

STRATEGIC ENVIRONMENTAL ASSESSMENT SCREENING REPORT



PREPARED FOR THE LONDON BOROUGH OF HOUNSLOW

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EXECUTIVE SUMMARY

The purpose of this Strategic Environmental Assessment (SEA) is to provide a high level of environmental protection by ensuring the potential environmental impacts of any plan or programme are evaluated in the early stages of their development.

The SEA consists of five stages, and this Report is the outcome of Stage A, the 'Screening Assessment'. The objective of this Screening Report is to clearly identify and understand the potential impact to the environment based on the outcome of the objectives and associated actions presented in the Local Flood Risk Management Strategy (LFRMS) and its associated Action Plan. Through this screening process an informed decision on whether the LFRMS requires a full SEA can be determined.

The baseline indicators used in this assessment were as follows:

1. Biodiversity, flora and fauna
2. Air quality
3. Infrastructure assets
4. Noise Pollution
5. Population
6. Soil and Water
7. Health
8. Historic and Cultural environment.

A number of local environmental issues affecting Hounslow were identified in this assessment which have potential impacts for flood risk management. These are outlined in Section 4.2. and were used to develop the SEA objectives, as follows:

- **SEA 1:** Conserve and enhance biodiversity, flora, and fauna in Hounslow.
- **SEA 2:** Prevent any decline in the quality or quantity of water resources and enhance the WFD status of rivers where possible.
- **SEA 3:** Increase physical activity amongst Hounslow residents.
- **SEA 4:** Provide support to vulnerable and deprived communities.
- **SEA 5:** Improve air quality and reduce CO₂ by establishing more green travel networks.
- **SEA 6:** Conserve, and where appropriate enhance, the significance of heritage assets (both designated and non-designated) and their setting.

The screening analysis of the SEA objectives against the LFRMS objectives indicates that the LFRMS and its associated actions are not likely to have any negative impact on the SEA objectives. The LFRMS objectives are predicted to have either a neutral or positive impact on the SEA objectives. In conclusion, the LFRMS has suitably considered the delivery of its actions regarding local environmental issues and no negative impact is predicted. Therefore, the assessment is not required to progress onto the appropriate assessment stage and the LFRMS does not require a full SEA.

This Screening Report has undergone a statutory consultation with Natural England (NE) and Historic England (HE). The feedback received from this consultation has been incorporated into this version of the report. Feedback from the Environment Agency will be incorporated into the final versions post-public consultation.

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ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
AQS	Air Quality Standard
BAME	Black, Asian, Minority and Ethnic
BAP	Hounslow's Biodiversity Action Plan
EA	Environment Agency
GLA	Greater London Authority
HE	Historic England
HRA	Habitats Regulations Assessment
Hounslow	London Borough of Hounslow
JSNA	Joint Strategic Needs Assessment
Lden	Day-evening-night level
LFRMS	Local Flood Risk Management Strategy
LLFA	Lead Local Flood Authority
NFCERMS	National Flood and Coastal Erosion Risk Management Strategy
NBS	Nature Based Solutions
NE	Natural England
ONS	Office for National Statistics
RMA	Risk Management Authority
SEA	Strategic Environmental Assessment
Statutory Consultees	Environment Agency, Natural England, and Historic England
TWUL	Thames Water Utilities Limited
ULEZ	Ultra Low Emission Zone
WHO	World Health Organisation
WWT	Wildfowl and Wetland Trust

1 INTRODUCTION

1.1 Purpose of Screening

The purpose of a Strategic Environmental Assessment (SEA) is to provide a high level of environmental protection by ensuring that the environmental impacts of a proposed plan or programme are considered in the early stages of its development with a view to promoting sustainable development. The [European SEA Directive \(2001\)](#) was adopted by UK law in 2004 and is implemented through the [Environmental Assessment of Plans and Programmes Regulations 2004](#). The SEA regulations require a report to be prepared, and made available to the public, which identifies and assesses the likely significant effects on the environment of implementing any plan or programme.

The purpose of this SEA Screening Report is to clearly identify and understand the potential impact to the environment based on the outcome of the objectives and associated actions presented in the Local Flood Risk Management Strategy (LFRMS) and its associated Action Plan. Through this screening process an informed decision on whether the LFRMS requires a full SEA can be determined.

