



Watercourse and Flood Risk Plan

August 2022

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Introduction

Water provides the foundations for the existence of life on Planet Earth. To survive, all species need access to clean water to drink, and water is essential to enable trees and plants to grow. The seas and oceans are also critical for regulating climate.

Historically, we have taken water for granted but population growth and the demands this has placed on both natural and made infrastructure means we cannot and should not continue to do so.

Water features can be found in many of Haringey's parks and greenspaces. These range in size and complexity from the Moselle Brook that flows through Lordship Recreation Ground, the boating lake in Finsbury Park, SuD's schemes in Rectory Gardens and elsewhere, and the ponds in Stationers Park.

These water features provide a variety of benefits for users and for the environment including for biodiversity, recreation, flood management and helping to reduce air temperature.

Haringey is responsible for taking the lead in managing flood risk from surface water, groundwater, and some of the smaller watercourses.

The Council has developed a Local Flood Risk Management Strategy to inform its approach

https://www.haringey.gov.uk/sites/haringeygovuk/files/20190730_haringey_lfrms.pdf

As the impact of climate change on weather and habitats becomes more pronounced, we are increasingly needing to explore ways to manage heavier rainfall and to protect and enhance water habitats, and parks and greenspaces will play an important role in contributing to this.

Through this Plan, we will examine the current arrangements for the management of water in parks and greenspaces, the issues and challenges arising from water and the actions being proposed by the Council to improve its management of water in parks and greenspaces.

Both Haringey and The Mayor of London declared a 'Climate Emergency' in 2019, in response to the growing threat to our health, our planet and our children and grandchildren's future. It is now widely acknowledged that urgent action is required to mitigate the scale and nature of the ecological crisis impacted by climate change. Making radical changes to our lifestyles (travel, energy consumption, diet) and the way we use land and resources is essential, if we are to avoid dangerous climate breakdown and a devastating loss of nature.

Aquatic environments can provide excellent carbon sinks with wetlands being particularly important in contributing to the ability of ecosystems to tackle the climate crisis now facing the world.

The Watercourse and Flood Risk Management Plan is one of several plans and policies that has been developed as part of the Council's overall Parks and Greenspaces Strategy.

It will provide information and direction for the future development, management, and maintenance of water in parks and greenspaces and aim to support the Biodiversity Action Plan as the 'Blue' element of the overall Blue/Green biodiversity network for Haringey.

The Plan will:

- identify the policy context
- look at benefits from water
- identify agencies involved in the management of water and their roles
- identify issues that impact on the management, maintenance, development, and usage of water bodies
- provide an action plan to inform the future approach towards the development, management, and maintenance of water in parks and associated issues
- provide information about current parks and greenspace water bodies and links to key supporting and reference documents

Aims

The Aims are taken from the overall Parks and Greenspaces Strategy.

Inclusion and Wellbeing: Providing inclusive parks and greenspaces that all communities in Haringey can benefit from so that usage and enjoyment of our parks and greenspaces reflects the communities living in Haringey and contributes to improved wellbeing.

Climate Change and Sustainability: Supporting the Council's declaration of a Climate Emergency by reducing the carbon footprint of parks and greenspaces, protecting and promoting biodiversity, and helping educate everyone in Haringey about contributing toward saving the planet.

A Quality Service: Securing investment, improving standards, partnerships, communications, and outcomes

Objectives

The objectives identified below are based upon the issues and challenges identified later in the Plan and support the wider Parks and Greenspaces Strategy Aims.

- To increase access to nature by seldom heard from groups
- To help residents and users better understand water features and their value by developing education and interpretation materials.
- To develop more water features in parks and greenspaces that support nature, increase biodiversity, and contribute to flood relief and urban cooling
- To develop a volunteer training programme that enables volunteers to take on enhanced roles in the development and management of water features
- To improve staff knowledge, skills and performance through guidance and training

- To promote better coordination, communication and liaison between Council departments involved in SuDS schemes in parks and greenspaces, as well as the wider management of water and flood relief
- To improve access to amenities and facilities through a reduction in flooding incidents
- To improve the quality of water features through regular maintenance, water quality testing and appropriate signage

Scope

The Watercourse and Flood Risk Management Plan provides guidance to the Council, its partners, residents and stakeholders on the role watercourses and flood prevention features in parks and greenspaces can play in the delivery of the Local Flood Risk Management Strategy and the Biodiversity Action Plan.

The scope of this plan is limited to areas of parks and greenspaces owned by Haringey Council. However, it is recognised that land under the management of others in the borough also plays a crucial role in the wider prevention of flood risk in the Borough.

Haringey's policies and plans

Wider policy context

National strategies

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.

[The Water Environment \(Water Framework Directive\) \(England and Wales\) Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2017/12/2017-07-27/eng/schedule-1/1/1)

This is the primary legislation for the management of water bodies and is based upon a European directive which aims to protect and improve the water environment.

The WFD divides the water environment into different water bodies. These can include lakes, reservoirs, streams, rivers, canals, groundwater, transitional waters (estuaries) and coastal waters.

