual aid is required
- Duty CPC (or their delegate) contact LRG (0208 555 1200 ext.88111 request LRG to be paged and dictate a message)
- Complete the mutual aid request form/risk assessment and send to LRalerts@London-Fire.gov.uk and llacclink@london-fire.gov.uk (if LLACC established)

2.8.2 Evacuation and sheltering

In some emergencies there may be a need to evacuate occupiers and other members of the public from a cordon area for their own safety. These evacuees may need temporary accommodation and feeding. If a small number of residents are displaced, it would be

preferable for them to be temporarily accommodated in local hotels. See [Borough Major Emergency Plan Part 2 Appendix 1](#) (BMEP Pt 2) for hotel arrangements within the London Borough of Tower Hamlets.

Step by step guides to booking with Premier Inn and Travelodge are saved in the Resilience Teams Repository.

Under certain circumstances (dependent on the number of persons affected & duration of incident) it may be necessary to use Emergency Centre(s) arrangements to support those affected by an emergency, as outlined within [Borough Major Incident Plan Part 2: Emergency Community Care Plan](#).

2.8.3 National government

Communication with Central Government functions will normally occur when the incident is of a severity that intervention or oversight might be required. In most of these types of flood events a Borough Emergency Control Centre (BECC) will be stood up to manage the incident. Communications with the government will be via a command structure that includes a London Local Authority Coordination Centre where the LRG will act as secretariat feeding situational updates into the Strategic Coordination Group (SCG).

For further information see section 3.5 below and more detailed information in the [Strategic Coordination Protocol](#).

2.8.4 Public Communications

The Environment Agency has a 24hr public information system, to which the public should be directed for advice and information about flooding events; Flood Line: Telephone: 0345 12 988 1188, Type talk: 0345 602 6340 (for the hard of hearing).

The Environment Agency has the ability to send out emergency alert notifications to the majority of mobile phones within the area of a Severe Flood Warning only.

An Emergency Alert is a 'cell broadcast system' that targets all 4G & 5G devices within a target area for a set duration of time. This means that as someone transits through an area with an active alert, they will receive the warning, with no need to register or sign up.

An Emergency Alert will only be sent out by the Environment Agency for a Severe Flood Warning. The Pan London Strategic Coordination Group will be consulted prior to the use of the system. However, the EA can send out a no notice alert should a sudden no notice situation arise, where delays may cost lives.

Emergency Alerts is a warning tool that is to be used in conjunction with other methods (social media, loud hailers, door knocking, text & email alerts etc).

PART 3: Strategic - LRF Wide Information

Where flood events occur across multiple London boroughs or London wide, there is a need for a pan-London strategic response. The [Strategic Flood Response Framework](#) provides strategic direction to London responders, before, during and after a significant flooding incident in London.

The Framework provides strategic direction in response to a flood event, causing or with the potential to cause significant and severe impacts. This includes flooding from rivers (fluvial), the sea (tidal), surface water, groundwater, and reservoirs. This may be severe flooding in one or more locations or a greater number of less severe flooding events in multiple locations in London.

The Framework trigger/activation levels differ slightly from this plan as Level 4 of the strategic plan escalates the flood event by invoking a pan-London Strategic Coordination Group (SCG) to oversee the event, whereas for this local plan, Level 4 is the recovery phase.

During a smaller scale flood event (Level 3) the Local Authority or Police may lead dependant on the impacts and which organisation has the primary response actions to manage the impacts.

The (Strategic) response phase of a widespread pan-London flood event (Level 4) would be led by the Police. Recovery stage is led by the Local Authority

3.1 Flood Risk and Impacts

For detailed information on the flood risk and impact London-wide, please refer to the [Strategic Flood Response Framework](#).

3.2 Multi-agency Response

3.2.1 Roles and responsibilities

The following information outlines the responsibilities of some key partners involved in the response. All partners should also have internal procedures alongside the pan-London strategic procedures to ensure a suitable response.

