Newham London

Local Flood Risk Management Strategy

October 2024

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Glossary of Abbreviations

Notation	Description
ATDA	Association of Thames Drainage Agencies
BRAVA	Baseline Risk and Vulnerability Assessment
CAF	Capacity Assessment Framework
CDA	Critical Drainage Area
CIRIA	Construction Industry Research and Information Association
CO2	Carbon Dioxide
DM	Development Management
DWMP	Drainage and Wastewater Management Plan
EA	Environment Agency
FCERM	Flood Risk and Coastal Erosion Management Programme
FRMP	Flood Risk Management Plan
FWMA 2010	Flood and Water Management Act 2010
GiA	Grant in Aid
GIS	Geographic Information System
GLA	Greater London Authority
LBN	London Borough of Newham
LFRMS	Local Flood Risk Management Strategy
LFRZ	Local Flood Risk Hazard Zone
LLDC	London Legacy Development Corporation
LLFA	Lead Local Flood Authority
LoDEG	London Drainage Engineering Group
LSSP	London Strategic SuDS Pilot
ODA	Options Development Appraisal
Ofwat	Water Services Regulatory Authority
PAR	Planning Application Requirements
PF	Partnership Funding
PFRA	Preliminary Flood Risk Assessment
RFCC	Regional Flood and Coastal Committee
RMA	Risk Management Authority
RoFfSW	Risk of Flooding from Surface Water
SAB	SuDS Approving Body
SFRA	Strategic Flood Risk Assessment
SuDS	Sustainable Urban Drainage System
SWDS	Surface Water Drainage Strategy
SWM	Surface Water Management
SWMP	Surface Water Management Plan
TE2100	Thames Estuary 2100
TfL	Transport for London
TW	Thames Water
uFMfSW	Updated Flood Map for Surface Water
UHI	Urban Heat Island

Foreword

Since being elected as Mayor of Newham, I have placed climate change at the heart of my administration's priorities. Our work has evolved from the Climate Emergency Action Plan through to the introduction of our ambitious Just Transition Plan. Newham's latest Local Flood Risk Management Strategy sits as part of our work to mitigate the impacts of climate change on our residents as part of our ambition of Building a Fairer Newham.

Flooding comes in a number of forms that have the ability to cause major disruption to services and social impacts if not robustly managed. This strategy sets out how the Council will fulfil its statutory role as Lead Local Flood Authority (LLFA) for Newham. It draws on the latest understanding of flooding that can occur in the borough, its effects, the unique circumstances affecting Newham being able to manage flood risk and how climate change is further increasing the likelihood and frequency of extreme rainfall and flooding events within Newham.

The strategy identifies the Risk Management Authorities and stakeholders responsible for flood management in Newham and outlines how partnership working between the Council and external partners can open up untapped funding opportunities to introduce SuDS (Sustainable Urban Drainage Systems), raingardens and other mitigations to assist Newham as LLFA in managing and minimising the impact of flooding in the borough.

The Strategy sets out seven key objectives to minimise the impact of flood risk in Newham, and the measures required to fulfil those objectives. These objectives will enable Newham to deliver a more resilient and secure future for its residents and its businesses.

Rokhsana Fiaz OBE
Mayor of Newham

Executive Summary

Executive Summary

Under the Flood Risk Regulations 2009 and Flood and Water Management Act 2010, the London Borough of Newham is designated as the Lead Local Flood Authority for Newham. The LLFA is a Risk Management Authority, a statutory body responsible for the management of local flood risk in the borough, in particular flood risk from surface water runoff, groundwater and small rivers, streams and ditches (ordinary watercourses).

This Flood Risk Management Strategy is an important tool to help deliver that statutory function, by aiding in the understanding of local flood risk and providing a clear framework to enable the Council to manage that flood risk within the borough. It outlines Newham's approach to this task, balancing the needs of our community, the economy, the environment and the availability of resources to the LLFA function. It also builds on the aspirations within Newham's new 'Just Transition Plan', published in December 2023.

A previous LFRMS was produced in 2015. Since then the understanding of Newham flood risk and climate change impacts has evolved significantly. Under the remit of the LLFA, a periodic revision has therefore been undertaken. Along with the introduction of new requirements, the light-touch approach of the original document is deemed out-of-step with the requirements of effective local flood risk management.

This Strategy explains what has changed, in terms of knowledge and flood risk requirements since 2015 to present day and how the objectives of this document align perfectly with aims and ambitions of the most recent industry plans and guidance: both within the Council, with the introduction of its Climate Emergency Action Plan (CEAP) to the latest Just Transition Plan, which builds on the work of 2020's CEAP and the latest Corporate Plan outlining the Council's aspirations in 'Building a Fairer Newham', as well as commitments made with other Risk Management Authorities, via the Environment Agency's Flood Risk Management Plan and Thames Water's Drainage and Wastewater Management Plan.

Being a Newham specific Strategy, the document goes on to set out the types of flood risk that Newham is susceptible to, who is responsible for its management and how this is set within the context of Newham's location and other factors, such as its topography and the existing lack of sewer capacity to deal with the higher levels of rainfall associated with climate change.

The Strategy identifies the need for flood risk management in Newham, to enable the identification of areas of the borough available for SuDS and raingarden delivery, but also and more importantly, provides a robust, evidence base on which Newham, as LLFA will enter into negotiations with other Risk Management Authorities to ensure every effort is made so Newham is able to adapt to the ever increasing risk of climate change and the inherent impacts that has on flooding.

It is worth noting that not all flooding can be prevented, but there are actions that can be taken to manage flood risk and reduce the impacts it may have on communities. Identifying those Risk Management Authorities with responsibilities in Newham and other stakeholders, this Strategy demonstrates the extent to which partnership working is necessary to manage the risk from all types of flooding in Newham and the need to raise public awareness of the risks.

The Strategy draws on this understanding to empower the Council's LLFA function and to deliver on seven key objectives that will enable the management of local flood risk in Newham:

OBJECTIVE 1: Maintain and enhance understanding of flood risk in the borough of Newham

This will require the LLFA, alongside partners, to use the improved understanding and awareness of flood risk and climate change impacts to develop, update and utilise flood modelling, flood incident investigations and Newham's Strategic Flood Risk Assessment to provide up-to-date information regarding the level of flood risk within Newham.

OBJECTIVE 2: Maintain and improve flood risk management assets and infrastructure

This will require the LLFA to maintain an asset register of all flood risk assets in the borough, identifying their ownership and maintenance responsibilities. This will allow the LLFA to request the regular inspection and maintenance of such assets to ensure their continued functionality and serviceability, following best practice principles.

OBJECTIVE 3: Ensure new developments minimise the risk of flooding

The LLFA will undertake its function as statutory consultee on all major developments within both the LBN and the LLDC planning jurisdictions, to develop guidance and provide detailed, robust recommendations on all major planning applications. This will ensure all new development is safe from flooding, does not increase flood risk elsewhere and through the redevelopment of previously developed land, reduce overall flood risk.

OBJECTIVE 4: Reduce the likelihood and impact of flooding within the borough

In order to improve the protection of flooding for all properties, where possible, the LLFA will identify areas where properties are at high risk of flooding, encourage a strategic approach to improving local flood defences to required standards, identify opportunities to deliver Sustainable Urban Drainage Systems (SuDS) or raingardens via the use of partnership working and deliver on its Flood Risk Management Plan commitments.

OBJECTIVE 5: Raise public awareness of flooding issues and promote community level action

The LLFA will promote flood resistance and resilience measures to any properties at risk of flooding where an adequate standard of protection cannot otherwise be achieved and ensure that residents in high-risk areas are adequately prepared.

OBJECTIVE 6: Respond effectively in the event of a flooding emergency

With the aid of multi-agency flood plans, improved communications and a robust post-flooding response, this Strategy will assist the Council in responding effectively in the event of flooding and providing emergency assistance to those in need.

OBJECTIVE 7: Adopt and maintain a partnership approach to flood risk management

This objective will expand on the good work already done by the Council in continuing to work effectively with other risk management authorities and stakeholders, to ensure flood risk management activities are coordinated across the borough and surrounding areas.

01

Introduction

The London Borough of Newham's Local Flood Risk Management Strategy (LFRMS) is a statutory document, required by Newham, as Lead Local Flood Authority for the borough, under the Flood Risk Regulations 2009 and Flood and Water Management Act 2010. It builds on the work done through the 2015 version, updating due to the increased understanding of flood risk in the borough and latest industry guidance and commitments.

This document, under the umbrella Just Transition Plan, which was adopted by the Council in December 2023, sets out the objectives Newham LLFA will need to meet to increase the preparedness and resilience against the increased risks of climate change and the inherent impact this will have on flooding in particular, both within the borough and cross-boundary.

The LFRMS sets out the relevant stakeholders, their responsibilities, including commitments made by the Council as LLFA, and demonstrate the importance of partnership working to open up opportunities for funding and ultimately the delivery of mitigation measures, such as Sustainable Urban Drainage Systems and raingardens, that are a necessary tool in building the borough's resilience.

02

Wider Environmental Objectives in Newham

The Flood and Water Management Act 2010 (FWMA) requires LLFAs such as Newham, to develop and apply a Local Flood Risk Management Strategy (LFRMS) that:

- Specifies the roles/management functions of the different authorities that have responsibilities for managing flood risk in Newham;
- Describes how Newham is working with partners to reduce flood risk;
- Provides an overall assessment of local flood risk;
- Sets out the objectives for managing local flood risk;
- Outlines measures/actions to be taken to meet those objectives and how and when these measures/actions are expected to be implemented;
- Sets out the costs and benefits of the measures and how they are to be paid for; and
- Describes how the strategy contributes to the achievement of wider environmental objectives.

Since 2015 updates and changes to local policy documents, plans and external drivers need to be integrated within the scope of the LFRMS:

- Newham Climate Change Emergency Action Plan
- Flood Risk Management Plan (FRMP) and agreed measures
- Thames Water DWMP –BRAVA- SMP
- Newham's Building a Fairer Newham Corporate Plan
- Just Transition Plan for the London Borough of Newham (December 2023)

Newham Climate Now

In 2019, Newham Council declared a climate emergency, under the 'Newham Climate Now' banner. The declaration acknowledged the need to take urgent action to counter climate change.

The agenda was fully consistent with local flood risk management objectives. Accordingly, Newham's climate-emergency-action-plan in 2020 had direct relevance to the role of the LLFA and to the objectives of flood risk management, under Action 1: 'Greening the Borough'.

The plan, in recognising the benefits of Sustainable Urban Drainage Systems (SuDS), explicitly included as an action point for the LLFA:

'Develop within the Flood Risk Management Strategy an approach to sustainable drainage in the borough across public and private sector land and developments'

SuDS reduce flood risk by mimicking the drainage behaviour of natural land i.e. greenfield. SuDS are engineered solutions that normally combine green features with other built structures, to provide rainfall interception, storage and attenuation and where possible infiltration. They reduce the runoff discharge of the land, therefore mitigating flood risk in the catchment, thus compensating for the high level of impermeability associated with urban development.

Newham's Climate Emergency Action Plan included sustainability measures that bring about reductions in CO2 emissions (energy efficiency, use of renewables, sustainable design, waste reduction/recycling etc.), coupled with the creation or enhancement of natural CO2 sinks (blue-green infrastructure and biodiversity).

Such measures have mitigating and remediating effects on climate change and its impacts:

- Flooding: greening of urban land (and SuDS) increases rainfall interception, attenuation and infiltration, reducing land runoff rates and volumes, therefore flood risk.
- Drought: greening of urban land (and SuDS) increases rainfall interception and infiltration, the mechanism of aquifer recharge. Rainfall entering the sewer represents a net loss in terms of water conservation/replenishing aquifers. In addition, rainfall drained to sewers often requires treatment before discharge to waterbodies (costing energy and therefore contributing to climate change). SuDS and greening are also tools for water conservation.
- Urban Heat Island (UHI) Effect: cooling effect of vegetation cover (by evapotranspiration) and similarly to water bodies (by evaporation), counters buildings and hardstanding effect of absorbing sunlight to radiate it back as heat. This source combined with waste-heat from appliances, determine urban environment higher daytime temperatures, reduced night-time cooling and higher air-pollution levels, characteristic of the UHI effect. Blue-green infrastructure can significantly contribute to a milder urban microclimate.
- Atmospheric carbon dioxide build-up: plants absorb (remove) carbon dioxide from the air and fix it as carbohydrate, through photosynthesis. The carbon is stored as organic compounds in the plant body tissues and in soil.
- Air Quality: all vegetation, trees in particular, filter out air pollutants by adsorption (particulates adhere onto leaf's structure) and by absorption (pollutants are taken in by leaves and metabolised by the plant)

Newham's Climate Emergency Action Plan therefore provided a potential framework for delivery of partnership projects and sharing of vital information, held throughout the council. In turn this optimised resource use and boosted funding opportunities.

FRMP

Flood Risk Management Plans (FRMPs) are produced and published by the Environment Agency that set out how risk management authorities (RMAs) work with communities to manage flood risk according to a six year cycle.