The management of flood risk is the major duty required of Haringey council from this legislation. The responsibility for flood risk came into effect through the Flood and Water Management Act 2010

https://www.legislation.gov.uk/ukpga/2010/29/pdfs/ukpga_20100029_en.pdf

The National Planning Policy Framework (NPPF)

The NPPF sets out the government's planning policies for England and how they should be applied. It states that planning policies and decisions should contribute to

and enhance the natural environment by recognising the intrinsic character and beauty of the natural environment, and the wider benefits from natural capital and ecosystem services of trees and woodlands, for example. Specifically, the NPPF provides for the protection of irreplaceable habitats such as ancient woodlands and veteran trees. It also requires planning decisions to contribute to conserving and enhancing the local environment.

The 25 Year Environment Plan 2018

This plan sets out the government's aims and objectives for improving the environment. A central tenet of the plan is to increase tree cover in the UK to meet a target of 12% tree cover by 2060. Protecting and planting trees and woodlands in and around towns and cities is a key objective because of the benefits of urban trees that are set out in 'Vision for a Resilient Urban Forest'.

2020 Environment Bill

The Bill will bring into UK law environmental protections and recovery putting the environment at the centre of policy making. It will make sure that we have a cleaner, greener and more resilient country for the next generation. It includes details on enhancing our greenspaces and legally binding target to be set to halt the decline in species abundance by 2030.

Regional strategies

The London Environment Strategy (GLA 2017)

This strategy sets out a number of ambitions in relation to trees and woodlands including the protection and management of the existing urban forest, increasing canopy cover by 10% from current levels, creating 200 hectares of species-rich woodland by 2050 and encouraging naturalistic approaches to flood water management and climate change adaptation.

It also commits to the preparation of an Urban Forest Plan to identify how this will be achieved, for example, through a major programme of tree planting; larger scale woodland creation projects in the Green Belt; improving the methods and data required to identify locations for tree planting and to monitor change in tree canopy cover; and to support and promote the work of the London Tree Officers Association, the Trees and Design Action Group and other partners.

The London Plan (GLA 2016)

The plan outlines the overarching need for green infrastructure within the city. It recognises the benefits that trees provide and sets planting targets for the next ten years, with an addition of two million trees by 2025. The manifesto committed to an increase in canopy cover from 20% to 25% by 2025 across London. The main aim of these targets was to mitigate for and adapt to climate change.

The plan states that trees and woodlands should be protected, maintained, and enhanced. It advises against removal of street trees, protection of veteran trees and adoption of the 'right place, right tree' principle throughout the planning process.

Biodiversity is also referred to under the London Plan policy 2.18, which states that the Mayor's network of green infrastructure should be designed to deliver a range of benefits, including biodiversity. To support this, Boroughs should ensure that the delivery of local biodiversity action plans should be linked to open space strategies.

The section of the London Plan that deals with the management of London's waterways is the Blue-Ribbon Network.

[Blue Ribbon Network | London City Hall](#)

For Haringey, the River Lea, the New River and the Moselle Brook are part of the Blue-Ribbon Network

Local strategies

Building a fairer, greener borough – Haringey Labour Manifesto 2022-26

Following the local elections in May 2022 the Council's ambition and priorities are based on putting residents at the heart of everything the Council does. For the remainder of 2022 and into 2023, the Council will work with residents to develop the Haringey Local Deal. The Haringey Local Deal will seek to empower communities to make change, putting local people at the forefront of decision-making. The Parks and Greenspaces Strategy will support the delivery of the Haringey Local Deal and in turn the manifesto commitments.

Below we have included extracts from the Manifesto that this plan will help to either directly deliver or support.

Inclusion and Wellbeing

- Community gardening and tree planting on estates and trees
- Co-produce designs for pocket parks, community gardens and street side verges
- Women at the heart of designing parks
- Participatory budgeting to help the Council set its spending priorities
- Contribute to the development of the Young Voices Programme
- Assist in developing a community health and wellbeing network

Climate Change and Sustainability

- Invest in sustainable drainage systems to reduce flooding
- Work to create three brand new nature reserves by 2026 and introduce Sites of Importance for Nature Conservation
- 50% of Council contracts to local business to keep more wealth in the borough

The Local Plan

The Local Plan, which is currently being updated, sets out how all land in Haringey will be used including the approach to be taken towards the provision of parks and greenspaces, sites of importance for nature conservation (SINC's), sports, play, allotments, and trees as well as for housing, employment, transportation etc.

The Local Plan also sets out the Council's policies towards the further deculverting of watercourses.

<https://www.haringey.gov.uk/planning-and-building-control/planning/planning-policy/local-plan>

Haringey Integrated Catchment Management Study

This document was produced in 2018 to help in actively managing flood risk within the Borough. It examines the interaction between drainage networks, watercourses, and surface water both above and below ground.

Many of the large-scale borough wide SuDS projects within Haringey are based on the ICMS (Integrated catchment management study) commissioned in 2018. This report identifies areas of London including Haringey that are at highest risk from flooding.