Table 7: Roles and responsibilities

Organisation	Roles & responsibilities
Met Police	<p>In the event of the agreed procedures for warning and informing communities at risk not being effective, then, where practicable, assistance will be given.</p>
London Fire Brigade	<p>The LFB will provide assistance with rescue from flooded environments, pumping operations, flood mitigation, warning and informing communities at risk.</p> <p>The LFB hold a range of flood capabilities including rescue boats, pumps including high volume pumping and specialist flood mitigation equipment.</p>
London Ambulance Service	<p>The LAS may assist with the evacuation of vulnerable persons and supporting the local authority on a clinical needs basis. Whilst the LAS does not possess any boats, they have a number of water rescue sleds and staff trained to work on boats and in water environment.</p>
Local Authorities	<p>Local Authorities lead for local flood risks as defined by the Flood and Water Management Act. These include surface water and groundwater.</p> <p>Operating, monitoring, and inspecting Local Authority owned assets within watercourses, including ensuring trash screens are clear to minimise the risk of potential blockages.</p> <p>Provision of general advice and information in support of the Environment Agency to the public on flood prevention measures and environmental health issues, including encouraging those at potential risk of flooding to sign up to the Environment Agency's flood alert scheme.</p> <p>Local authorities may also provide further assistance to the public if resources permit, e.g., drying-out facilities or potential provision of flooding mitigation measures.</p> <p>Co-ordination of the recovery phase following a flooding incident.</p>

Organisation	Roles & responsibilities
<p>Environment Agency</p>	<p>The EA will lead the response to fluvial (river) and tidal (Thames) flooding. If resources allow the EA will support local authorities and others in the response to surface water, ground water and other types flooding as well.</p> <p>Provide a flood warning service for fluvial, tidal and in some areas ground water flooding.</p> <p>Operating, monitoring and inspecting flood defences, including ensuring trash screens on main rivers are clear to minimise blockages.</p> <p>Helping partners to pump flood water away from flooded areas where resources allow.</p> <p>Alongside the Met Office helps to escalate the partnership multi-agency preparation and response by triggering teleconferences on certain forecasts.</p> <p>Have the strategic overview for all types of flood risk from rivers, sea, groundwater, reservoirs and surface water. Their priority is to ensure we respond to and recover from river and sea flooding. However, they will often support other partners, especially the lead local flood authorities (London Boroughs) who lead on response to surface water and groundwater flooding.</p> <p>Response phase:</p> <ul style="list-style-type: none"> • Provide a flood warning service for rivers and the sea, and giving advice to help people to protect themselves in time of flood • Operate, monitor and maintain flood defence assets • Attend and provide advice at multi-agency Tactical and Strategic Coordinating Groups • Send support officers out to impacted communities to record data and talk to members of the public • Assist emergency services and London Boroughs where resources allow

Organisation	Roles & responsibilities
	<p>Recovery phase:</p> <ul style="list-style-type: none"> • Collect data, record and report • Inspect flood defences • Support flooded communities by attending 'flood surgeries' • Carry out post-flood surveys with affected communities and professional partners
<p>Transport for London</p>	<p>Undertaking the management and operational continuity of transport infrastructure such as roads and rail and the provision of public transport.</p> <p>The provision of engineering and plant equipment at the request of the pan London Gold Coordinating Group or affected local authority Golds including the provision/filling or placing of sandbags where danger to life or infrastructure is foreseen.</p>

All organisations:

- Assess the severity for their own organisation and decide whether response should be escalated to Level 4 (strategic flood response)
- Activate emergency response plans and/or BCM plans where appropriate
- Communicate any concerns or issues over critical infrastructure early so London Fire Brigade (LFB) or Environment Agency (EA) can assess whether they can help by deploying temporary barrier equipment
- Scale up. Open control centres / incident rooms where appropriate to provide coordination for your organisation and a central point of contact
- Check the status of key sites and infrastructure that are known to be in flood risk areas
- Media and public messages need to be agreed and circulated on a regular basis, coordinated via the London Resilience Communication Group (LRCG). A flooding situation can change rapidly
- Report all details of any flooded properties or infrastructure and pass them to the Environment Agency and relevant London Borough or London Local Authority Coordination Centre (LLACC) (if open) on a regular basis

3.2.2 Evacuation and sheltering

In the event that large numbers of residents require evacuation from their homes (beyond the scope of the local borough arrangements), the London Resilience Forum (LRF) have

appropriate plans that outline how it would be managed. See the [Mass Evacuation Framework](#), and the [Mass Shelter Framework](#).

3.3 Response Equipment

Resources and support can be requested from across the London Resilience Partnership through the strategic coordination structures.

Table 8: Resources and support

Resource / Support	Provider(s)
Temporary barriers / demountable	EA / LFB
Pumping equipment	EA / LFB / Contractors
Military aid	Military
Mutual aid (equipment or people)	Any agency providing mutual aid
Sandbags/Gel bags	LAs / LFB / EA
Boats	LFB / LSR
Flood Rescue Team assets	HM Coastguard

Note: Availability of the above resources is not guaranteed and is dependent numerous factors. Should it be required, the London Resilience Group can access the Defra Flood Rescue National Asset Register which is a comprehensive listing of all flood rescue assets who maintain availability for national deployment.