1.2 Methodology

There are five stages to a SEA which each have specific objectives and tasks. These are summarised in *Table 1-1*. This document is the main outcome from Stage A and so the tasks outlined for this stage will be the focus for this assessment. Progression onto the following stages is only required if potential significant environmental impacts are identified at the Screening Stage. Stage B tasks focus on collecting all the relevant information in preparation for the Environment Report, which is drafted in Stage C. Stage D involves the public consultation which will review the SEA alongside the plan, programme, or strategy it accompanies. The outcome of this consultation is evaluated at Stage E. This process should be continuous, with the outputs reviewed accordingly.

Table 1-1 Summary table of stages in a SEA

SEA Stages		SEA Task
Screening Stage	Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope.	A1: Identifying other relevant policies, plans and programmes and environmental protection objectives.
		A2: Collecting baseline information.
		A3: Identifying environmental issues and problems.
		A4: Developing the SEA objectives and framework.
		A5: Consulting on the scope of the SEA.
Full Assessment Stages	Stage B: Developing and refining options and assessing affects.	B1: Testing the plan objectives against SEA objectives.
		B2: Developing strategic alternatives.
		B3: Predicting the effects of the plan, including alternatives.
		B4: Evaluating the effects of the plan, including alternatives.
		B5: Mitigating adverse effects.
	B6: Proposing measures to monitor the environmental effects of implementing the plan.	
Stage C:	C1: Preparing the environmental report.	

SEA Stages		SEA Task
	Preparing the environmental report.	
Stage D: Consulting on the draft strategy and the SEA report.		D1: Consulting on the draft strategy and environmental report with the public and consultation bodies.
		D2: Assessing significant changes.
		D3: Making decisions and providing information.
Stage E: Monitoring the significant effects of implementing the strategy.		E1: Developing aims and methods for monitoring.
		E2: responding to adverse effects.

1.3 SEA Consultation Questions

To fulfil the obligations of this SEA Screening Report, a list of questions has been collated to be directed at the relevant statutory consultation bodies. The statutory consultees responded to these questions prior to the public consultation phase of this document. This ensured that the screening assessment satisfied the SEA requirements. Each set of questions corresponds to the tasks outlined in Stage A of the SEA methodology.

Task A1: Legislation, plan and policies

1. Do you feel we have included all relevant policies, documents, plans and legislation that relate to or could affect the Local Flood Risk Management Strategy?
2. If not, which policies do you think have been overlooked?

Task A2: Baseline data

3. Do you agree that the baseline data we have included herein is appropriate to the Local Flood Risk Management Strategy that is being developed?
4. Do you have, or know of, any additional baseline indicators or data that should be added into this SEA screening assessment?
5. As far as you are aware, is the baseline data correct?

Task A3: Environmental issues affecting the borough

6. Do you agree that these are the main environmental issues relating to the strategy affecting Hounslow?
7. Are there any other environmental issues that you believe should be added into this SEA? If so, please give details.
8. Do you believe that any of these environmental issues do not affect Hounslow? If so, please give details.

Task A4: Proposed SEA objectives

9. Do you agree that these proposed SEA objectives are suitable in the context of Hounslow?
10. Are there any other SEA objectives that you believe should be included? If so, please give details.

Task A5: SEA methodology

11. Do you have any comments on the proposed method for the assessment of the SEA objectives against the Local Flood Risk Management Strategy objectives and actions?
12. Do you agree with the screening analysis of each of the Local Flood Risk Management Strategy strategic objectives? If not, please give reasons as to why you would screen a certain objective differently.

Conclusion and further comments

13. Do you have any comments on the conclusions that we have made in this SEA screening report of the Local Flood Risk Management Strategy?
14. Do you have any additional comments or suggestions for this SEA screening report?

1.4 Local Flood Risk Management Strategy

1.4.1 LFRMS Summary

Under the [Flood and Water Management Act 2010 \(FWMA\)](#), the London Borough of Hounslow (Hounslow) has the role of Lead Local Flood Authority (LLFA) and is responsible for managing local flood risk within the borough. As LLFA, Hounslow are required to produce and maintain a Local Flood Risk Management Strategy (LFRMS) which is typically updated every six years. The purpose of the LFRMS is to outline how the LLFA and other stakeholders will manage flood risk in the borough, including flooding from sources such as surface water, groundwater, and ordinary watercourses. The Strategy sets out the Hounslow strategic objectives for managing flood risk from all sources, and the actions that will be taken to achieve them are outlined in an accompanying Action Plan.