Under the FRMP Cycle-2 (2021-2027), Newham is required to deliver Newham-specific actions that match FRMP objectives, which have been agreed by Newham with the EA.

Newham's five agreed measures within the Flood Risk Management Plan (FRMP) are:

Measure 1
By 2027, London Borough of Newham will upgrade a register of assets within Newham with an enhanced scope and format, to improve understanding of flood risk assets and serve as an engagement tool in the London and Thames Estuary, Thames Flood Risk Area.

Measure 2
By 2027, London Borough of Newham will deliver a SuDS scheme on the capital programme using partnership funding in Newham, to reduce flood risk to vulnerable communities in the London and Thames Estuary, Thames Flood Risk Area.

Measure 3
By 2027, London Borough of Newham will join the London Lee Catchment Partnership in the Lee Valley, to contribute to the improvement of water quality and biodiversity in the London and Thames Estuary, Thames Flood Risk Area.

Measure 4
By 2023, London Borough of Newham will create a Royal Docks Riverside Strategy, to improve flood risk management through development in Newham, to support sustainable growth and development in the London and Thames Estuary, Thames Flood Risk Area.

Measure 5
By 2027, London Borough of Newham will redesign the Lead Local Flood Authority webpages, to provide Newham residents, businesses and other stakeholders with clear and specific information on resilience measures, flood insurance and other issues in the London and Thames Estuary, Thames Flood Risk Area.

Thames Water Drainage and Wastewater Management Plan (DWMP)

LLFA engagement with Thames Water has been updated by the introduction of the DWMP (2020), a long-term strategic plan (2020 -2050) setting out how 'wastewater systems, and the drainage networks that impact them, are to be extended, improved and maintained to ensure they are robust and resilient to future pressures'.

This includes consultation with the LLFA, to share flood risk information in support of DWMP planning objectives, via their BRAVA network, which should also consider the impact of climate change and population growth on Thames Water's sewer–drainage network and local flood risk.

Newham LLFA has engaged in the Options Development Appraisal (ODA) process of the DWMP, aiming to identify potential measures for Thames Water to implement in Newham Risk Areas.

Measures considered within Newham are:
1. Large SuDS schemes
2. Source SuDS (green roofs, rainwater harvesting)
3. Surface Water discharge to river
4. New Surface Water sewers
5. New Foul Water sewers

Newham's Building a Fairer Newham Corporate Plan 2022-2026

Newham's Corporate Plan was created to build on the success of the 'Towards a Fairer Newham' Corporate Plan and in response to external factors such as the impacts of the pandemic and the cost-of-living crisis. The Plan aims to help Newham residents through tough times and live happy, healthy and well.

This LFRMS helps delivery of a number of the Council's priorities within this corporate plan:

- Priority 3: Your Neighbourhood
  Although air quality related, much of the available Council land for the delivery of such projects will be on Newham Highways land. Introducing traffic-calming or Low Traffic Neighbourhoods will potentially open up new areas of land for flood risk management, also helping to improve the aesthetic of these areas, where concrete could be replaced by greenery. Utilising cross-council project management will ensure opportunities to deliver such projects are maximised and potential new green technologies are introduced into the borough. Raingardens and SuDS improve satisfaction with the local area and public spaces.

- Priority 5: Homes for our residents
  Newham is in need of homes, however these homes need to be sustainable and fit for the future. As Newham becomes more developed, development will inevitably be introduced in higher flood-risk areas. Ensuring flood-risk management is correctly enshrined in Newham's Local Plan refresh will ensure sustainable drainage and climate commitments are at the forefront of developers' minds when bringing plans forward.

- Priority 6: Supporting our young people
  One of the priorities identified within the Young People's Charter was 'Environment: Protect the environment/our home'. Refining the Council's statutory flooding function will provide sustainable, environmentally friendly means of protecting current and future homes from flooding and creating less reliance on already severely over-capacity sewerage systems.

Newham's Just Transition Plan

This new Plan builds on the work achieved by Newham's Climate Emergency Action Plan, providing a more holistic and collaborative approach to climate action. The Plan aims to enhance equity and increase climate resilience within the borough, providing a strategic framework for climate action in the borough. It is a blueprint to address the unequal impacts of climate change on society and build a fairer borough that has lower emissions, is more equitable and future-ready.

The Just Transition Plan creates a new 3-6-5 framework, featuring:

- Three principles – our guiding beliefs to inform actions for a fairer, greener, healthier Newham
- Six futures – our vision and focus areas to deliver ambitious and equitable benefits for our borough
- Five enablers – our methods to ensure transparency and efficient delivery on our principles

This LFRMS sets out to demonstrate how the Just Transition Plan aligns perfectly with the requirements and holistic approach required in Newham to deliver on the LLFA function and work in partnership to delivering flood mitigations across the borough, via the following aspects of the framework. The following aspects of the Just Transition Plan align perfectly with the aims and objectives of this Strategy:

- Principle 3: Future-readiness
  - Requires Building Newham's physical, social and organisational capacity, to absorb, adapt and respond to the negative stresses and shocks associated with the climate emergency, for which flooding is an obvious stress factor.

- Future F6: Our neighbourhood are resilient, connected and green
  - Proposes green assets to be introduced to support the physical safety of Newham residents from climate hazards such as flash flooding. F6.1 builds on this, proposing the implementation of SuDS wherever appropriate and feasible, in order to reduce the risk of surface water flooding in highly impermeable areas.

- Flood risk associated via Principle 3 and Future F6 can be achieved via enablers within the Just Transition Plan:
  - E1: Growing the Council's Climate Action capacity and effectiveness;
  - E2: Targeting and increasing investment
  - E5: Working beyond Newham's borders

03

Local Flood Risk

Flood risk is the combination of the likelihood of the flood happening (probability) and the potential damage flooding will cause (consequence).

Risk = Probability × Consequence

A risk can only be realised if there is a means (pathway) of connecting the source of the flood with the people, property and land that may be affected (receptors). Source, pathway and receptor must all be present for there to be a risk.

Source = Pathway × Receptor

The consequences of flooding can be quantified relating to, for example, the damage to property or disruption to transport, however some consequences can be far reaching and not always easy to assign a value to, particularly the social impacts of displacement, loss and fear of repeat events.

The most significant sources of flooding in Newham are main rivers and surface water.

River flooding occurs when a river cannot cope with the amount of water draining into it from the surrounding land and its channel capacity is exceeded. Tidal flooding, in the case of tidal reaches of rivers, occurs during high tides and storm surges.

Surface water flooding occurs when intense rainfall generates runoff that that the drainage system is not able to manage, leading to ponding and overland flows. The combination of extensive man-made surfaces and structures, underlying geology, low-lying topography and primarily pumped drainage systems (of the combined sewer type), means that the borough is susceptible to surface water flooding.

Further sources of flooding include sewers, groundwater, ordinary watercourses and 'artificial sources', such as reservoirs and canals. Table 1 below describes the sources of flooding in Newham and the relevant Risk Management Authority (RMA).

Flood Sources	Definition	RMA
Main Rivers	Flooding caused by overtopping of banks or defences, main rivers are defined by the Environment Agency and are capable of causing significant flooding.	Environment Agency
Tidal	Flooding from the sea or tidal rivers.	Environment Agency
Groundwater	Water rising from the ground where permeable rock formations exist.	Newham Council
Ordinary Watercourses	Flooding caused by rivers, streams or ditches that are not classed as main rivers.	Newham Council
Surface Water Runoff	Water that is not able to be managed by the drainage system, because it has been overwhelmed, leads to ponding and overland flows.	Newham Council
Sewers	Water flows out of sewers due to blockages or lack of capacity/exceeding capacity (in case of extreme weather events).	Thames Water
Reservoirs	Reservoir dam failure leads to sudden inundation of downstream areas.	Environment Agency
Canals	Flooding caused by overtopping or breach of canal banks or defences.	Canal and River Trust
Docks	Flooding caused by failure/ overtopping of the dock gates, during tidal flood events, and overtopping of the dock walls	Environment Agency

Table 1 – Flood Sources applicable to Newham

A wide range of water management and flood defence systems are required to manage flooding. These defences include all aspects of the drainage network from simple road gullies to large assets, such as the Thames and Barking Barriers, locks, culverts and sluices.

Managing local flood risk is trans-boundary (i.e. across land ownership, infrastructure, organisations and services) and a multi-disciplinary undertaking, thus requiring partnership and cooperation between all relevant local authority services and other stakeholders.

Managing local flood risk must also rely on cooperation between other statutorily designated Risk Management Authorities (RMAs), namely EA and Thames Water. These RMAs are LLFA's main partners and stakeholders.

Partnership working provides an opportunity to undertake a holistic approach to effective flood risk management. Figure 1 identifies all stakeholders in flood risk management within Newham:

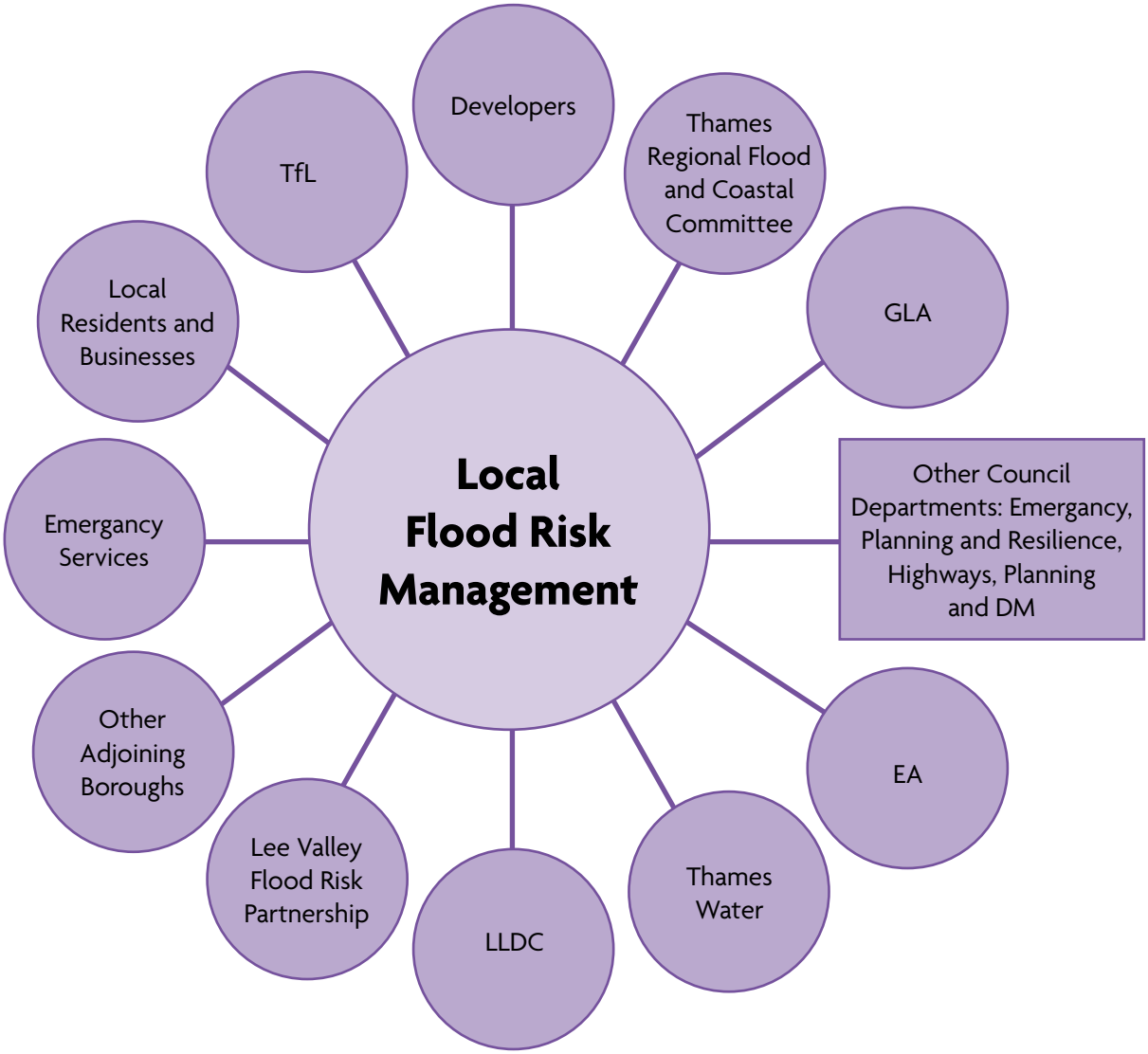


Figure 1: Stakeholders in Local Flood Risk Management

04

Flood Risk in Newham

Understanding of local flooding has evolved from a number of studies developed over the years by the EA and LLFAs. These include hydraulic modelling and flood incident investigations.