3.4 Communication and Information Exchange

During a Pan-London flood event, communications will be overseen by the London Resilience Communication Group (LRCG). This is a subgroup that sits within the Strategic Coordination Group. Their remit is:

- Communication and media strategy, including key messages and specific audiences (e.g., those impacted, and general messaging across partnership, public and business)
- Briefing on media coverage

Further information on the role of the LRCG can and how they fit into the Strategic Coordination Group can be found in the [Strategic Coordination Protocol](#).

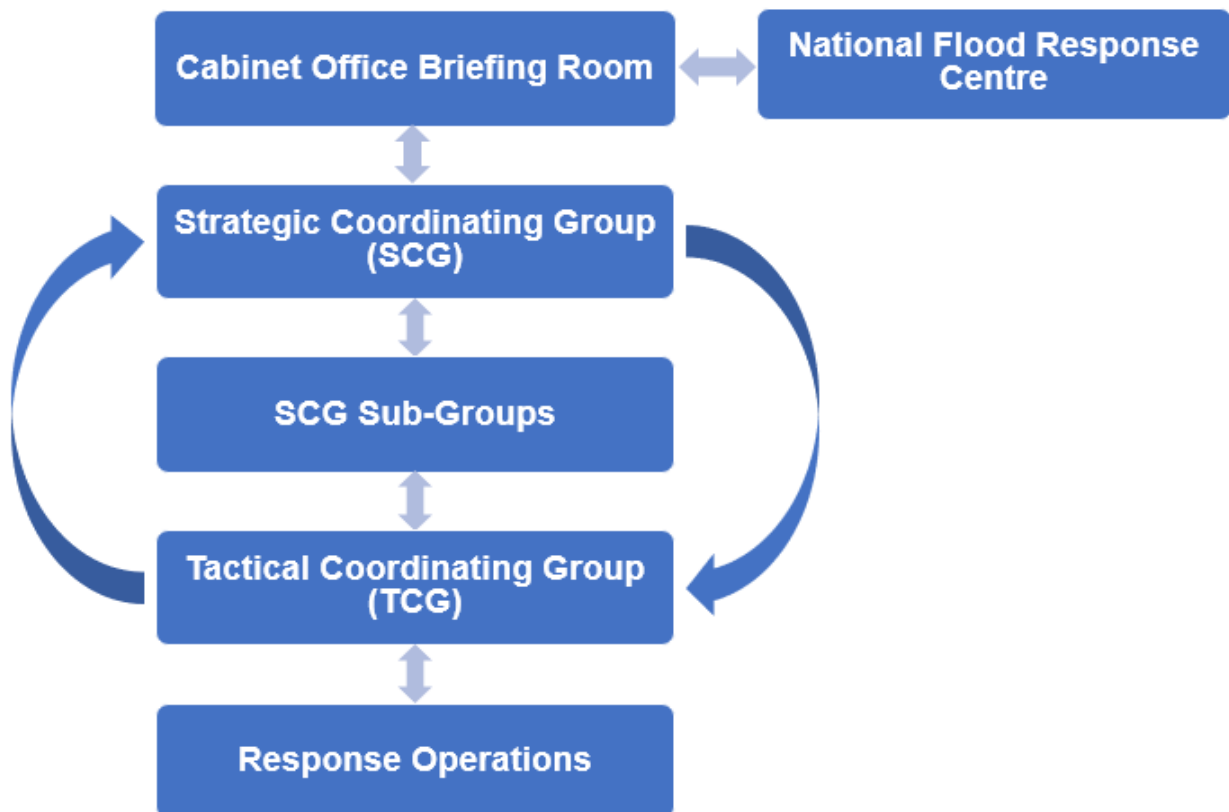
3.5 National Government

The below diagram represents the command structure of a fully escalated flooding incident.

The National Flood Response Centre is a specialist centre for Government Departments involved in responding to flooding to ensure they have joined up situational awareness to help advise COBR on the national situation. DEFRA as lead Government Department will decide in consultation with the Civil Contingencies Secretariat when to open the National Flood Response Centre.

Further information on role of Central Government during a flood event (or any other incident can be found in the [Strategic Coordination Protocol](#).

Diagram 2: showing the command structure of a fully escalated flooding incident.



3.6 Recovery

During the recovery phase of a flood event, the Council will often take the lead role in overseeing the return to normality or business as usual. For Tower Hamlets, the Director from the most heavily impacted service will usually act as the Gold Recovery Lead. Guidance on how to manage the recovery process is provided in the [Borough Major Incident Plan Part 5: Recovery Plan](#).