(Link to be inserted)

Local Flood Risk Management Strategy

This document sets out how the Council seeks to fulfil its responsibilities in managing flood risk in the Borough arising from surface water run-off, groundwater and from some of the smaller watercourses and is the main reference point for finding out information about how the Council approaches the management of flood risk.

https://www.haringey.gov.uk/sites/haringeygovuk/files/20190730_haringey_lfrms.pdf

Haringey Surface Water Management plan.

A document that is key in the management and control of water before or as it enters greenspace. The SWMP outlines the preferred surface water management strategy for Haringey. Surface water flooding describes flooding from sewers, drains, groundwater, and runoff from land, small watercourses and ditches that occurs because of heavy rainfall.

[SURFACE WATER MANAGEMENT PLAN - Haringey & middot; PDF filesurface water management plan drain london london borough of haringey final draft v2.0 - \[PDF Document\] \(vdocument.in\)](#)

Multi-Agency Flood Plan

This document is maintained and updated by the London Borough of Haringey Emergency planning and Business Continuity team and was developed with key partners to ascertain the following:

- the effectiveness and consistency of current flood plans produced by Local Resilience Forums (LRFs) in England
- identifying good practice
- how good practice could be shared across the country
- development of Multi-Agency Flood Plans (MAFPs) allows all responding parties to work together on an agreed coordinated response to severe flooding

Relationship to other PGSS plans

As with all aspects of parks and greenspaces, the management of water is multi-faceted with implications for design, management, programming, and marketing.

However, there is a core and complementary relationship to the Biodiversity Action Plan with water providing a range of habitats that support flora and fauna. The most directly applicable strategies for watercourse and flood risk in greenspaces are listed and briefly summarised below.

The Parks Asset Management Plan

The Asset Management Plan (AMP) aims to identify all hard and soft assets in Haringey parks, to describe the current condition of these assets and the capital and revenue costs associated with their management, maintenance and updating or replacement.

For water the AMP will provide cost information for the management of water and linked assets, information about their current condition, expected life and anticipated replacement costs. For water bodies this includes details about ponds, lakes, rivers and SUD's schemes

Biodiversity Action Plan (BAP)

This plan will aim to protect and enhance biodiversity value across the borough for both water based (blue) and land based (green) flora and fauna. The Plan supports regional, national, and global efforts to halt the decline in biodiversity. It identifies policy and legislation requirements for conserving and enhancing biodiversity and sets targets and actions to achieve these. The correct management and utilisation of water assets will be an important part of the BAP.

Tree and Woodland Plan

The Tree and Woodland Plan will provide information about how Haringey aims to manage trees and woodlands in a sustainable way that enhances quality of life for all species and helps to mitigate climate change.

A key aim of the Plan is to increase tree canopy cover in Haringey, particularly in areas of deficiency.

The Plan will also seek to develop a better understanding of the challenges involved in the management of trees and seek to increase community involvement in new tree planting projects.

Further benefits will include:

- having a more accurate record of the Boroughs tree resources
- quantifying the value and benefits that Haringey's urban forest provides

The correct utilisation of water as an asset is critical in effective maintenance of trees and can significantly reduce both watering and drought related costs.

Community Engagement and Volunteering Plan

The Community Engagement and Volunteering Plan identifies the need to engage with all communities in Haringey to enable them to contribute to the design and management of parks, to develop a range of activities that meet the needs of a wider section of the community and support the further development of parks volunteering activity. The Plan:

- includes actions to support broader engagement and involvement in parks and greenspaces
- provides a clear picture of the current volunteering offer and what might be achieved in the future through volunteering
- identifies barriers to volunteering
- identifies the current capacity of the service and what additional resources are needed to support volunteering and engage communities going forward
- identifies that volunteer activity adds value and expands the scope of what the Council can achieve as its resources are limited

Pesticides and Chemicals Policy

The parks service aims to minimise the use it makes of inorganic chemical herbicides with the long-term aim of removing their use altogether. The use of chemicals or herbicides will only be considered if they have a current license (under UK law), and which are approved for use by the Health and Safety Executive (HSE).

Staff and contractors using chemicals and herbicides will be appropriately trained and provided with appropriate personal protective equipment.

Chemicals generally are extremely toxic in aquatic environments and should be avoided, if possible, with alternatives such as undertaking operations by hand and using biological controls. Before any chemicals are added to aquatic environments a comprehensive report should be provided.

Invasive species policy

Invasive species can be very damaging to native habitats and species and their presence needs to be either prevented or if already present managed and eliminated. The Invasive Species Policy aims to:

- provide a structure for recording, reporting and identifying invasive species
- provide information regarding legal responsibilities

As water provides a very efficient transport route for invasive species it is important that anyone working in water courses is aware of the risks posed by invasive species and carries out their roles in a non-damaging way. For volunteers, this can include providing training.

All contractors/operations staff will need to be aware of the Council's Policy should they undertake work involving water courses.

Why does Haringey need a Watercourse and Flood Risk Plan for parks and greenspaces?

There are four main reasons for developing this Plan.

- To help to mitigate the flood risk and increased temperature impacts of Climate Change.
- To support and enhance the natural environment.
- To improve the management of water features, water quality and water-based habitats.
- To facilitate better public engagement and public understanding about watercourses.