1.4.2 Local Area Information

Hounslow is located in west London and covers an area of 56 km². It shares its borders with the London Boroughs of Ealing to the north, Hillingdon in the north-west, Richmond upon Thames to the south and Hammersmith and Fulham to the east, with Surrey County Council to the west. The main rivers in Hounslow are the River Thames, River Crane, River Brent, Duke of Northumberland's River, Lower Feltham Brook and Felthamhill Brook.

1.4.3 Strategy Objectives

A list of the strategic objectives of the LFRMS are listed below. These objectives have been developed in line with the [National Flood and Coastal Erosion Risk Management Strategy \(NFCERMS\)](#)

- A. Establish and maintain collaborative partnerships with key internal and external stakeholders, such as other Hounslow departments, utility companies, and other risk management authorities to maximise joint- working opportunities.
- B. Pro-actively encourage holistic and sustainable, nature-based solutions that manage flooding and deliver wider environmental, social, and economic benefits.
- C. Engage, educate, and empower local communities to take action and contribute to the management and reduction of flood risk, including through the uptake of flood resilience.
- D. Seek to identify funding and resources available for flood risk management, targeting resources where they could have the greatest effects.

1.5 Consultation Process

The SEA Screening report is required to go through a consultation process which involved three statutory consultation bodies: the Environment Agency (EA) and Natural England. This statutory consultation process was carried out in April 2022. The feedback from this consultation stage has been incorporated into this updated version of the SEA. A public consultation will begin in May 2022 of all the LFRMS documents, and any feedback will be incorporated into the final versions of these documents accordingly.

The 14 SEA Consultation Questions presented in *Section 1.3* will be repeated under their relevant sections within this report.

2 IDENTIFICATION OF RELEVANT POLICIES

2.1 Task A1 Summary

The purpose of Task A1 is to identify any relevant policies, plans and programmes and environmental protection objectives. To do this a list of all relevant policies, documents and legislations that could impact upon the LFRMS and its actions in relation to the SEA objectives have been compiled.

2.2 Relevant Policies

Policy and legislation must be considered at a range of levels including, international, national, regional, and local. These policies are presented in *Table 2-1*.

Table 2-1 Table of relevant policies to the SEA

International
EU Biodiversity Strategy for 2030 (2020)
EU Birds Directive (2009)
EU Floods Directive (2007)
EU Habitats Directive (1992)
EU Water Framework Directive (2000)
UNESCO World Heritage Convention (1972)
National
Ancient Monuments and Archaeological Areas Act 1979 (legislation.gov.uk)
Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011)
Civil Contingencies Act (2004)
Climate Change Act (2008)
DEFRA: 25 Year Environment Plan (2018)
Environmental Protection Act (1990)
Environment Act (2021)
Future Water: The Government's Water Strategy for England (2008)
Flood Risk Regulations (2009)
Flood and Water Management Act (2010)
Meeting our Future Water Needs: A National Framework for Water Resources (2020)
National Planning Policy Framework (2012, revised 2021)
National Planning Practice Guidance (2016, revised 2021)
National Standards for Sustainable Drainage Systems (2011)
Natural Environment and Rural Communities Act (2006)
Planning (Listed Buildings & Conservation Areas) Act (1990)
The Pitt Review - Lessons learned from the 2007 summer floods (2007)
The SuDS Manual C753F (2007)
Water Act (2014)
Regional
London Regional Flood Risk Appraisal (2018)
Mayor of London's Climate Change Adaptation Strategy (2011)
South East Inshore Marine Plan (2021)
Thames Catchment Flood Risk Management Plan (2009)
Thames Estuary 2100 Flood Risk Management Plan (2012)