Based on the findings of these flood risk modelling studies, Newham Council has published several reports (LB Newham Flooding Webpage) in recent years that provide information regarding flood risk, including:

Newham Strategic Flood Risk Assessment, (published 2017) as required of all Local Planning Authorities, looks at all sources of flood risk across the borough to ensure that the Local Plan and planning decisions take account of these risks. The Local Plan in turn seeks to ensure that future development is located and designed to minimise future flood risk.

Newham Preliminary Flood Risk Assessment (published 2011) is a high-level study, required by the Flood Risk Regulations, covering all types of flooding in the borough and includes a summary of historically significant floods and information on future flood risk, based on EA data. The PFRA was reviewed in 2017 by Newham LLFA and approved by EA.

Newham Surface Water Management Plan (published 2011) identifies Local Flood Risk Hazard Zones (LFRZs) and Critical Drainage Areas (CDAs), and outlines the preferred surface water management strategy for the borough, based on surface water flood modelling developed specifically for this purpose.

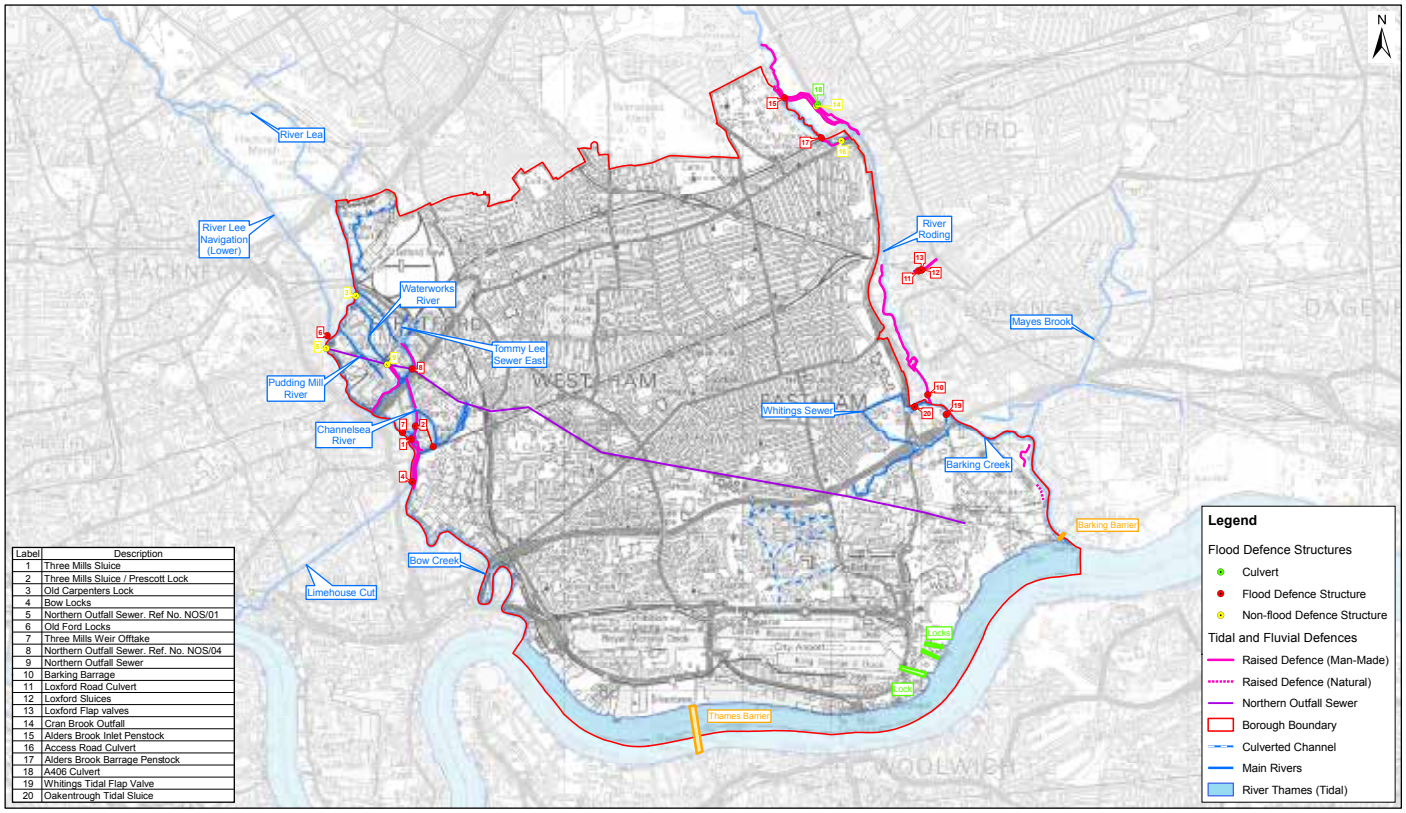
Fluvial Flood Risk

The London Borough of Newham is bounded on three sides by main rivers, as shown in Figure 2.

The River Thames, River Lea and River Roding are main rivers, and a number of other smaller rivers, such as the Aldersbrook, have also been classified by the EA as 'main rivers'.

There are a number of small ordinary watercourse channels discharging into the River Roding, along the eastern side of the borough. The Royal Docks is classified as an ordinary watercourse and protected against tidal flooding by the dock gates, which fall under the responsibility of the EA.

The borough includes the Thames Barrier, which provides tidal flood protection to the upstream catchment.



Label	Description
1	Three Mills Sluice
2	Three Mills Sluice / Prescott Lock
3	Old Carpenters Lock
4	Bow Locks
5	Northern Outfall Sewer. Ref No. NOS/01
6	Old Ford Locks
7	Three Mills Weir Offtake
8	Northern Outfall Sewer. Ref. No. NOS/04
9	Northern Outfall Sewer
10	Barking Barrage
11	Loxford Road Culvert
12	Loxford Sluices
13	Loxford Flap valves
14	Cran Brook Outfall
15	Alders Brook Inlet Penstock
16	Access Road Culvert
17	Alders Brook Barrage Penstock
18	A406 Culvert
19	Whitings Tidal Flap Valve
20	Oakentrough Tidal Sluice

Figure 2: Newham Watercourses, Assets and Defences (Source: Figure 3.1 Newham SFRA, Assets and Defences)

The River Thames and the lower reaches of both the River Lea and the River Roding are tidally dominated. The lower tidal reach of the River Roding is called Barking Creek and extends from the River Thames upstream to the Barking Barrage. The Barking Creek Tidal Barrier is located at the confluence with the River Thames and provides tidal flood protection to the River Roding and adjacent low-lying areas. The tidal reach of the River Lea (also known as Bow Creek) extends upstream to the Bow Lock link to the River Lee Navigation and the Prescott Lock link to the Prescott Channel/River Lea at Three Mills.

The lower reaches of several of the watercourses in the borough are canalised and managed by the Canal and River Trust. This network of waterways (known as the Bow Back Rivers) connects the River Lea to the River Thames, draining to Bow Creek which is the final, tidally dominated reach of the Lea.

Historically all of these watercourses have been subject to engineering works to facilitate navigation and water supply and in more recent times, for flood risk management and restoration, in association with the Olympic Park legacy.

In other cases, watercourses have progressively lost their original function to development. The Channelsea River, for example was integrated into major development drainage (Stratford City) and elsewhere culverted or infilled, in practice starved of water and now represents a vestigial watercourse.

The Thames Barrier and associated tidal defence walls, embankments and gates on the River Thames and River Lee provides Newham with a statutory level of tidal flood protection of 1-in-1000 (0.1% chance of flooding in any year).

There is always a residual risk of flooding however, from breaches of the tidal defences caused by human interference or through defence failure.

River flooding of Newham occurs from:

- Fluvial flooding, from prolonged or intense rainfall in the upstream catchments of the River Thames, River Lea and/or River Roding,
- Tidal flooding from a tidal surge, or
- A combination of both.

The greatest recorded flood event on the River Lea and River Roding (since records began), is the March 1947 Thames flood. The floods were caused by snowmelt, followed by rainfall and were unique in their volume and persistence, affecting areas in the west of Newham, principally around Stratford, but also the area of Silvertown.

The extent of fluvial and tidal flooding recorded to have affected Newham is shown in Figure 3.

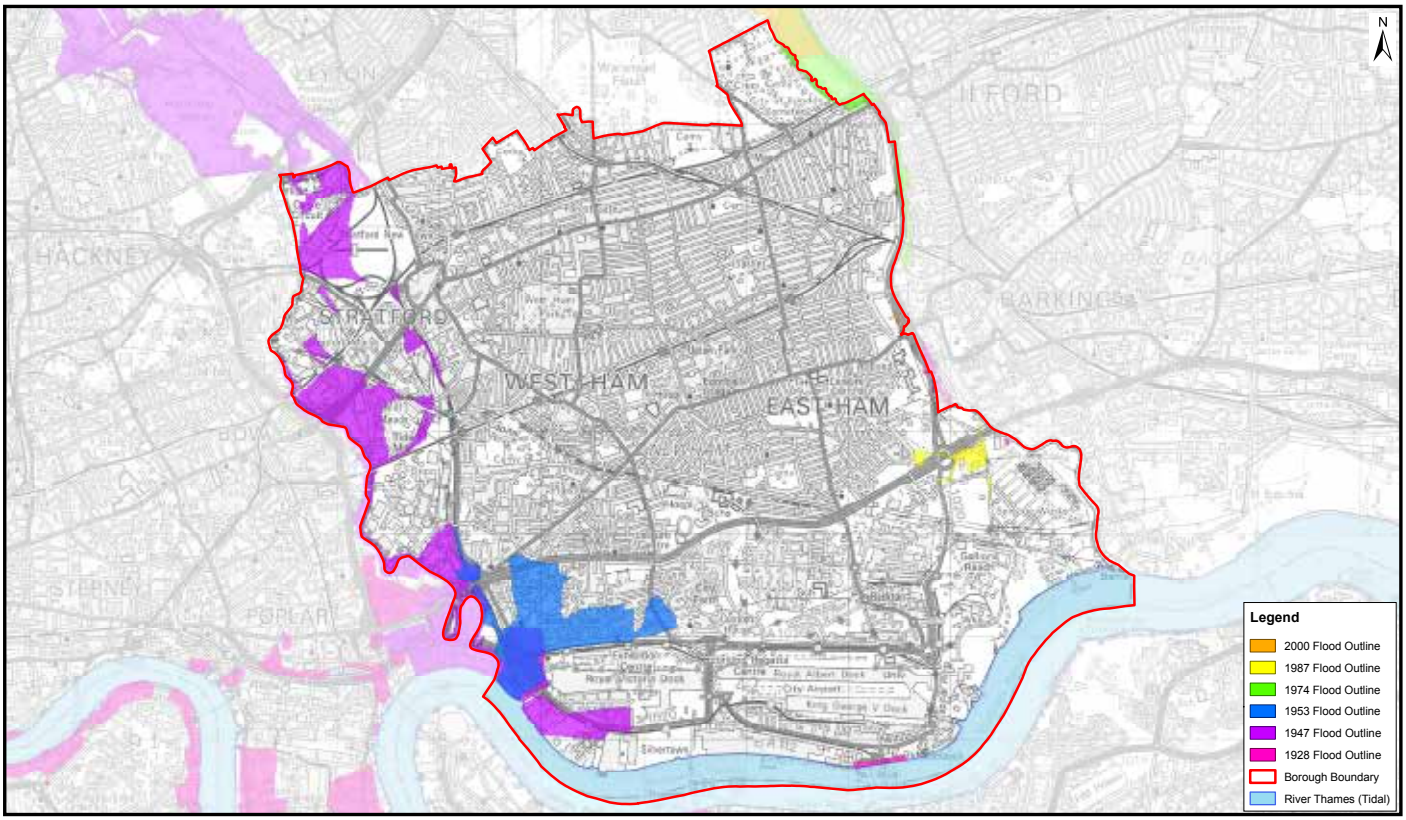


Figure 3: Historic Fluvial and Tidal Flooding [Source: Newham SFRA Figure 1.4]

Surface Water/Pluvial Flood Risk

Overland flow and surface water flooding typically arise following periods of intense rainfall, often of short duration, that is unable to soak into the ground or enter drainage systems. It can run quickly off land and result in localised flooding.

This source of flooding can be compounded when combined with impermeable sub-soils or significant areas of development with associated hard-standing areas. As the majority of an area is heavily developed, the risk of surface water flooding is increased.

Newham's SWMP undertook a comprehensive review of pluvial flood risk and identified Local Flood Risk Zones where surface water flooding may affect homes, businesses or infrastructure. In addition, thirteen critical drainage areas (CDAs) were identified, defined within the SWMP as the 'wider hydrological catchment areas causing flooding in one or more Local Flood Risk Zones' (see Figure 4). The classification however, does not indicate that every property within the boundary of a CDA is at a significant risk of flooding.

This information was used to create a long-term action plan for Newham to assist in their role as LLFA.