For large scale pan-London incidents, reference can be made to the [London Recovery Coordination Framework](#) which scales up the processes found in the Borough plan.

It may be the case that Borough Major Incident Plan Part 2: [Emergency Community Care Plan](#) has already been invoked to provide humanitarian assistance to residents who may have been displaced as a result of flooding. Refer to Part 2 for greater details on Rest Centres, Resources and capabilities of the Council to support the humanitarian needs of its residents.

Part 4: Plan maintenance and review

This section outlines the plans for the maintenance, review, training, and exercising of this plan. Overall maintenance arrangements will be overseen by the LBTH Civil Protection Unit.

4.1 Maintenance

The Tower Hamlets Multi-Agency Flood Plan will be reviewed on an annual basis (or sooner where there is a substantial change to any of its contents) by the Civil Protection Unit in conjunction with multi-agency input from the Borough Resilience Forum membership.

4.2 Revisions

MAFP Document control

Version	Date	Amended by	Summary of key revisions
Version 1.0	01/06/23	Jason Thomas	Full Review

MAFP Distribution

Primary Location	Distribution Organisations	Notification arrangements
LBTH Website: Flooding (towerhamlets.gov.uk)	<ul style="list-style-type: none"> LBTH Borough Resilience Forum 	Civil Protection Unit to notify via the Borough Resilience Forum

4.3 Assurance

This table lists the self-assurance arrangements for peer review. The Civil Protection Unit will consider peer reviews in line with any revisions and amendments above.

Multi Agency Flood Plan Assurance

Assurance	Detail	Last completed	Next scheduled	Sign-off details
BRF Assurance	BRF to review	April 2023 BRF	April 2024 BRF	Approved
Peer Review	EA to review	2017 Plan update	April 2023	TBC

4.4 Training and Exercising

This Table highlights the training and exercise regime that validates the Tower Hamlets MAFP. Plan exercising should be undertaken whenever there is a major revision, and at a minimum of every three years. Training should be a continual process, assessing and considering the needs of those who are party to the plan.

Standardised resilience training is readily available for internal staff throughout the year via the Tower Hamlets Learning Hub. Training for External Organisations that are members of the BRF can be arranged via the Civil Protection Unit.

MAFP Training & Exercising

Exercise / Training	Date	Type	Covering	Validation
Exercise Safer City	17/05/23	Pan-London Local Authority Command Post Exercise	MAFP, Strategic Leadership, BECC arrangements	Exercise Debrief, Exercise Report
Borough Resilience Forum	TBC	Tabletop Exercise	Multi-agency response arrangements	Exercise Report

Part 5: Aide Memoir

The following Aide Memoir provides a quick access summary of things for the Civil Protection Unit or the Duty Civil Protection Coordinator (CPC) to consider when responding

to a flood. It can be printed during an incident, or in the build up to a rising tide incident and treated as quick read version of the plan.

Note: The following is a list of commonly required actions, intended to act as an aide memoire for the Duty CPC, or the Duty Silver. Not all of the actions listed below will be relevant for all flooding scenarios.

Table 9: Aide Memoir

Considerations	Notes
METHANE – Utilise METHANE Mnemonic to aid situational awareness (Incident Log)	
Has a LALO/SHAO been deployed? Consider deploying multiple LALO’s for flood events affecting separate areas (i.e., surface water flood events) and SHAO’s for the likely large number of vulnerable residents that may be affected and hotel booking	
Has Gold been contacted/ a Gold Group been convened?	
Are the press/comms team being kept aware of the situation? Are relevant messages being distributed on internal and external council communication channels? i.e., re-tweet EA messages, urge motorists to drive with care and avoid flooded roads, show the work of Council teams	
Does a BECC need to be opened? If the flood event is so severe that it requires additional resources and or escalation, consider invoking BECC procedures.	
Have Waste Services been deployed to clear gullies to prevent surface water flooding? (Highways and Waste Services maintain a log of areas with ponding/flooding/drainage issues)	
Have you consulted with multi-agency partners on scene	
Do you need to speak with EP colleagues from neighbouring boroughs? (See Borough Profiles for contact information)	
Has a Major Incident been declared? Do you need to liaise with Council Gold about declaring one?	
Has sufficient and appropriate equipment been deployed? Do you require further equipment? Consider mutual aid request to neighbouring boroughs directly or via LRG for additional resources.	