On a global level access to fresh water of sufficient quality is fundamental to the survival of humans and other species on earth, water quality has a huge impact on the local flora and fauna and can significantly impact both the biodiversity and aesthetics of open spaces. Additionally, polluted water can cause significant health and safety issues and Blue Green Algae has caused several domestic animal deaths in recent years.

Urbanisation together with climate change has led to increased surface water in Towns and Cities. In London, this surface water cannot be accommodated by the existing dated storm water drainage systems leading to flooding issues that are predicted to increase in the future.

In 2018, the Council commissioned an Integrated Catchment Management Study to better understand flood risk within Haringey and how this could be managed.

Flooding can lead to damage to property and infrastructure as well as placing at risk people's safety and health. In open spaces the impact can range from impacts on the creation, maintenance and stability of habitats, flooded sports facilities and unusable event space.

Alternatively, the management and development of aquatic environments in parks can create large scale carbon sinks, provide attractive water features, i.e., river sidewalks and seating areas, improve biodiversity and wildlife assets, enhance community involvement and interest and potentially can help with the easier monitoring of water quality and pollution incidents.

To mitigate possible flooding within Haringey, measures need to be incorporated to remove surface water faster and to redirect it away from infrastructure. When these two actions can be combined it helps to reduce pressure on the current drainage systems. In open spaces and there is the opportunity for water to be directed into the natural environment where it can be utilised for a variety of purposes. However, this

redirection needs to be considered as part of an overall Sustainable Urban Drainage System (SuDS) strategy for the site to effectively utilise and/or control the increased volume of water and any potential negative impacts that may occur.

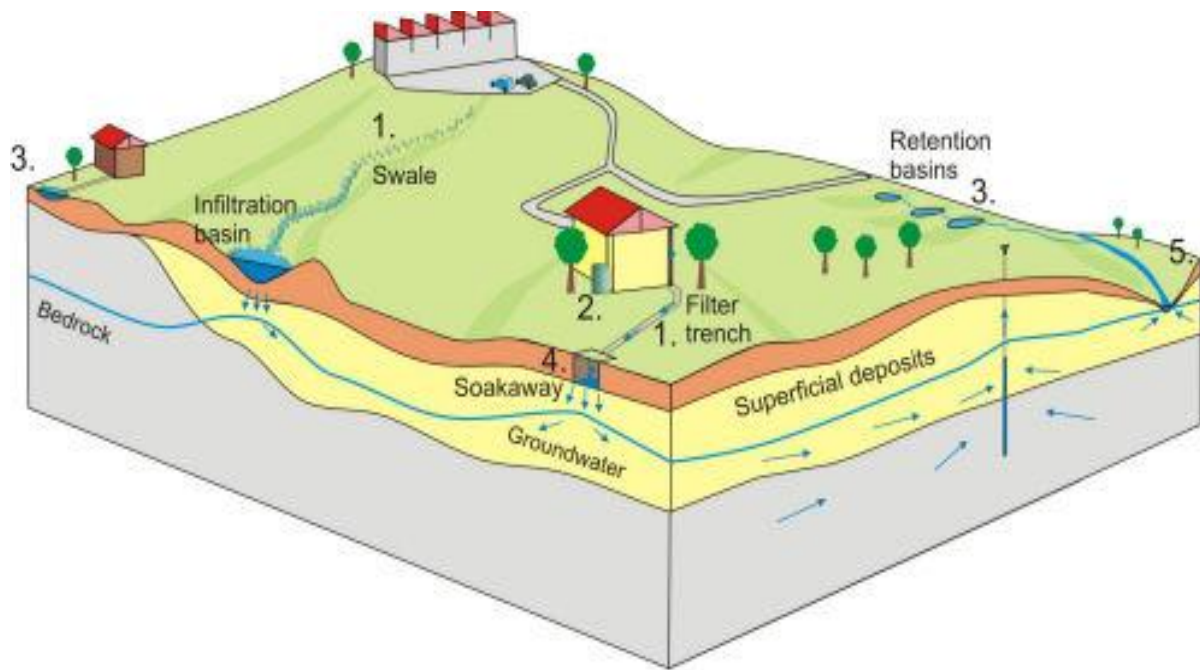
Haringey is a rapidly developing borough with extensive regeneration. Tottenham Hale alone will generate 5,000 new homes soon. The resulting increased urbanisation created from regeneration, combined with climate change is resulting in greater surface run-off. Parks can utilise this run-off by developing features and assets, thereby creating more attractive spaces leading to opportunities for improved health, aesthetics and useability.

Other flooding related impacts include:

- damage to or the destruction of habitats
- making sports pitches unplayable
- damaging other parks infrastructure such as paths

In natural environments, rain falls on permeable surfaces and soaks into the ground through infiltration, or naturally flows into water bodies through natural landscaping. In urban areas where many surfaces are sealed by buildings and paving and in Haringey's case where the systems for the management of water were created for a smaller population than exists today, natural infiltration is limited as the landscape has been substantially altered by man-made structures.