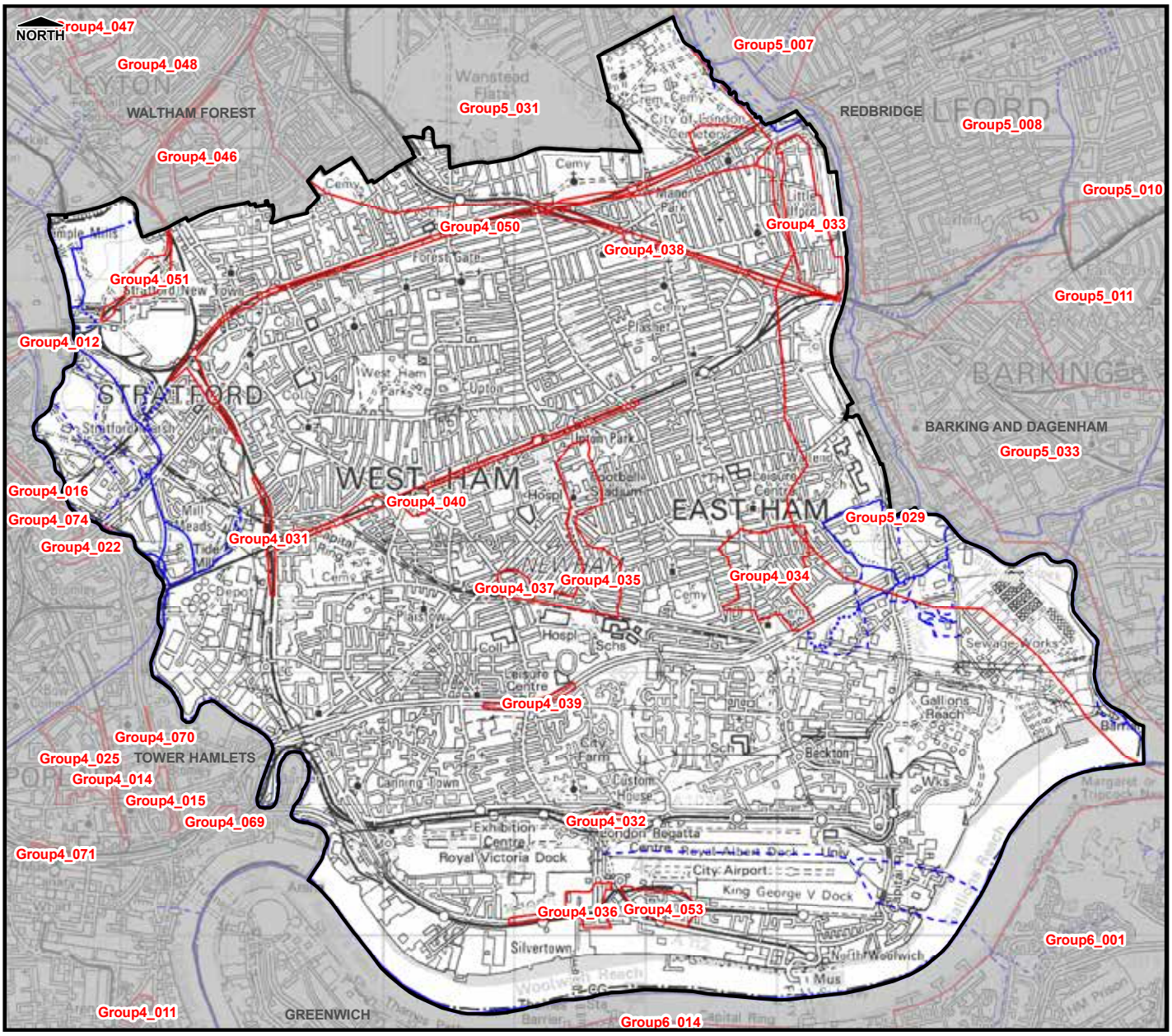


Figure 4: Critical Drainage Areas in Newham [Source: SWMP (2010) Figure 1]

The thirteen CDAs generally fall within the following categories:

- Topographical low lying areas: underpasses, subways and lowered roads beneath railway lines that are more susceptible to surface water flooding;
- Railway cuttings: stretches of railway track in cuttings that are susceptible to surface water flooding and if flooded, will impact on services;
- Embankments: discrete surface water flooding locations along the upstream side of the raised rail or Northern Outfall Sewer embankments;
- Sewer flood risk areas: where extensive and deep surface water flooding is likely to be the influence of sewer flooding mechanisms alongside pluvial and groundwater sources.

In addition, the National Planning Policy Framework also refers to areas with 'critical drainage problems' as notified by the Environment Agency.

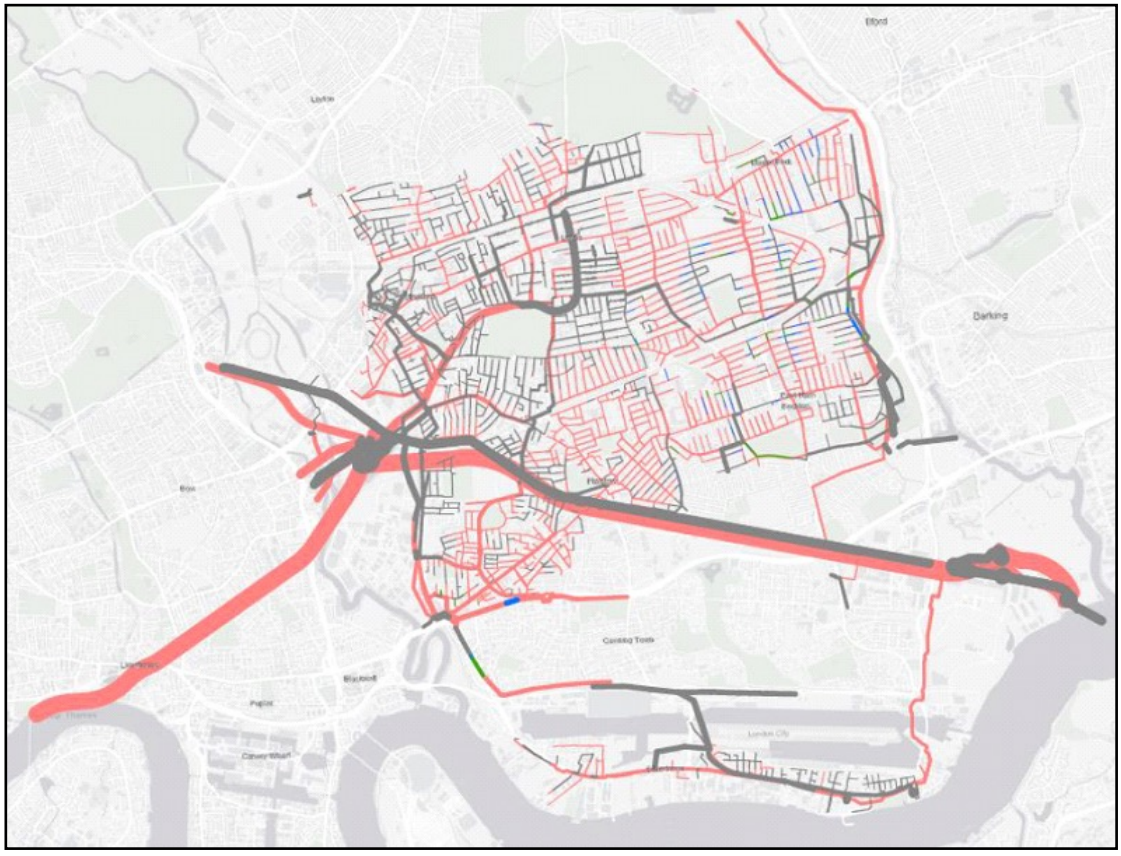
More recently than completion of the 2010 SWMP, the Environment Agency has undertaken further detailed modelling of surface water flood risk at a national scale and produced mapping identifying and classifying those areas at risk of surface water flooding (see Newham's SFRA):

- 3.33% annual probability (1-in-30 year), 'high'
- 1% annual probability (1-in-100 year), 'medium' and
- 0.1% annual probability (1-in-1,000 year) 'low'.

The latest version of the mapping is referred to as the 'Risk of Flooding from Surface Water' Map (RoFfSW). This dataset is available nationally on the EA website and is referred to as 'Risk of Flooding from Surface Water'.

Surface Water flooding in Newham cannot be separated from sewer network capacity and quality issue, the borough being dominated by a Victorian infrastructure, largely inherited by Thames Water, but now increasingly under stress from climate change and growth.

Thames Water's Capacity Assessment Framework (CAF), formed via data sharing with Newham LLFA, illustrates the sewer capacity issue, testing the sewer capacity according to the 1-in-2 year return, the lowest capacity assumed for a sewer (i.e. 50% probability to flood each year):



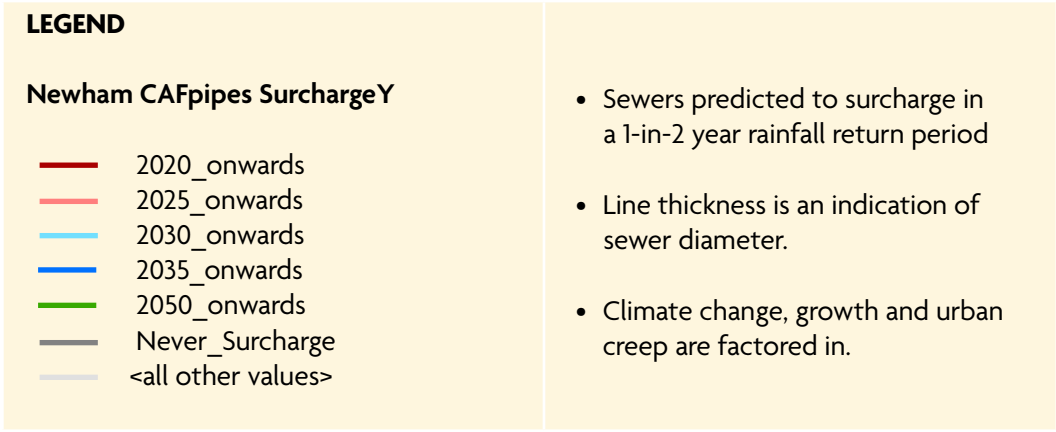


Figure 5: Thames Water (BRAVA) CAF maps: Newham sewer surcharging in a 1-in-2 year rainfall event. The 2025 baseline is assumed to include current (2020) baseline. Sewer surcharge marked in red overlaps brown (2020) baseline

LLFA's conclusion is, based on evidence of flooding incidents, that without significant upgrade of the local sewer capacity, certain locations are unavoidably going to flood under rainstorm events of magnitude well below the 1-in-30 year event, which is the current minimum hydraulic design standards for sewer systems and represents a 'high' risk from surface water flooding (as defined within EA flood-risk maps).

In terms of local flood risk management, a significant reduction of flood risk within the worst affected area in Newham, cannot realistically be achieved solely by implementing SuDS schemes through the planning process and partnership projects, on land owned by the council.

SuDS are very beneficial, to contribute cumulatively to the standard of protection assumed for a modern sewer infrastructure (1-in-30 rainfall event), in the sense that SuDS attenuate/infiltrate runoff, therefore relieving pressure on the sewer infrastructure.

For wider catchment areas however, where redevelopment is not an option and the sewer capacity can be below the 1-in-2 year event, aside other considerations, such as costs, SuDS would be required on a scale and density, perhaps unrealistic because of the constraints of a dense urban environment.

Groundwater Flood Risk

Groundwater flooding occurs as a result of a rising water table from the underlying rocks (usually permeable and forming an aquifer), or from water flowing from abnormal springs. This tends to occur after long periods of sustained heavy rainfall and can be random in both location and time of flooding, often lasting longer than a river or surface water flood. High groundwater levels may not always lead to widespread groundwater flooding, but have the potential to exacerbate the risk of:

- Surface water flooding, by saturating the soil and reducing the amount of rainfall the ground can accept;
- River flooding, by increasing the base flow in rivers; and
- Sewer flooding, through the interaction between groundwater and underground sewer networks.

Groundwater flooding is rarely a threat to life, but is potentially damaging to property and infrastructure.

The impact of climate change on groundwater levels is highly uncertain. More winter rainfall may increase the frequency of groundwater flooding incidents, but drier summers and lower recharge of aquifers may counteract this.