Considerations	Notes
Have all relevant council services been notified and activated? E.g., Highways, Housing, EDT etc	
Have all staff attending the scene been sufficiently briefed? (inc. provision of appropriate equipment such as Airwave Radio)	
Have vulnerable people and infrastructure been identified? Ensure SHAO's have the correct information to carry out their checks	
Have Highways been deployed to implement any appropriate traffic management plans?	
Are people being evacuated? If so, does an Emergency Centre need to be established? Consider sending a request for Resilience Reserves via WhatsApp Group.	
Has ownership and management of affected residences been established? E.g., contact RPSH	
Have the Duty Comms Manager, Director on Call and Council Members been informed of the flood event?	
Has Flood data been requested by the LLACC if stood up?	
Has a shift pattern been established? (BECC, EC, Reserves)	
Do Business Continuity plans need to be invoked? Consider utilising BC&R for a company-wide all-informed message	
Are businesses being affected? Communicate with multi-agency partners via the BRF distribution in the Emergency Planning email contacts	
Do TFL need to be informed of any road closures? Has Transport system been affected? Consider the additional resources TfL may be able to provide	
Have you considered the Recovery Plan/process? Inform Gold about of consideration for Recovery Lead from the most impacted service e.g., Highways or Housing	

Part 6: Command Structure Considerations

The below table is a list of key considerations for operational, tactical, and strategic responders when responding to flooding. It is to be used as an early guide of possible key issues to put in place arrangements for. This table of considerations is not exhaustive.

Table 10: Command structure considerations

Operational responders	Tactical responders	Strategic responders
Initial Operational Response	Tactical command, control, and coordination structures	Strategy
Threat and hazard assessment	Vulnerable residents	Multi-agency consequence management
Rescue and recovery	Resource management	International/national media
Triage, treatment, and transportation	Contamination risks	Communications and press strategy
Environmental protection	Any impact on water supply and other utility services (local and London wide)	National reporting
Evacuation and shelter	Warning and Informing	Political sensitivities
Survivor Reception Centres, Rest Centres and Humanitarian Assistance (including access to services)	Logistics (i.e., of evacuation and shelter)	Impact on infrastructure
Decontamination of buildings and the environment	Impact on infrastructure	Vulnerable areas (schools, hospitals, basement dwellings etc.)
Contaminated waste disposal (used sandbags)	Vulnerable areas (schools, hospitals, basement dwellings etc.)	Critical National Infrastructure
Health and wellbeing (public and operational response staff)	Casualty bureau	Threats to strategically significant locations and events
Blocked streets and highways	Public Health impacts and advice	Recovery planning (e.g., needs of communities)
	Health and wellbeing (public and operational response staff)	Economic and financial implications
	Loss of access for emergency services	Legislation and policies
	Impact on Registered Providers of Social Housing (RPSH)	Public health impacts and advice
		Loss of River Thames navigation due to consecutive barrier closures (e.g., impacts to construction projects)
		VIP visits
		Pan London impacts

Part 7: Glossary of Terms and Abbreviations

Table 11: Glossary

BAU	Business As Usual
BECC	Borough Emergency Control Centre
BRC	British Red Cross
BRF	Borough Resilience Forum
CCA	Civil Contingencies Act (2004)
CPC	Civil Protection Coordinator
EC	Emergency Centre
EA	Environment Agency
FGS	Flood Guidance Statements
LA	Local Authority
LALO	Local Authority Liaison Officer
LAS	London Ambulance Service
LBTH	London Borough of Tower Hamlets
LFB	London Fire Brigade
LLACC	London Local Authority Control Centre
LLAG	London Local Authority Gold
LLFA	Lead Local Flood Authority
MAFP	Multi-Agency Flood Plan
MPS	Metropolitan Police Service
NSWWS	National Severe Weather Warning Service
PPE	Personalised Protection Equipment
RVP	Rendezvous Point
SCG	Strategic Coordination Group
SitRep	Situation Report
SHAO	Senior Humanitarian Assistance Officer
TCG	Tactical Coordination Group
UKHSA	United Kingdom Health Security Agency

Part 8: Appendices

For security and service confidentiality reasons, this section has been removed, to allow the document to be made available to the public or external organisations.

Council staff can find the appendices in the CPU Resilience Teams folders under Useful Contacts. If you are unable to access via this link, please contact the Civil Protection unit.

8.1 List of Appendices

- Appendix A1 Main rivers
- Appendix A2 flood zones
- Appendix A3 Areas benefitting from defences
- Appendix A4 Modelled flood outlines
- Appendix A5 Historic flooding
- Appendix A6 Modelled breach extents
- Appendix A7 Areas at risk from surface water flooding
- Appendix A8 Areas at risk from reservoir flooding
- Appendix A9 Flood warning areas
- Appendix B Flood Warning Area descriptions

End