As a result of climate change and with increased urbanisation, the capacity of these (man-made) systems is often exceeded, resulting in downstream flooding and deterioration in river water quality caused when the foul sewers are overwhelmed leading to a release of dirty water into rivers. Sustainable drainage systems aim to alleviate these problems by storing or re-using surface water either at source or at a pre-defined destination, by decreasing flow rates to watercourses and by improving water quality by filtration or other means.



The above diagram shows the flow of water through sustainable drainage systems into the subsurface during a storm event.

Key:

1. Surface water flows through swales and filter trenches that remove pollutants.
2. The peak river discharge is delayed and reduced by storage of water for re-use.
3. Storage in ponds.
4. Infiltration of water to the ground through infiltration basins and soakaways.
5. Improved quality of water in rivers and decreased peak river discharge.

How SuDS work

SuDS come in a complex variety of forms and exact approaches and applications will depend on the specific situation and available resources, in broad terms SuDS can be thought of in the four categories below, performing the key functions outlined. One or several of these approaches may be employed.

- Source control methods decrease the volume of water entering the drainage/river network by intercepting run-off water on roofs for subsequent re-use (e.g., for irrigation) or for storage and subsequent evapotranspiration (e.g., green roofs).
- Pre-treatment steps, such as vegetated swales (ditches) or filter trenches, remove pollutants from surface water prior to discharge to watercourses or aquifers.
- Retention systems delay the discharge of surface water to watercourses by providing storage within ponds, retention basins and wetlands for example.
- Infiltration systems, such as infiltration trenches and soakaways mimic natural recharge, allowing water to soak into the ground.

Biodiversity

In line with the aspirations of the Biodiversity Action Plan, the Council wants to provide as much high quality and biodiverse rich habitat as possible within the available resources and by modifying how we use rainwater we can significantly improve biodiversity through:

- Standing water, e.g., ponds
- Planting schemes, e.g., wildflower and other specialist meadows
- Wildlife corridors through the creation of swales, etc
- Collection and storage of water to assist the long-term management of SuDS schemes,
- Direct source of water on site

Development

Urbanisation has generated an increase in pollution that in turn has reduced air quality. SuDS schemes, with careful design, can act as both a sink for Carbon, and absorb noise pollution. By employing proactive management of Aquatic environments, we can make greenspaces:

- more attractive and resilient to climate change
- better able to support wildlife and nature
- help to inform people about the impacts of climate change
- reduce the risk of waterlogging, local flooding and water pollution
- build greater resilience and response to the climate and ecological emergencies
- improve parks and greenspaces enabling more people to exercise, play, meet and socialise

Who is involved in managing, developing, and maintaining water bodies and SuDs schemes?

The management of water is multi layered with different statutory and voluntary organisations involved. The organisations below are some of the main contributors.

External to Haringey

The Department for the Environment, Food and Rural Affairs

This Central Government Department is responsible for the development and management of relevant legislation for water and sewerage in England including:

- standard setting
- drafting of legislation
- creating special permits

The Environment Agency

Is a national agency that oversees the management of water on behalf of Central Government acting as the regulator of the water and sewerage sector. Within England the Environment Agency is responsible for:

- regulating major industry and waste
- treatment of contaminated land
- water quality and resources
- fisheries
- inland river, estuary and harbour navigations
- conservation and ecology

They are also responsible for managing the risk of flooding from main rivers, reservoirs, estuaries and the sea.

Thames Water

Thames Water is responsible for the public water supply and wastewater treatment in Haringey as well as London as a whole. They manage and maintain an extensive infrastructure system to enable them to do this. Thames Water are a partner for the Council in:

- SuDS schemes
- misconnected pipes, leaks and associated issues
- leading on and contributing to large scale projects

Thames 21

Thames 21 is a volunteer-based organisation active in Haringey and developed from a partnership programme supported by:

- Keep Britain Tidy
- The Port of London Authority
- The Environment Agency
- Thames Water
- British Waterways
- The Corporation of London and 19 local authorities

The organisation seeks to act as the voice for London's waterways, working with communities to improve rivers and canals for people and wildlife.

They engage annually with thousands of volunteers to clean and green the capital's 400-mile network of waterways and provide much added value to communities in the management of water. Promoting safe and equitable access to waterways by:

- undertaking monitoring and research into the health of our local rivers
- delivering environmental education to children and adults
- campaigning against waterway pollution and promoting sustainable behaviour

- accrediting and training community groups to deliver safe and sustainable waterway improvement events

The Lower Lea Catchment Partnership

The Lower Lea Catchment Partnership is a local group of people and organisations who are working to improve the Lower Lea for people and for wildlife. The partnership meets formally three times a year to review progress and discuss future projects; more informal meetings take place more regularly.

The partnership is supported by Thames 21

The Conservation Volunteers (TCV)

TCV are involved in delivering conservation activities within the borough, mainly with the aim of supporting the BAP, however there is a considerable overlap with water bodies in greenspaces and TCV are also involved on occasion in water body maintenance.

Haringey Rivers Forum

The Haringey Rivers Forum is a subsidiary group of the Friends of Parks Forum and works with partners listed elsewhere in this section to improve the Boroughs water courses.

They informally act as champions for Haringey's rivers, engage in partnership working, bring resources into the borough and are a key group to engage with when developing schemes.