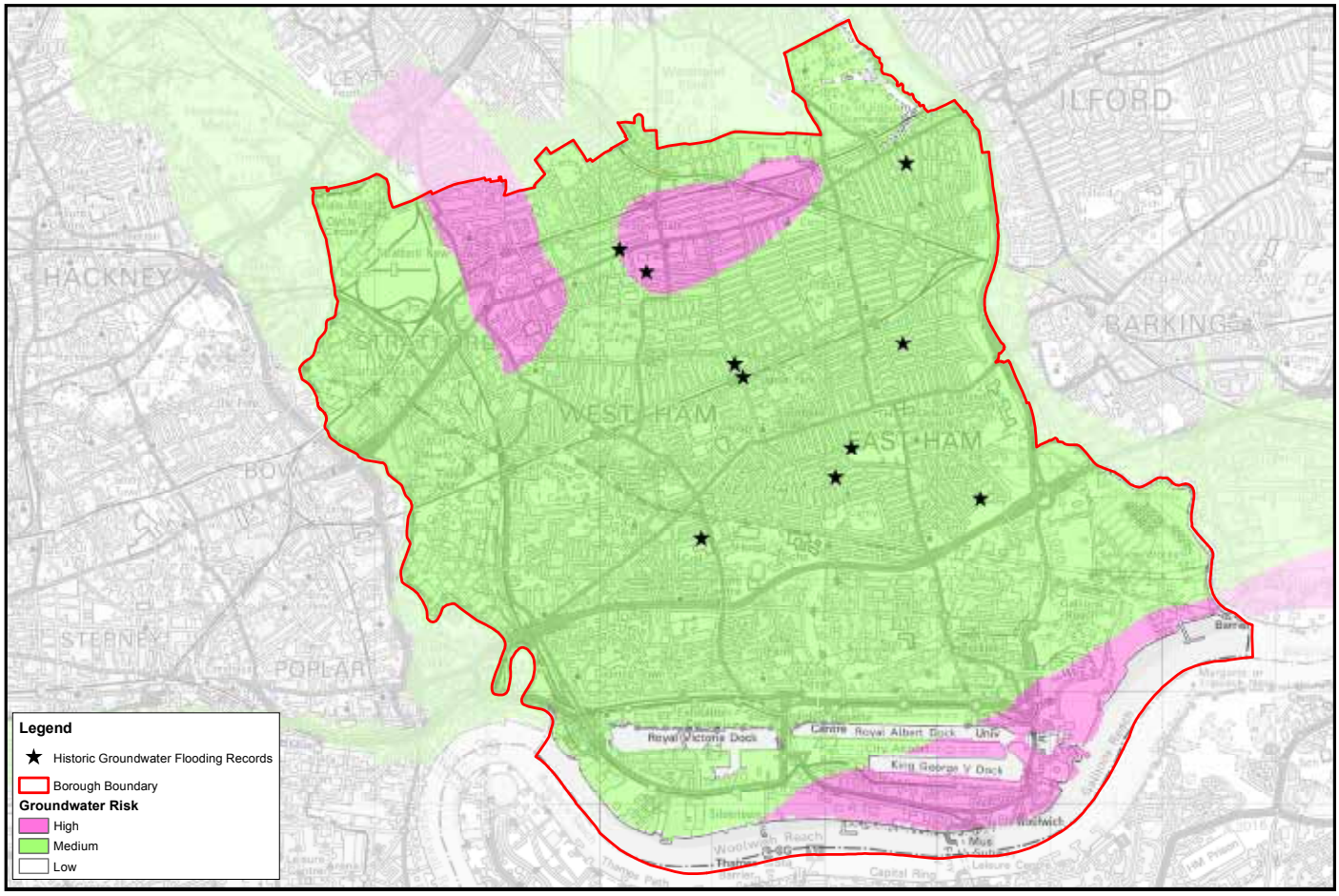


Figure 6: Potential Groundwater Flood Risk and Historic Groundwater Flooding Records [Source: Newham SFRA Figure 7.1]

Flood Risk from Local Sources – Ordinary Watercourses

Ordinary watercourses include every river, stream, ditch, drain, cut, dyke, sluice, sewer (other than a public sewer) and passage through which water flows, above ground or culverted, which is not designated as a main river.

There are a number of short reach ordinary watercourses that discharge into the River Roding, along the eastern side of the borough.

The Royal Docks, located in the south of the borough, are classified as an ordinary watercourse, but managed by the Royal Docks Management Authority. The dock gates themselves form part of the Thames Defences and thus fall under the responsibility of the EA.

The historic fluvial and tidal flooding map from the SFRA is shown in Figure 3. The location of the recorded flooding during the 1987 event is a low-lying area drained by ordinary watercourse channels to the River Roding (Barking Creek).

The source of the worst case flooding of the ordinary watercourse is considered to be from the main rivers, rather than from the contributing catchment of the ordinary watercourse itself, due to their short reaches and drainage of the low-lying catchment areas of the main rivers.

No other historical information of flooding from ordinary watercourses in the borough is known.

05

Objectives and Actions for Managing Local Flood Risk

Based on the current understanding of flooding in the borough, the LFRMS has been prepared with the overarching aim of minimising the impact of flood risk on our residents and businesses.

To succeed in this aim Newham have identified 7 key objectives and the associated actions/measures that are considered necessary to deliver each objective. The objectives are set out below.

All future flood risk management actions will consider social, economic and environmental outcomes.

Local Flood Risk Management Strategy Objectives

1. Maintain and enhance understanding of flood risk in the borough
2. Maintain and improve flood risk management assets and infrastructure
3. Work with planners and developers to ensure that flood risk is appropriately managed by new development
4. Reduce the likelihood and impact of flooding within the borough
5. Raise public awareness of flooding issues and promote community level action
6. Respond effectively in the event of a flooding emergency
7. Adopt and maintain a partnership approach to flood risk management

It is considered that these actions are consistent with and further support the objectives of, the National Flood and Coastal Erosion Risk Management Strategy (EA, 2011) and integrated actions and measures under the concern of Newham's Just Transition Plan and FRMP.

National Strategy Objective	Link with LFRMS Objectives
Understanding the risks of flooding and coastal erosion, working together to put in place long-term plans to manage these risks and making sure that other plans take account of them	1, 5, 7
Avoiding inappropriate development in areas of flood and coastal erosion risk and being careful to manage land elsewhere to avoid increasing risks	3
Building, maintaining and improving flood and coastal erosion management infrastructure and systems to reduce the likelihood of harm to people and damage to the economy, environment and society	2, 3, 4, 5
Increasing public awareness of the risk that remains and engaging with people at risk to encourage them to take action to manage the risks that they face and to make their property more resilient	1, 5, 6
Improving the detection, forecasting and issue of warnings of flooding, planning for and coordinating a rapid response to flood emergencies and promoting faster recovery from flooding	1, 6

Table 2: LFRMS and National Strategy Objectives

OBJECTIVE 1: Maintain and enhance understanding of flood risk in the borough of Newham

Provide up to date information regarding the level of flood risk within the borough of Newham, taking account of the improved understanding and awareness of flood risk emerging and climate change impacts,

Flood Modelling

Newham has provided updated integrated flood-risk modelling that were used to produce the EA's Risk of Flooding from Surface Water (RoFfSW) maps. These maps include the capacity of below-ground drainage infrastructure and its interaction with above-ground drainage systems. These updated models, such as Newham's CDA's Integrated Flood Risk Model were shared with the EA in 2016.

Newham LLFA will consider new flood risk models/ studies for Flood Risk Areas, identified under flood risk investigations, to support scoping/proposal of flood risk mitigation schemes, as either partnership projects or proposals made to Thames Water under DWMP optioneering for increasing the local sewer capacity in flooding hotspots. This could include the role of the Thames Tideway Project, if applicable.

Flood Incidents

It is vital to collect and record detailed information when flood incidents occur. This enhances the understanding of flood risk and can be used to validate and improve models, as well as providing first-hand evidence of flooding.

The public must be encouraged to increase the reporting of incidents of surface water/highway/property flooding. As part of the FRMP Measure 5, Newham will publish a standard form on its website to facilitate members of the public to report flooding. A dedicated email has been set up to return the form and information: LLFAFlooding@newham.gov.uk

All Newham services must also proactively report flooding incidents they have come across, from their remit, to the LLFA. A standard form to facilitate reporting flooding was produced by the LLFA.

For instance, unscheduled highway gulley maintenance (e.g. unblocking gullies/pipe connections) due to reported flooding, must be recorded and inspections/maintenance shall be informed by flood risk criteria. Newham will ensure that the incident information gathered and recorded by the Council is safely held and spatially referenced, in a dedicated flood incident GIS map/ database.

Strategic Flood Risk Assessment

Newham, under the concerns of its planning policy function, published the SFRA in 2010 and its updated version in 2017. It provides information relating to flood risk from all sources across the borough.

As information relating to surface water flooding is continuously improving, it is recommended that the Surface Flood Risk Assessment is updated as updates to the RoFfSW are implemented, or new evidence of local flood risk is available. This should include prior consultation with Newham LLFA.

The SFRA should also be updated with respect to the other sources of flooding, such as main rivers, if new modelling is available.

ACTIONS

Improve understanding of flood risk in Newham by carrying out detailed modelling studies in high-risk areas.

Work with partners to ensure national datasets, such as the uFMfSW/ RoFfSW maps are updated with the results of these local studies.

Record flood incidents in a consistent manner.

Set up and agree a system to facilitate the reporting of flood incidents, from council services and members of the public.

Provide up to date information regarding the level of flood risk within Newham, taking account of emerging climate change impacts and by publishing flood risk data on the Council website where appropriate.

Review the SFRA with respect to surface water flood risk, in consultation with the LLFA.

OBJECTIVE 2: Maintain and improve flood risk management assets and infrastructure

Ensure continued serviceability of existing flood risk management assets, by carrying out regular inspections and maintenance as required following best practice principles

Maintenance Responsibilities

Maintenance of flood risk management assets is the responsibility of the asset owner ('riparian' owner where land associated with a watercourse). This includes the flood defences along watercourses.

The 'main river' designation of watercourses gives the EA powers to undertake maintenance, carry out improvement works, operate structures, etc., but not the duty to do so.

Maintenance and operation remains the responsibility of the owner. Newham Council, as the LLFA, is responsible for ensuring that riparian owners carry out their duties in those cases concerning ordinary watercourses.

Newham council is also a riparian owner of several flood defence structures on land it owns, therefore responsible for their maintenance and repair.

The EA is responsible for the maintenance of its flood defence assets within the borough, including the Thames Barrier and Barking Barrier.

Ordinary Watercourse Consents

Where a landowner wishes to carry out modifications to an ordinary watercourse that will have an impact on the flow of water, the owner must obtain consent from Newham Council.

Routine and Reactive Maintenance

Routine maintenance includes day-to-day activities such as cleaning highway gullies and removing litter and other detritus from the streets and is the responsibility of the Council.

Reactive maintenance involves responding to incidents where some degree of flooding has already occurred, often due to blockages of the drainage system. Newham's contractors carry out unscheduled cleaning when blockages or other issues are reported.

Asset Register

The FWMA requires LLFAs to establish and maintain a register of 'significant flood risk management assets', including information on ownership and condition.

It is up to individual LLFAs to define what a 'significant flood risk management asset' is, however any asset that has the potential to cause flooding through individual failure has to be regarded as significant. Large assets such as culverted watercourses, raised flood defences, flood storage areas, underground tanks and pumping stations are therefore considered as significant, whereas individual highway gullies are not.

Newham LLFA, took the view to include in their register, only those structures either in council ownership or with immediate relevance to surface water flooding (as is the LLFA's remit). Other major assets under others' responsibility (e.g. pumping stations with Thames Water) or concerning other type of flood risk (e.g. river, tidal), were excluded.

Newham LLFA's further determination is that the current register of assets is inadequate as a meaningful tool for flood risk management. This consideration is based on evidence of structures in Newham that have not been maintained, due to historical gap in the record of ownerships and lack of awareness of additional obligations under flood risk management.

Other cases are those of structures falling between different services boundaries and/or listed under different services assets portfolio and/or without provision of dedicated funding for inspection and maintenance.

In light of the above, a significant update of the asset register is required that will identify the parties

responsible for the assets where action is required. It is also deemed important to include river flood defences in recognition of their criticality, regardless of EA's responsibility for their inspection or whether owned by Newham or others.

Newham LLFA has fully reviewed the classification of flood risk assets in its register with inclusion of all relevant structures and has agreed with the EA to deliver an enhanced version of the Newham Flood Risk Assets Register, as a measure of the FRMS:

FRMP Measure 1: By 2027, London Borough of Newham will upgrade a register of assets with an enhanced scope and format in Newham to improve understanding of flood risk assets and serve as an engagement tool in the London and Thames Estuary, Thames Flood Risk Area.

The register database is to be delivered in 3 phases: Phase 1 corresponds to the Register of Assets for all existing structures, other than SuDS. Phase 2 is to add SuDS schemes delivered through Newham LPA and Phase 3 SuDS delivered through LLDC Planning.

The new register is intended as a resource for the whole borough, a live record to which Newham services responsible for flood risk assets can refer to and use as a tool to inform their actions. All services will be expected to update records with their asset management actions.

Inspections

Newham Council, will carry out regular inspections of all significant flood risk management assets for which it is responsible, to ensure they are maintained.

LLFA will advise the owner of the structure, whether Newham or private company, on the criticality in relation to flood risk. This aspect will be a further specification in the flood risk assets register.

The frequency of inspection will depend on the type of asset. High-risk assets that are prone to blockage will be inspected at relatively short intervals (e.g. monthly) and/or reactively, following weather events that might increase risk of blockages. Low-risk assets may only require inspection every few years. Newham LLFA will seek EA's advice on standards.