Thames River Basin District, River Basin Management Plan (2015)
The London Plan (2021)
West London Strategic Flood Risk Assessment (2018)
Local
Brent Catchment Partnership Action Plan
Crane Valley Partnership Strategy
Draft Green and Blue Infrastructure Strategy (2021)
Draft Hounslow Nature Recovery Action Plan (2021)
Hounslow's Air Quality Action Plan (2018)
Hounslow's Biodiversity Action Plan (2011)
Hounslow's Climate Emergency Action Plan (2020)
Hounslow's Greener Borough Framework (2020)
Hounslow's Green Recovery Strategy (2021)
Hounslow's Local Plan (2015-2030)
Hounslow's Preliminary Flood Risk Assessment (2011)
Hounslow's Surface Water Management Plan (2021)
Kew World Heritage Site Management Plan (2019-2025)
Local Plan Reviews

Questions to be asked during the consultation exercise based upon the screening analysis conducted:

1. Do you feel we have included all relevant policies, documents, plans and legislation that relate to or could affect the Local Flood Risk Management Strategy?
2. If not, which policies do you think have been overlooked?

3 BASELINE INFORMATION

3.1 Task A2 Summary

Task A2 is to collect baseline information. To do this baseline information on Hounslow will be collated from a variety of sources including the [Office for National Statistics \(ONS\)](#), the EA and [Hounslow's Data Hub](#). This information will be used to determine any key environmental issues that may exist in Hounslow. Although the SEA Screening Report is primarily focused on issues and effects from an environmental perspective, additional social and economic baseline indicators have been included to provide a wider scope of any potential impacts from the actions in the LFRMS.

3.2 Hounslow Characteristics

Located in West London, Hounslow covers an area of approximately 5,600 hectares, stretching from Chiswick in the east, to the eastern boundary of Heathrow Airport in the west. The highest points within the borough are in the north-west, whilst the lowest areas are within Chiswick and from Brentford to Isleworth, bordering the River Thames. The River Brent also acts as a local low stretch from Ealing down to Brentford. Within Hounslow, the bedrock geology consists mainly of London Clay, silt, sand, and gravel while the superficial geology is made up of sand and gravel.

The borough is reasonably well served by public transport and with easy access to major roads and motorways linking Central London to the west. The borough is diverse, with plentiful green spaces and several waterways as well as a range of residential, commercial, and industrial land use areas. Green Belt in the borough lies exclusively in the west, but Hounslow also has several open spaces in the more built-up parts of the borough. The main parks and open spaces include Hounslow Heath, Osterley Park, Boston Manor Park, the grounds of Chiswick House, Bedfont Lake's, Hanworth Park, Duke's Meadows, Syon Park and Gunnersbury Park.

The borough is made up of 20 wards and has four major town centres: Brentford, Chiswick, Hounslow, and Feltham. These centres, as well as Chiswick Business Park, the Great West Road and Bedfont Lakes are the borough's key employment areas. Hounslow town centre has undergone significant redevelopment, with further development currently being carried out in the centre of Feltham. The regeneration of Brentford and Hounslow Town Centre continues with vacant employment sites on the Great West Road being redeveloped for mixed-use purposes.

Although outside the borough boundaries, Heathrow Airport continues to have influence on Hounslow's economy with employment in the west dominated by airport related logistics, construction and services such as hospitality and catering.

3.3 Baseline Environmental Information

This chapter provides information relating to the current state of the environmental, economic and social baseline for Hounslow and identifies environmental issues that may affect flood risk management. The identification and definition of environmental issues relevant to flooding is fundamental to the production of a sustainable LFRMS since it allows the strategy to avoid or help solve these problems. The following baseline indicators have therefore been chosen.

3.3.1 Biodiversity, Flora and Fauna

Despite being densely populated and heavily urbanised in many parts, Hounslow is one of London's top ten greenest boroughs. According to the Mayor of London's [Green Cover Map](#), Hounslow has 2,677ha of green area, making up approximately 47.3% of the land area. Of this, an estimated 954 ha is managed either wholly or partly for nature conservation. These important areas of nature conservation are detailed in *Table 3-1* with their associated designations. In line with the Draft Hounslow Nature Recovery Action Plan (2021), the number of Sites of Importance for Nature Conservation (SINC) includes those which extend across and beyond the borough boundary as a part of the London-wide SINC network.