A practical volunteer initiative that HRF supports is the 'Water Squad.'

Friends of Parks (Individual sites) and community organisations

Where a new water body or change to an existing water body is proposed this will have implications for the park in question. Therefore, the relevant Friends group should always be consulted. Some Friends groups and other community organisations such as the Parkway Malvern residents Association take an active role in the management and maintenance of water bodies.

Within the Council

The Planning Department who are responsible for land use within Haringey through their management of the Local Plan and for ensuring that planning applications comply with the Local Plan

The Regeneration Service who can support the development of new water features as a part of area-based regeneration and look to work with Highways to create SuDS schemes where viable within new projects.

The SuDS Team which is based within the Highways Department.

Environmental Health who are responsible, in partnership with Thames Water, for the investigation and removal of misconnections.

The Parks Project Team where individual officers support the management of existing water features as well as contributing to the development of new features

Current water bodies in Haringey

Water bodies in greenspaces in Haringey vary enormously, ranging from small ponds, through to rivers, both exposed and culverted. Additionally, many sites now have SuDS schemes in place and more SuDS schemes are being actively considered as part of wider environmental improvements or as regeneration projects.

Appendix 2 of this Plan includes a table that summarises the current situation in Haringey.

Opportunities for further developments

SuDS are now being actively considered as a key component of many development schemes in Haringey.

Scheme development can be complex with issues about ownership, management responsibilities and scheme detailing to be worked through, sometimes requiring significant expenditure on studies and investigations to help inform the best approach to be taken.

Within Haringey parks there are projects currently being developed or proposed at:

- Chestnuts Park
- Markfield Park
- Priory Park
- Queens Wood
- White Hart Lane Recreation Ground

Scheme identification can come from a variety of sources both national and local and from external organisations and internal projects. For example, Thames 21 is currently working on a road run-off project ascertaining how polluted runoff can be mitigated using Greenspace.

Key issues and challenges associated with developing, managing, and maintaining water bodies and SuDs

Developing Skills and resources to better manage and maintain water features

The management of water and the hard and soft assets associated with water in parks and greenspaces is a challenge for the Parks Service due to a lack of designated resource, a lack of expertise and on some occasions, of management plans tailored to inform the required approach.

The current operational parks department has a large workload and most of this workload is performed using traditional management approaches, i.e., cutting grass short, strimming edges pulling out weeds.

For the management of water features, a different approach is needed that focuses more on ecological considerations that can often require longer establishment periods, less frequent intervention, greater knowledge of wet habitats and a management and maintenance regime often specifically tailored to the site

In Haringey this specialised knowledge and approach is not currently available widely enough within teams, especially considering the increasing amount of these schemes.

Water quality monitoring

There is a dual system of drainage in Haringey with rainwater being dealt with through surface water drainage systems and foul water from households and businesses through a separate foul water system. Misconnections, where households and businesses connect drainage to surface water drainage systems rather than foul water systems are a long-standing problem for the Borough and the result is a negative impact on water quality in water courses such as the Moselle Brook that flows through Lordship Recreation Ground.

Responsibility for water quality management and monitoring are divided between Thames Water and the Council.

Thames Water is responsible for carrying out initial investigations to identify misconnections and for advising owners or occupiers that they have misconnected and need to connect to the appropriate system. However, where owners and occupiers do not respond, it becomes the responsibility of the Council to take action to enforce.

It is an ongoing issue with new misconnections occurring as existing ones are dealt with.

The impact of misconnections can be that water courses become polluted and start smelling unpleasant as well as potentially off putting for communities in areas of the Borough who are considering further de-culverting initiatives.

Monitoring of the Moselle Brook within Lordship Rec indicates that water quality is improving following remedial actions to improve quality

Better understanding the impact of existing schemes

Associated with both issues above, there has been limited ability to learn about the impact of introducing new water features such as de-culverting and SuDS.

Schemes have historically been implemented on the basis that they contribute to enhanced biodiversity, habitat creation and restoration and the management of flood

risk but there is very limited post implementation monitoring and as a result information available to demonstrate the positive impact of schemes, learn what has worked well and what hasn't and help in making the case for further projects.

Associated with this, there would be benefits from providing more information about the benefits of schemes to aid public understanding and appreciation.

Funding and resources

The capital costs and complexity associated with bigger schemes can make these schemes expensive with considerable investment needed for survey and other investigatory work. It should be noted however, that these schemes can be funded as part of larger national and local initiatives led by external agencies who have water retention and SuDS objectives as primary aims.

Potentially an even greater challenge is to identify the required funding for effective management and maintenance as this can require both additional revenue funding and capital funding where major works are required such as for the Moselle Brook.

Associated with both is that the management and development of water bodies can be highly specialised.

There are however some indications that specialist engineering companies and academic institutions may provide pro-bono support and expertise and this is an area that might be investigated further.

Better coordination and communication between Council services

As described earlier in this document, there are a number of Council services who contribute towards the development and ongoing management of water features both within and external to parks.