Main river assets and reservoirs already have established inspection regimes that are overseen by the EA. For river and tidal flood defences owned by Newham however, under riparian owner obligations, a proactive regime of inspection and maintenance needs to be implemented by Newham.

This approach is recommended under several concerns: protecting the public, avoiding higher costs arising from deterioration, potential liabilities as well as loss of reputation.

If maintenance is not carried out enforcement action will be considered and carried out as a last resort. It should be noted that equivalent criteria apply to Newham, as riparian owner of flood defences (river and tidal) that are liable to enforcement notice by the EA.

Actions (as relevant to Newham services)

Review and issue ordinary watercourse consents, and ensure the works are carried out in accordance with requirements

Carry out routine and reactive maintenance of highway drainage (Newham Highways Team)

Review, improve and maintain the flood risk management asset register

Based on the updated flood risk assets register, ensure that ownership and obligations under flood risk management are clear and implemented by Newham services

Carry out planned maintenance of Council owned assets, according to ownership/delegated duty by the Council to specific Newham service

Ensure that privately owned, non-main river assets are adequately maintained, through the use of enforcement action if necessary

OBJECTIVE 3: Ensure new developments minimise the risk of flooding

Ensure new development is safe from flooding, does not increase flood risk elsewhere and through the re-development of previously developed land, reduces overall flood risk

Planning Policy

The application of planning policy and development management are fundamental in ensuring all new developments are not at risk of flooding and do not exacerbate flood risk elsewhere, by increasing surface water runoff from hard-standing areas or reducing catchment flood storage. Flood risk prevention policies have been encapsulated in the Council's Local Plan.

The Environment Agency's 'Flood Map for Planning' provides designated Flood Zones, which inform what types of new development can be located where, as well as dictate what assessments are required to support planning applications.

In accordance with national planning policy, a sequential, risk-based approach must be taken by Newham for the allocation of development sites. The Sequential Test, using Flood Zones as refined by the SFRA, steers new development to areas with the lowest probability of flooding. The requirements can be found at: http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/site-specific-flood-risk-assessment/

These documents also contain policies that avoid locating vulnerable uses, such as basement dwellings or essential infrastructure, in areas that are at risk of flooding.

National and regional policy provisions, are integrated into the Newham Local Plan 2018 and will be carried forward within any Local Plan refresh, to respond to Newham's local development and flood risk settings. The Local Plan sets out ways in which development should respond to known flood risks, both in terms of design and siting.

Sustainable Drainage

New developments provide opportunities to reduce overall flood risk from surface water runoff, principally through the use of Sustainable Drainage Systems (SuDS) and allowing space for flood storage and overland flows. It is widely recognised that sustainable forms of flood alleviation, such as providing more space for rivers to flow and flood naturally, are preferable to outdated techniques that rely on hard defences such as concrete walls and channels.

SuDS include measures such as green/brown roofs, blue roofs, rain gardens/bio-retention, soakaways, swales, permeable paving and rainwater harvesting, that aim at mimicking natural drainage of undeveloped land by increasing storage and infiltration and slowing down the rate of runoff. This reduces the rate and volume of surface water runoff and therefore the risk of flooding further downstream.

Well-designed SuDS can be more economic and robust than conventional drainage systems, while also offering a wide range of ancillary benefits, including improved water quality, increased tolerance of droughts, enhanced amenity and opportunities to create biodiversity habitat features. SuDS accordingly represent a tool of climate change impact mitigation.

Major Development SuDS Standards

Newham Local Plan Policy SC3 Part(c) provides that:

'All development should enable separation of foul and surface flows and incorporate Sustainable Urban Drainage Systems (SuDS) that reduce surface water run-off. All major development and any development falling within a Critical Drainage Area (CDA) should achieve Greenfield Run-off and be accompanied by a Surface Water Drainage Strategy (SWDS) that:

i. clarifies before and after development run-off rates and addresses water quality impacts, ensuring run-off water is clean and safe;

ii. follows the drainage hierarchy of the London Plan;

iii. maximises the use of SuDS in accordance with the SuDS hierarchy (see SC1);

iv. confirms the ownership, management and maintenance arrangements of any SuDS features;

v. shows regard to the recommendations of Newham's Surface Water Management Plan (SWMP) and Local Flood Risk Management Strategy (LFRMS)';

Part (d) of Policy SC3 sets out that: Where culverted watercourses are present, opportunities for de-culverting should be investigated. Where de-culverting is not possible within the realities of a site, contributions to de-culverting elsewhere in the borough may be sought.

Newham LLFA's standards for major development proposal reflect Local Plan's requirements, and will be updated periodically as applicable. They are further specified by LLFA's own technical guidance and planning requirements, published on Newham Council's website:

Newham Sustainable Drainage Design and Evaluation Guide

Flood Risk and Sustainable Drainage: Requirements and Guidance for Planning Application

London Borough of Newham Planning Application Requirements (PAR)

Actions

Apply the National Planning Policy Framework 'Flood Risk & Coastal Change' section of the Planning Practice Guidance and the local flood risk policies for Newham

Require use of sustainable drainage techniques for all new development, in accordance with local and national policies

Provide the statutory consultee response on planning applications for surface water management

Develop and publish Newham SuDS Guide: Newham Sustainable Drainage Design and Evaluation Guide (Published in 2020)

Review guidance to reflect changes in requirements of policy and according to LLFA determination of local flood risk

Review the LLFA statutory consultee role and its sustainability, in regard to resource requirement, to manage caseload within the overall demand of the LLFA function

OBJECTIVE 4: Reduce the likelihood and impact of flooding within the borough

Improve protection against flooding for all properties where possible. Identify areas where properties are at high risk and implement flood alleviation schemes where opportunities exist

Local Flood Defence Improvements

Encourage a strategic approach to improving local flood defences, through identification of flood risk and working with developers, planners, EA and other RMAs, to reduce flood risk within the borough.

Work with the EA and asset owners, using LLFA and planning powers, to ensure that the flood defence improvements required by the TE2100 strategy are achieved.

The overarching scope of Newham Royal Docks Riverside Strategy, an agreed measure of the FRMP, will address this specific concern.

Retrofitting Sustainable Drainage

Identify and implement opportunities to retrofit SuDS, to maximise the benefits of sustainable drainage in existing communities. There are many situations where such measures can be carried out cost effectively, for example:

Regeneration projects – projects to enhance public spaces create opportunities to improve drainage by implementing multi-functional measures, such as rain gardens and permeable paving.

Footway schemes – works on the footway often provide opportunities to implement SuDS, for example by converting conventional highway verges and planted areas, which are usually raised, to raingardens which are shallow, depressed areas of vegetation that can accept, store and drain rainwater runoff.

Traffic calming schemes – works that involve restricting traffic in some way to promote safety measures can often be combined with SuDS implementation, at minimal additional cost.

Car parks – most car parks can be easily converted to store shallow depths of flood water during extreme flood events, without significantly affecting their serviceability. Such schemes can be enhanced further by replacing conventional drainage systems with SuDS features.

Refurbishment of large estates – such schemes create SuDS opportunities which should be explored.

Natural Flood Management

Natural flood management refers to the alteration, restoration or use of landscaped features to slow runoff rates and reduce flood risk downstream.

The highly urbanised character of the borough does not lend itself to the implementation of such measures; however, where possible, existing parks and grassed fields will be assessed for the likelihood of retaining rainfall runoff or overland flow.

Newham LLFA will scope potential flood risk management projects, considering potential overlap with other services' objectives, to maximise funding opportunities, as per the Thames Water SWM Strategic Partnership and DEFRA (EA) FCERN Grant in Aid partnership funding bidding criteria.

Newham LLFA will revisit options under the scope of Newham's Just Transition Plan by further engagement with services called to deliver actions under the Plan's 'Principle 3: Future-readiness and Futures 6: Our neighbourhoods are resilient, connected and green' objectives.

Measure 3 of the FRMP, as agreed with the EA, will be delivered in partnership with other LLFAs and Thames 21.

Surface Water Drainage Improvements

The SWMP identified a number of preferred options for Critical Drainage Areas, where below ground surface water drainage improvement was suggested.

Integrated modelling undertaken by the Council, reviewed the SWMP preferred options and made recommendations or provided alternate options for reducing surface water flood risk. The options identified included:

- Improving gulley drainage to sewers;
- New surface water pipe connections from areas of flooding to adjacent pipe networks;
- Additional surface water pumping stations;
- Providing surface or below ground storage required along the railway lines.

All the above options are under the remit of Thames Water, as owner of the sewer infrastructure. Implementation of any of the options will require engagement with Thames Water, under the BRAVA–DWMP programme.

Actions

Encourage strategic approach to improving local flood defences

Ensure that the main river flood defence improvements required by TE2100 are delivered, in collaboration with the Environment Agency and asset owners

Council (Newham Planning Policy) to deliver a Royal Docks Riverside Strategy as FRMP measure agreed with EA

Identify and implement opportunities to retrofit Sustainable Urban Drainage Systems through partnership projects, in fulfilment of FRMP, utilising funding made available to Newham LLFA under TW SWMP and in furtherance of Newham's Just Transition Plan

Scope potential partnership schemes under the overlapping objectives of Newham partners

Implement surface water options, in collaboration with Newham and external partners

Review and undertake further assessment towards implementation of the preferred options for reducing surface water flooding and to support the case of their inclusion in TW's BRAVA-DWMP optioneering process

OBJECTIVE 5: Raise public awareness of flooding issues and promote community level action

Promote flood resistance and resilience measures to any properties at risk of flooding where an adequate standard of protection cannot otherwise be achieved; ensure that residents in flood risk areas are adequately prepared

Raise and Maintain Public Awareness

Any future SFRA update will need to reflect the EA and LLFA updated surface water modelling, Thames Water DWMP–BRAVA implications and Newham LLFA's characterisation of local flood risk, as per this document and other subsequent studies.

Preparedness

In the case of surface water flooding, the design standard for the 'no flooding' condition is less than the standard adopted for fluvial or tidal flood defence assets. Conditions in Newham do not support 'no flooding' from surface water, because of the lack of capacity in the sewer infrastructure.

Flood defences under TE2100 are assumed to provide a standard of protection from river tidal flooding up to 1-in-1000-year event; for surface water flooding standard of protection, associated with local sewer infrastructure capacity, in several areas is below the 1-in-2-year rainstorm event.

Consequently, in areas where significant actual or residual flood risk remains, it is important that communities and businesses are adequately prepared.

Where specific communities are at significant residual risk of flooding the development of Community Flood Plans should be promoted, as well as the development and exercising of business continuity and emergency plans.

LB of Newham website, on its Emergency Plans and Advice pages, provides general guidance to the public.

Flood Resistance and Resilience

Where residual flood risk remains and no other suitable flood risk reduction measures can be identified, individual property protection measures can be used as a last resort to minimise the potential consequences of flooding. Properties of all types can be modified to be flood resistant or flood resilient.

Flood resistance measures aim to prevent floodwaters from entering properties, while flood resilience measures allow water to enter properties but aim to reduce the damage caused when it does.

Such measures are not ideal and entail a financial burden on the property ownership, however they can significantly reduce the costs and disruption caused by flooding.

Under the concern of raising public awareness of flooding issues and promoting community level action, according to Measure 5 of Newham's FRMP, further evaluation of the full scope of communicating flood risk information to the public and the production of 'Community Flood Plans', will be required, especially on advice of 'unacceptable' residual flood risk.

Actions

Identify properties where an 'acceptable' standard of protection cannot be achieved

Promote Community Flood Plans and Business Continuity Plans where significant residual flood risk remains

Promote individual property protection measures including flood resistance and resilience measures that will be delivered by the LLFA under FRMP Measure 5. (Guidance on flood resilience and resistance and flood risk insurance will be published on Newham website)

OBJECTIVE 6: Respond effectively in the event of a flooding emergency

Respond effectively in the event of flooding, providing emergency assistance to those in need

Multi-Agency Flood Plan

Newham Council aims to take action before, during and after flooding, in order to mitigate the effects of any extreme rainfall or fluvial flood events. The procedures followed are set out in detail in the Multi-Agency Flood Plan, prepared by Newham's Emergency Planning and Resilience Team, in partnership with a number of external agencies, such as the Metropolitan Police, London Fire Brigade and the EA.

It includes a risk assessment for critical infrastructure across the borough, ensuring that risks are well understood and can be managed accordingly.

Newham Emergency and Resilience Team regularly reviews its Multi-Agency Flood Plan (under the Emergency Planning and Resilience function). Explicit reference to the LLFA function, with regards to communicating emergency activation and actions associated with flood risk alerts and actual incident response by emergency services, is to be included.

Above all, sharing evidence of flooding and recovery actions is essential to inform post-emergency evaluation of flooding, which is a LLFA statutory duty to investigate, under Section 19 of the FWMA 2010.

Communications

There are a number of ways flood warnings are communicated to residents and businesses. The EA offers a Floodline Warnings Direct service for homes and businesses, for fluvial and tidal flooding. Flood warning messages are sent out to numbers registered with this service, which includes tenants and landlords.