Feedback indicates that the community feels that more could and should be done by these different services to work in a more collaborative and joined up way and to work more collaboratively with the community

Achieving improved internal working amongst Council services should lead to benefits in the quality and contribution made for flood alleviation and biodiversity from water features and for the Council's ability to work more effectively with statutory, voluntary and community partners.

Natural versus engineered approaches to flood risk

Strongly related to other issues particularly, that of better coordination, is the need within the Council to find the optimum balance between nature led approaches and engineering led approaches.

Often the lead and the funding for SUD's schemes can originate from more engineering orientated approaches.

Lack of access to nature

Both nationally and in Haringey, communities living in more deprived areas have less access to natural environments.

In Haringey there is substantially more greenspace in the west of the Borough, whereas there is much more deprivation in the east.

It has also been found from external research, that natural environments are more popular with people of a white ethnic origin than people of a black or Asian ethnic origin.

The Council wants to better understand the views of a range of groups whose voices are seldom heard from in a parks and greenspaces context to better understand the needs of groups so that the overall parks and greenspaces offer, including for watercourses, can demonstrably meet the needs of all Haringey communities

Community impact

De-culverting, SuDS and other new water features all involve physical changes to the environment which for some residents may be unwelcome and/or effect their existing usage and enjoyment. For this reason, and because it is established good practice, any new schemes should involve meaningful engagement and consultation with affected communities.

Public access/safety

Watercourses in public open spaces always need to consider the question of access to the watercourse. From an ecological perspective inappropriate or over-use by both people and dogs can cause damage to ecologically important habitats that can become little more than mud banks. Also, water bodies can present health and safety risks to the public.

In consequence, signage and or fencing may be needed to both protect the watercourse and its surrounding habitat and to keep the public safe.

Volunteering

As evidenced by Thames 21, by the establishment of the Haringey Rivers Forum and by the numbers of people who become involved as Friends in Haringey parks, volunteers make an important contribution both in the development of schemes and in their subsequent care and maintenance.

Volunteering is also a source of community action and can help in empowering communities to become more involved and take greater control over local affairs.

The contributions made by volunteers are valuable in several ways including:

- the expertise that some volunteers can offer
- the enhanced levels of care and maintenance that volunteers make possible
- for the wider communities whose usage and enjoyment of water courses and water features is enhanced by volunteer efforts
- for the volunteers themselves who can learn new skills and achieve greater wellbeing from their inputs

However, volunteering is not a substitute or alternative to paid activity and should be focused on seeking to add value. However, volunteers can find that tasks they have taken on become burdensome or as the membership of groups changes over time the group and the individual volunteers may have different volunteering priorities from those originally taken on.

Notwithstanding the above, volunteers are a major benefit and where volunteers are involved, projects should consider the following before commencement:

- volunteering options/availability considered at an early stage of project inception
- stakeholders and Community groups included at the pre-planning stages
- projects have realistic and workable long-term strategies
- potential volunteers and or work parties are included at an early stage and any training identified and undertaken
- the exact form of water retention, storage and usage is carefully considered for accessibility by volunteers
- volunteering support should be identified early, for example through Thames 21 and the Haringey Rivers Forum

Action plan

A draft Action Plan in support of this Watercourse and Flood Risk Management Plan has been developed.

The Action Plan demonstrates the links that exist between the overall Parks and Greenspaces Strategy Aims, the Objectives of the Watercourse Plan, the issues and challenges that the proposed action is seeking to address, what the proposed action is and how it might be resourced

Aim	Objective	Issue/Challenge	Action	Resources
Inclusion	To increase access to and appreciation of nature by seldom heard from groups	Lack of access to nature by more deprived communities and other seldom heard from groups	Develop a programme of activities and events that showcases and supports increased usage and involvement by seldom heard from groups including activities to	Community Engagement and Partnership Officer Greenspace Volunteering Officer External partners

Aim	Objective	Issue/Challenge	Action	Resources
			involve communities in nature	
Inclusion and Climate change and sustainability	To help users better understand water features and their value by developing education and interpretation materials	Helping the public to obtain a better understanding of the contribution that water features make to mitigating climate change and overall quality of life	Developing education and interpretation materials to support public education and appreciation of water in green space	Community Engagement and Partnership Officer Greenspace Volunteering Officer Communications External Partners
Climate change and sustainability and a Quality Service	To develop more water features in parks and greenspaces that support nature, increase biodiversity and contribute to flood relief and urban cooling	The development of more watercourses and water features to provide flood risk mitigation and biodiversity benefits Improved drainage in parks and greenspaces	Work with Partners to identify additional suitable schemes Work with the SuD's team and other partners to develop further SuD's schemes	All relevant Council services. External voluntary and community organisations Parks project officers Nature Conservation Officer
A Quality service	To improve staff knowledge and skills through guidance and training.	To improve staff knowledge and ability to manage water features to a higher standard	Identify appropriate training through the Workforce Plan	Operational management Project Officers Nature Conservation Officer
A Quality service	To improve the quality of water features through regular maintenance, water quality testing and appropriate signage	Improving the management of existing and future water bodies	Developing a planting guide for water bodies. Developing further maintenance regimes for water bodies	Project officers Nature Conservation Officer. Operations Team