The Met Office in partnership with the EA, through their Flood Forecasting Centre, issue Flood Guidance Statements, which advise on surface water flood risk as a side effect of severe weather forecasted, usually over large geographical areas, as a subset of an overall UK wide assessment.

Newham LLFA, as well as several other Newham services, receive regular email updates by the EA/Met Office services, highlighting the likelihood of severe weather in their relevant area and the probability and potential magnitude of impact in terms of surface water flooding.

In part to address a lack of specific surface water flooding alerts, from an LLFA concern, as well as supporting retrospective flooding incident investigations, Newham LLFA has purchased a software resource called MAP Rain. The system, relies on both weather model predictions and live monitoring of rainfall intensity, by remote sensing radar technology, and is tailored to Newham, addressing specific locations and catchments.

The system is set to issue email alerts triggered by critical rainfall level and projected scenario for specific location/catchment.

It is an extremely useful tool for Newham for post-emergency investigation of flood risk incidents. Sharing of this system throughout Newham will be investigated, with resets required to cover the specific concern of the department involved.

The Council will provide access to up-to-date information via its website, to keep residents and businesses informed.

Emergency Flood Defence Measures

Newham Emergency Planning activates emergency services in response to triggers as identified in their Multi-Agency Flood Plan. Triggers are based on Flood Warning and Alert, in response to heavy rainfall events, or as informed by Central Government.

Specific procedures and level of activation are based on the risk assessment of information received. Emergency response will vary accordingly, from monitoring the situation, instruct preparedness, up to escalating responses, with full activation and coordination of emergency services.

Where properties or businesses are threatened by flooding, Newham will consider the level of assistance it is able to provide, complementing other partner agencies' services, in accordance with the Multi-Agency Flood Plan.

Operate Evacuation Centres

Evacuation centres would be opened by Newham's Emergency Planning, according to the Multi-Agency Flood Plan.

Post Flooding Response

In the event of a local flooding incident, Newham Council will assist the community with the recovery, as well as undertake an investigation of the flooding.

Post-flooding analysis will look to determine the cause of the flooding incident and if anything could be done to reduce the likelihood and impact of a similar event in the future.

In case of a significant flooding incident, the LLFA will carry out a formal Flood Incident Investigation, according to duties under Section 19 of Part 3 of the Flood and Water Management Act 2010 and publish the report of the investigation.

Actions

Apply the emergency response measures described in the Multi-Agency Flood Plan

LLFA Review the Multi-Agency Flood Plan with respect to surface water (achieved)

Encourage residents and businesses in flood risk areas to sign up to the Environment Agency's Floodline Warnings Direct service

Review whether sharing Rain Map flood alert system useful for Newham services other than the LLFA

Continue to improve network of remote flood monitoring equipment and CCTV cameras and make this information publicly available where possible

Gather flooding information effectively to allow post-flooding incident assessments to be undertaken

OBJECTIVE 7: Adopt and maintain a partnership approach to flood risk management

Continue to work collaboratively with fellow risk management authorities, to ensure flood risk management activities are coordinated across the borough and surrounding areas

Flooding does not respect local authority boundaries, it is therefore essential that LLFAs work in partnership across local authority boundaries (in particular the five surrounding boroughs) and with a range of agencies, to create a comprehensive understanding of flood risk and determine a suitable plan of action to manage that risk.

Drain London

Drain London has been working to establish ownership of London's drainage assets, assess their condition and secure a better understanding of the risk from surface water flooding, so that boroughs and the Greater London Authority (GLA) can manage and improve drainage assets and mitigate the risk from this type of flooding.

Newham LLFA representatives attend regular meetings with neighbouring borough LLFAs, Thames Water, EA and TfL, through the Drain London Forum, as member of the Lea Valley Flood Risk Partnership. Issues revolve around flood risk management concerns, sharing best practice and ensuring ongoing projects provide complementary flood risk mitigation.

Environment Agency

The EA is able to provide support to Newham, through providing knowledge and funding for detailed assessments and delivery, from funding allocations they administer.

Newham also works collaboratively with the EA to continuously assess flood risk, using the latest available techniques and information, sharing data and resources where applicable and contributing to flood risk plans and other documents.

Utility and Transport Providers

Thames Water is an important partner in the implementation of flood mitigation and resistance measures. Thames Water has a remit through the utilities regulator Ofwat, to reduce the number of properties affected by sewer flooding. Ofwat imposes strict criteria and will only fund projects where there is a history of internal sewer flooding of premises during 1-in-10-year rainfall events.

Other utility companies and transport providers, such as TfL, London Underground and Network Rail, need to be aware of the flood risks affecting their networks. Flood risk strategies provide an opportunity for engagement with these organisations.

Technical Bodies

London Drainage Engineering Group (LoDEG), Association of Thames Drainage Agencies (ATDA) and Construction Industry Research and Information Association (CIRIA) provide technical support and training related to flood risk and SuDS. Newham LLFA regularly attend LoDEG meetings at the GLA.

Emergency Services

In the event of an emergency, Newham will work together with other agencies including the emergency services and neighbouring local authorities to respond, as set out within the Multi-Agency Flood Plan.

Actions

Continue to actively engage in the Drain London Forum (LoDEG–GLA forum) to contribute to a coordinated London-wide approach to flood risk management

Continue to actively engage with the Lea Valley Flood Risk Partnership as member LLFA

Join London Lee Catchment Partnership in the Lee Valley to contribute to improving water quality and biodiversity in the London and Thames Estuary, Thames Flood Risk Area

Establish a Newham Flood Working Group meeting, to discuss issues of flood risk management between Newham internal partners, according to different service role/remit

Work with the Environment Agency to deliver flood alleviation schemes and improve knowledge and understanding of flood risk

Work with Thames Water to identify opportunities for jointly funded projects where opportunities exist

Provide utility and transport companies with the latest available information on flood risk, so they can assess the potential impact on their infrastructure and build resistance and resilience to flooding where necessary, ensuring a prompt recovery following a flood incident

06

Actions to Reduce Local Flood Risk

Funding for Flood Risk Management Project

The LLFA is required to deliver Flood Mitigation Projects (SuDS or similar), using its annual Revenue Support Grant allocation, complemented by Partnership Funding (PF), by which is meant other partners' contribution to a project (internal and external partners) and with capital Grant in Aid (GiA) applications, under the Flood Risk and Coastal Erosion Management Programme (FCERM GiA); funding administered by the EA according to their overview of flood risk management.

The funding levels available from statutory bodies for each flood management scheme relates directly to the number of homes protected, damage prevented, and other benefits such as the environmental (biodiversity/ greening enhancement) or business benefits that will be delivered. Extra emphasis is given to protecting homes in deprived areas.

There are alternative funding approaches that are being piloted in London, such as the London Strategic SuDS Pilot (LSSP), funded by Thames RFCC, whose criteria are not so strictly correlated to number of homes protected and rather focuses on promoting the benefits of multiple small-scale SuDS interventions.

Under a more recent version of the Partnership Funding Calculator, for partnership Grant in Aid (GiA) applications, more scoring weight is assigned to biodiversity/greening, water quality and overall sustainability components of a project. This prospects potential higher level of funding recognised to projects addressing wider environmental aims than strictly flood risk protection. A shift in emphasis that would better serve partnership projects complementing greening and SuDS objectives.

Accordingly, a range of available funding opportunities will be pursued to help reduce identified flood risk in the borough with additional greening benefits.

In addition to local authority budgets for works on the highways drainage network and maintenance regimes, the Council could consider seeking contributions from developers when planning applications are determined.

The level of flood risk varies across the borough and as such, any works would be proportionate to the level of risk. They would also consider their impact on the local environment to ensure that, where possible, flood management measures go beyond being merely functional, and secure wider environmental enhancements, such as to water quality, landscape and biodiversity, in order to meet the objectives of the Water Framework Directive and National Flood and Coastal Erosion Risk Management Strategy.

The more practical and cost effective tool to mitigate overall impact of surface water flood risk in Newham (considered that only Thames Water could improve the local sewer infrastructure), is to implement a SuDS/green infrastructure programme.

SuDS projects are consistent with the aims of Newham's Just Transition Plan and meet other policy aims by bringing about additional benefits to local communities (e.g. amenity, well-being, biodiversity, water quality and conservation etc.).

SuDS schemes, with their green specifications, can also contribute to improve local air quality and microclimate.

Scoping of SuDS projects, deliverable by Newham LLFA, according to a partnership approach, first relies on studies of flood risk to identify critical drainage issues in vulnerable locations, criteria that must be matched by availability of land owned or managed by Newham.

Another tool to support scoping of flood risk alleviation project, including estimation of costs, is City Hall SuDS Opportunity Mapping (published by GLA to support scoping and cost estimation for SuDS projects).

Future delivery of Flood Mitigation Scheme

Delivery of SuDS schemes is an agreed measure of Newham's Flood Risk Management Plan and consistent with P3, F6, E1, E2 and E5 of the Newham Just Transition Plan.

The visual aspect of SuDS schemes, with their potential to enrich urban landscape, carving out green-biodiversity spots from a mostly tarmacked-concreted background, whilst performing a water management function, is an important quality to promote for urban regeneration, green-blue infrastructure and as an opportunity for internal and external partnerships.

Newham, to fulfil its duties under the SWMA, is required to deliver SuDS projects tackling critical drainage issues in identified Flood Risk Areas.

However, the majority of potential projects scoped by the LLFA, as per commissioned studies, tend to prescribe hard engineering solutions (beyond the SuDS model) and/or upgrade of Thames Water sewer infrastructure.

These types of projects realistically exceed current LLFA's remit. Further testing of potential schemes feasibility will require cost vs benefits analysis and sufficiently advanced design to score projects under partnership funding (PF) criteria and inform a business plan.

Applying for flood risk alleviation schemes dedicated external funding contribution (PF), from the Thames Regional Flood & Coastal Committee (RFCC) capital programme (Grant in Aid, Local Levy (RFCC) etc.) will be pursued in cooperation with the EA.

The LLFA will seek support by Thames Flood Project Advisors Team and explore partnerships with other potential stakeholders, such as Thames Water and/or other Newham services (under overlapping objectives: Newham Building a Fairer Newham Corporate Plan; Newham Just Transition Plan; FRMP measures).

In Newham, local flood risk management schemes will be categorised as follows:

- Scheme addressing area with known critical drainage issues as identified by Newham flood risk studies and validated by flooding incidents (Flood Risk Areas).
- Schemes in response to reports of flooding incidents from residents and businesses, if meeting criteria as per above.
- Ongoing programmes of drainage monitoring, improvement and maintenance works (e.g. gully cleaning, survey etc.), though this is under the remit, responsibility and funding of Newham Highways.
- Possible larger long-term schemes with eligibility for national funding.
- Introduction of SuDS techniques such as swales, green/blue roofs, storage ponds, rain gardens, water features and permeable paving within new developments through the planning process and inclusion within regeneration projects where public open space is available to include SuDS techniques.
- Internal partnership projects with Newham Schools, Public Housing, Green Spaces and Highways, where overlapping scope and opportunity exist through planned works and other schemes to be delivered on public land, especially under the objectives of Newham's Just Transition Plan.

07

Flood Risk Action Plan

OBJECTIVE 1: Maintain and enhance understanding of flood risk in the borough of Newham

Action	Who	When	Funding
Full review of LLFA function, structure, lead officer role, additional requirement of resources (including additional staff) to enable delivery of LFRMS objectives (including FRMP agreed measures), support funding applications, as well as ensuring the sustainability of the role to meet all other statutory requirements.	LB of Newham LLFA	2022	Borough and LLFA
Provide up to date information regarding the level of flood risk within the borough of Newham taking account of emerging climate change impacts, improve understanding and awareness of flood risk: Updating flood risk maps/models to include uplift in Climate Change Allowance from 30% to 40% and additional study for flood risk area, identified by flood incident investigation since 2015, to support rationale for flood risk alleviation scheme and funding application.	LLFA	Ongoing: Updating of flood risk maps requires upgrading Climate Change Allowance, but also a more in depth scoping of flood risk parameters specific to Newham. LLFA will consult with EA and explore availability of funding	LLFA Local Levy (RFCC) FCERM GIA
Improve understanding of flood risk in Newham by carrying out detailed modeling studies in high-risk areas	LLFA	2015 to 2017 and ongoing, updates as required Clarification pending from Thames Water on Thames Tideway impact when fully operational (2025) LLFA will scope and cost flood risk study to support case for flood mitigation risk projects	LLFA EA Drain London FCERM GiA Local Levy (RFCC)

Action	Who	When	Funding
Improve understanding of flood risk in Newham by carrying out detailed modeling studies in high-risk areas	LLFA	2015 to 2017 and ongoing, updates as required Clarification pending from Thames Water on Thames Tideway impact when fully operational (2025) LLFA will scope and cost flood risk study to support case for flood mitigation risk projects	LLFA EA Drain London FCERM GiA Local Levy (RFCC)
Work with partners to ensure national datasets are updated with the results of these local studies	LLFA Environment Agency	2015 to 2017 (achieved) Then in 5 year cycles New cycle to starts in 2020 - deferred to appraise full operational phase of Thames Tideway (2025) and review DWMP BRAVA Thames Water dataset	LLFA
Develop and implement a record management system to record flood incidents in a consistent manner: GIS-based system. Also to support flood incidents investigation	LLFA and partners: Newham Highways Thames Water Newham Emergency Planning and Resilience Team Fire Brigade TfL	Implemented and ongoing, but it requires reinforcing cooperation from all internal and external partners in sharing information with LLFA, reiterating partnership commitment sought in 2021	LLFA
Review the SFRA with respect to surface water flood risk	Planning Policy (LLFA consultee)	2017 published Update expected shortly	Newham Planning and Policy

OBJECTIVE 2: Maintain and improve flood risk management assets and infrastructure

Action	Lead	Timescale	Funding
Review and issue ordinary watercourse consents and ensure the works are carried out in accordance with requirements	LLFA	Ongoing	LLFA
Carry out routine and reactive maintenance of highway drainage assets and land drainage features in parks: new register of flood risk assets to inform/specify requirements.	Highway Services Green Space Newham property	Ongoing Discussion with Newham Highways started in 2021	Highways Green Space Borough
Maintain the flood risk management asset register: Upgrade as agreed FRMP Measure 1: (agreed between Newham and EA): *'By 2027, London Borough of Newham will upgrade a register of assets with an enhanced scope and format in Newham to improve understanding of flood risk assets and serve as an engagement tool in the London and Thames Estuary, Thames Flood Risk Area.'* First Phase: register upgraded to include all relevant structures with full disclosure of maintenance record from EA, TW, LBN and TFL to be fully fit for purpose. Second Phase: to include SuDS assets delivered by major development through planning system (Newham LPA and LLDC)	LLFA Newham Highway Others/ Borough	First phase: 2020-2021 being finalised. Second phase: 2021-2022 Full programme by 2027 (FRMP)	LLFA (commission and delivery of the register) Upkeeping of the register as costs and duty must be shared with relevant Newham services

Action	Lead	Timescale	Funding
Carry out planned maintenance of Council owned assets: Ownership and responsibility for assets maintenance is to be fully established as per updated asset register, therefore relevant parties notified. Financial provision by Newham is required to enable a regime of assets maintenance across services to address standard of flood risk management	LLFA Highways Newham Property Borough (LLFA to monitor/ scope as per Register of Flood Risk Assets)	Ongoing 2021 discussion on requirement initiated by the LLFA, with relevant Newham services	Borough provision requiring costing and allocation of resources across services as relevant to service remit/ named responsibility for the asset to be specified
Ensure that privately owned, non-main river assets are adequately maintained, through the use of enforcement action where necessary: Full scoping to be determined by the finding of the new register of assets	LLFA	Ongoing 2021-2027	LLFA Newham
Apply the National Planning Policy Framework 'Flood Risk & Coastal Change' section of the Planning Practice Guidance and the local flood risk policies for Newham	Planning LLFA	Ongoing	Planning
Require use of sustainable drainage techniques for all major developments and new development in CDAs and high flood risk areas in accordance with local and national policies.	Newham LPA And LLDC Planning LLFA Statutory Consultee	Ongoing 2021	Planning and LLFA (NB additional resources evaluation required)

OBJECTIVE 3: Ensure new developments minimise the risk of flooding

Action	Lead	Timescale	Funding
Provide the statutory consultee response on planning applications for surface water management	LLFA Statutory Consultee	From 6/4/2015 onwards	LLFA
Develop and publish Newham SuDS Guide SuDS-design-evaluation-guide-newham (Guide commissioned as a joint initiative by London LLFAs -LoDEG – GLA and tailored for Newham)	LLFA	Published in 2019 Reviewed periodically	LLFA

OBJECTIVE 4: Reduce the likelihood and impact of flooding within the borough

Action	Lead	Timescale	Funding
Improve protection against flooding for all properties where possible, identify areas where properties are at higher risk/more vulnerable and implement flood alleviation schemes where opportunities exist.	LLFA EA TW	Ongoing	LLFA FCERM GIA Local Levy (RFCC) Thames Water
Encourage strategic approach to improving local flood defences Also in reference to Newham Royal Docks Riverside Strategy.	EA Planning LLFA GLA	Ongoing	EA LLFA Local Levy (RFCC)
Ensure that the main river flood defence improvements required by TE2100 are delivered, in collaboration with the Environment Agency and asset owners. Also a consideration under Newham Riverside Strategy (to be delivered as a measure of the FRMP)	EA Planning and Development Newham Policy Newham Property/Assets / other Newham service within which boundaries flood defences LLFA overview	Ongoing Newham Riverside Strategy 2020-2023	Newham Others: Land/Asset owner, EA Newham Planning Policy

Action	Lead	Timescale	Funding
Identify and implement opportunities to retrofit Sustainable Drainage Systems	LLFA Planning Regeneration Highways	Ongoing	Newham services area e.g. Highways, Schools, Housing, Green Space, Regeneration, LLFA, Others: Thames Water (SWM funds) FCERM GiA Local Levy (RFCC)
Review and undertake further assessment towards implementation of the preferred options for reducing surface water flooding: Scoping under the FRMP agreed Measure 1 and overlapping with: - Thames Water DWMP and SWM Programme - Newham Just Transition Plan	LLFA	Ongoing 2021- 2027	LLFA FCERM GiA Local Levy (RFCC) Newham partners Other Newham services Thames Water

Action	Lead	Timescale	Funding
Implement surface water options, in collaboration with internal and external partners: **FRMP Measure 2:** *By 2027, London Borough of Newham will deliver a SuDS scheme on the capital programme using partnership funding in Newham to reduce flood risk to vulnerable communities in the London and Thames Estuary, Thames Flood Risk Area.* Thames Water SWM programme LLFA partnership funding for SuDS schemes.	LLFA Planning Highways Housing Schools Green Spaces Thames Water	2016 onwards FRMP programme: 2021-2027 Ongoing	ERM GIA Local Levy (RFCC) Borough Capital Thames Water

OBJECTIVE 5: Raise public awareness of flooding issues and promote community level action

Action	Lead	Timescale	Funding
Promote individual property protection measures including flood resistance and resilience measures: To be implemented as specific FRMP agreed measure: *'By 2027, London Borough of Newham will redesign the lead local flood authority website pages, to Newham residents, business and other stakeholders with clear and specific information on resilience measures, flood insurance and other issues in the London and Thames Estuary, Thames Flood Risk Area'* Publish link to guidance on Newham website in all relevant documents	LLFA EA	Ongoing 2021-2027	LLFA Borough

OBJECTIVE 6: Respond effectively in the event of a flooding emergency

Action	Lead	Timescale	Funding
Apply the emergency response measures described in the Multi-Agency Flood Plan	Emergency Planning and Resilience Team	Ongoing	Emergency Planning
Review the Multi-Agency Flood Plan	Newham Resilience-Emergency Planning Team LLFA	LLFA carried out review 2018 and 2024 Ongoing	Emergency Planning and Resilience Team
Encourage residents and businesses in flood risk areas to sign up to the Environment Agency's Floodline Warnings Direct service and/or Newham Council's Community Safe system	Emergency Planning EA	Link to EA webpage provided in Newham Flooding webpage	Council Emergency Planning LLFA
Gather flooding information to allow post flooding incident assessments to be undertaken	LLFA Newham Highways Newham Control Room Emergency Planning and Resilience Team Fire Brigade Thames Water TfL	Ongoing and to be revisited in 2024, to agree proactive sharing of information between partners and suitable standards to support flooding investigation and recording of flooding incidents. Thames Water data sharing ongoing issue: obtaining data sharing agreement	LLFA

OBJECTIVE 7: Adopt and maintain a partnership approach to flood risk management

Action	Lead	Timescale	Funding
Continue to actively engage in the Drain London (Lee Valley flooding Partnership) and LoDEG-GLA For a, to contribute to a coordinated London-wide approach to flood risk management	LLFA	2014 - ongoing	LLFA
FRMP Measure 3: By 2027, London Borough of Newham will join the London Lee Catchment Partnership in the Lee Valley to contribute to improving water quality and biodiversity in the London and Thames Estuary, Thames Flood Risk Area	LLFA	2021-2027	LLFA
Re-engage Newham Services to restate obligations attached to Newham role as LLFA as applicable to Newham services from their own remit and agree way forward to implement and maintain partnership	LLFA	2021 and ongoing	Newham
Work with the Environment Agency to deliver flood alleviation schemes, and improve knowledge and understanding of flood risk. Directly relevant to: FRMP Measure 2 and scoping of flood risk study to specify requirement for flood alleviation schemes (within and beyond the SuDS approach) to explore requirement of for additional sewer capacity in identified Flood Risk areas and on evidence of recurrent – higher than predicted flooding impact.	LLFA Thames Flood Advisor	Ongoing	FCERM (GiA) Local Levy (RFCC) LLFA Other Newham departments under complementary / overlapping objectives (e.g. Newham Just transition Plan, greening, air quality etc Thames Water under DWMP

Action	Lead	Timescale	Funding
Work with Thames Water to identify opportunities for jointly funded projects where opportunities exist: This objective should be read within the scope of Thames Water SWM-DWMP LLFA engagement and ability of Newham LLFA to apply for delivery of SuDS projects of the retrofitting sewer disconnection type. To expand scope beyond the SWM programme to include the case for of flood risk alleviation schemes to feed into Thames Water DWMP identification of option measures to meet their long term flood risk reduction targets over the 25 years DWMP timescale.	LLFA Thames Water	Ongoing 2021-2050	LLFA Thames Water
Work with EA, Thames Flood Advisors and with relevant Newham departments to develop and demonstrate internal capacity-structure to deliver Surface Water Management Scheme, to support ability to access Thames Water SWP partnership funds, and application for EA FCERM (GiA) partnership funding	LLFA Borough	2021-2023 Latest Water Management Strategy currently in consultation	LLFA Newham

Appendix 1 – Legislative Context

Flood and Water Management Act 2010

The Flood and Water Management Act 2010 aims to provide better, more comprehensive, management of flood risk for people, homes and businesses. The Act defines the following bodies as 'risk management authorities':

- a Lead Local Flood Authority (LLFA)
- the Environment Agency
- a district council for an area for which there is no unitary authority
- an internal drainage board
- a water company
- a highway authority

Newham's roles and responsibilities, as a LLFA, contained within the Act include:

- development, maintenance, application and monitoring of a strategy for local flood risk management (LFRMS) in its strategic leadership of local risk management authorities
- powers to request information from any person in connection with the authority's flood risk management functions
- a duty to investigate and publish reports on flooding incidents in its area (where appropriate or necessary), to identify which authorities have relevant flood risk management functions and what they have done or intend to do
- a duty to maintain a register of structures or features which have a significant effect on flood risk in their area, in the view of the Lead Local Flood Authority
- power to do works to manage flood risk from surface runoff or groundwater
- power to designate structures and features that could affect flooding and are considered to be significant when assessing local flood risk
- a role as a statutory consultee regarding approvals for SuDS schemes for major developments, as defined by the London Plan
- decision-making responsibility for whether works on ordinary watercourses by third parties that may affect water flow can take place

Newham, as the LLFA, is from the 6 April 2015 statutory consultee to Planning for approval of SuDS schemes intended to apply to major development. This replaces the original legislation that would have designated the LLFA as the SuDS Approving Body (SAB), with responsibilities for approving all new SuDS and adopting them where they serve more than one property.

In formulating the LFRMS, Newham must consult with the public and any risk management authority that would be affected. The Strategy must also be consistent with the National Flood and Coastal Erosion Risk Management Strategy for England. A summary of the Local Strategy must be published and may be accompanied by guidance on how the strategy should be applied in the area.

The Local Flood Risk Management Strategy will be reviewed in line with the Environment Agency's Flood Risk Management Plan for the Thames River Basin.

Flood Risk Regulations 2009

The Flood Risk Regulations 2009 came in to force on 10 December 2009. They transpose the EU Floods Directive into UK law.

The key provisions of the Regulations are:

- to give responsibility to the Environment Agency to prepare preliminary flood risk assessments, maps and plans - for floods from the sea, main river and reservoirs
- to give responsibility to lead local flood authorities to do the same for all other forms of flooding (excluding sewer flooding which is not caused by precipitation)
- preliminary flood risk assessments (PFRAs) to be prepared by the Environment Agency and LLFAs. Newham has prepared and published its preliminary flood risk assessment as part of the 'Drain London' initiative co-ordinated by the Greater London Authority (GLA)
- flood hazard and risk maps to be prepared by the Environment Agency for identified areas of significant flood risk
- for Newham as a LLFA to prepare a flood risk management plan by December 2015
- FRMP2

The flood risk assessments must be reviewed on a six-yearly basis and any changes in the assessment incorporated in the flood risk management plans.