Aim	Objective	Issue/Challenge	Action	Resources
A Quality service	To promote better coordination, communication and liaison between Council departments involved in SuDS schemes in parks and greenspaces, as well as the wider management of water and flood relief	Ensure that more effective coordination and communication and liaison take place between internal Council departments to improve the overall approach taken by the Council towards the management of water including policy, planning, funding, consultation and engagement, management and maintenance and benefits realisation	Establish Inter-departmental coordinating group, agree terms of reference and annual programme of topics to be covered and meetings schedule	Relevant managers from Parks, Planning, SuD's team etc
A Quality service	To develop an enhanced volunteer training programme that enables volunteers to take additional roles in the development and management of water features	Better support for volunteers and volunteering that will result in better managed water features and greater community benefits	Updated volunteer training programme to be developed with partners	<p>Greenspace volunteering officer</p> <p>Community Engagement and Partnership Officer</p> <p>External partners</p> <p>Nature Conservation Officer</p> <p>TCV</p>

Aim	Objective	Issue/Challenge	Action	Resources
				Rivers Forum and Friends groups
A Quality Service	To improve the quality of water features through regular maintenance, water quality testing, and appropriate signage	<p>Improved management.</p> <p>Greater resourcing for maintenance activity.</p> <p>Tackling misconnections</p> <p>Education/ interpretation materials.</p>	<p>Developing additional management plans for water features.</p> <p>Allocate resources and develop a programme of cyclical maintenance</p> <p>Continue to work with Environmental Health and Thames Water to monitor and rectify misconnections</p> <p>Review signage in parks for water features as part of the Marketing and Communications Plan</p>	<p>Nature Conservation Officer</p> <p>Parks Project Officers</p> <p>Asset Management Plan</p> <p>Thames Water</p> <p>Environmental Health</p> <p>Marketing and Communications Plan</p>
A Quality Service	To improve the quality of water features through regular maintenance, water quality testing, and appropriate signage	Better understanding the impact of existing schemes.	Investigate options to find out more about the impact of current schemes as a means to improving the management of current schemes and incorporating learning in the approach towards future schemes	TBC

Appendices

Appendix 1

Summary of SuDS and aquatic assets in Parks and Greenspaces within Haringey

Site name	Type of water body	Owned by	Managed by	SuDS Proposed	SuDS Existing	Site issues e.g., flooding
Duckett's Common	n/a	Haringey Council	Haringey Council		yes	Heavily urbanised leading to frequent flooding issues
Finsbury Park	Boating lake	Haringey Council	Haringey Council	Management plan with future proposals		Historical leak. Management plan to be prepared
Finsbury Park	River (New River)	Thames Water	Thames Water			
Stationers Park upper pond	Wildlife pond	Haringey Council	Haringey Council/ Friends/ TCV		yes	New scheme has recently been installed with new liner and planting
Stationers Park Lower Pond	Wildlife Pond	Haringey Council	Haringey Council/ Friends/ TCV		yes	This pond has developed over time and needs appropriate management
OR Tambo Rec. Ground	Wildlife Pond	Haringey Council	Friends		yes	Non directly, however, site wide flooding issue remediation

						may take the pond area into consideration
OR Tambo Rec. Ground	Storage tank	Thames Water	Thames Water			Flood alleviation
Coldfall Wood	Stream and culvert	Haringey Council	Haringey Council and Friends			Issues with the size of culvert opening and falling leaves blocking it, Options being explored.
Crescent Road Beds	SuDS	Haringey Council	Haringey Council		Yes	Improve drainage and mitigate flooding
Crescent Road Gardens	SuDS	Haringey Council	Haringey Council		Yes	Improve drainage and mitigate flooding
Queens Wood	Moselle Stream	Haringey Council	Haringey Council			Scheme currently under development
Rectory Gardens	SuDs	Haringey Council	Haringey Council, Friends and Thames 21		Yes	
Avenue Gardens (Park Avenue)	New River Culvert	Thames Water	Thames Water			
Bridge Row Beds	New River Culvert	Thames Water	Thames Water			
Finsbury Gardens	New River Culvert	Thames Water	Thames Water			
Nightingale Gardens	New River Culvert	Thames Water	Thames Water			

Springfield Community Park	Connected wildlife Ponds	Haringey Council	Friends and Historically TCV			
Woodside Park	Storage tank	Thames Water	Thames Water			
Priory Park	Flood attenuation tank and deculverting	Thames' s water	Thames Water?			
Down Lane Park	Moselle Culverted	Thames Water	Thames Water			River very deep underground
Lordship Recreation Ground	Deculverted Moselle Lake	Haringey Council	Haringey Council, through Ebsford the contractor and Friends Group		yes	Complex site with a range of issues to mitigate as the management programme proceeds
Brunswick Park	Culvert	Thames Water	Thames Water			
Markfield Park	Culvert, flood relief channel, pond					
Downhills Park	Pond	Haringey Council	Friends of Downhills Park			Friends of Downhills have indicated that their management role is a burden
Tottenham Cemetery	River Moselle					

Appendix 2: Flowchart of SuDs routeways