Table 3-1 Designated sites of natural importance in Hounslow

Designation	No. of sites	Site names
Special Protection Area (SPA)	1	Kempton Park Reservoirs
Site of Specific Scientific Interest (SSSI)	2	Kempton Park Reservoirs Syon Park
Local Nature Reserves	10	Bedford Lakes Chiswick Eyot Crane Park Island Cranebank Water Meadows Duke's Hollow Gunnersbury Triangle Hounslow Heath Isleworth Ait Kempton Nature Reserves Pevensey Road
Sites of Importance for Nature Conservation (SINC)	63	Metropolitan Importance (SMI) - 11 Borough importance (BI) Grade I - 18 Borough importance (BI) Grade II - 19 Sites of Local Importance (SLN) - 15

In addition, Hounslow has 11,500 street trees, along with road verges and hedgerows which act as wildlife corridors allowing dispersal between habitats.

As part of the West of Borough Plan to accommodate housing and employment requirements, several areas of Hounslow's Green Belt are set to have their designations removed. This includes:

- Crane Corridor SMI
- East Bedfont Lake SBI Grade I
- Hatton Meadows SBI Grade II
- Mayfield Farm & Water Treatment Works SBI Grade I
- Cain's Lane SLI
- Raleigh Park SLI

3.3.2 Infrastructure assets

Hounslow has a large range of critical infrastructure assets that are vulnerable to the risk of flooding and must be considered in plans and programmes. These infrastructure assets must have the ability to serve and/or function unimpeded by hazards or developments. A summary of the infrastructure assets in Hounslow is outlined in *Table 3-2*.

Table 3-2 Infrastructure assets in Hounslow

Level of infrastructure	Types of infrastructure	No. of Assets
Critical infrastructure assets	Hospitals	1 (West Middlesex)
	Primary Schools	55
	Secondary Schools	18
	Colleges	1
	Universities	1
Essential infrastructure assets	Airports	1 (Heathrow Airport)
	Motorways	1 (M4)
	Main Roads	6 (cA4, A312, A30, A406, A316, A205)
	Waste Water Treatment Plants	1 (Mogden Water Treatment Works)
	Train Stations	7 (Feltham, Hounslow, Isleworth, Syon Lane, Brentford, Kew Bridge, Chiswick)
	Tube stations	Gunnersbury, Chiswick Park, Turnham Green, Stamford Brook, Boston Manor, Osterley, Hounslow East/Central/West.
Highly vulnerable infrastructure assets	Police Stations	3 (Chiswick, Feltham and Hounslow)
	Ambulance stations	2 (Feltham and Isleworth)
	Fire stations	3 (Isleworth, Chiswick, Heston)

It is also important to outline the number of properties at risk of flooding within Hounslow. Hounslow's 2021 Surface Water Management Plan (SWMP) estimates that nearly 3,000 residential properties are at risk for a 1 in 100-year rainfall event. The number of residential and non-residential properties at risk of flooding from the 1 in 30, 1 in 100 and 1 in 1000-year rainfall event is shown in *Table 3-3*. This table has been extracted from the [Hounslow SWMP \(2021\)](#).

Table 3-3 Properties at risk of flooding

	Residential	Other	Unclassified
1 in 30-year rainfall event	276	24	123
1 in 100-year rainfall event	2,904	476	483
1 in 1000-year rainfall event	15,088	1,770	1,733

3.3.3 Population

According to the most up to date projections from the Greater London Authority (GLA), the population in Hounslow is approximately 288,600 in 2022. This accounts for just over 3% of London's total population. The population is split, with 51% males and 49% females. Hounslow is

one of the most rapidly growing boroughs in London and according to the GLA housing led forecast, the population is projected to grow to 304,500 by 2030. This growth is expected to be a result of inward international migration and new births since the number of domestic arrivals is lower than departures.

Hounslow also has one of the most ethnically diverse populations in London. The Black, Asian and Minority Ethnic (BAME) population in Hounslow is estimated to be approximately 148,003 (52%) which is significantly greater than the London average (43.5%). The working population (aged 16-65) is 190,691, 65.8% of the total population. More information on the population of Hounslow can be found on the [Hounslow Data Hub](#).

3.3.4 Public Health

According to the latest [Joint Strategic Needs Assessment 2017 \(JSNA\)](#), life expectancy in Hounslow has increased since 1991-1993, by 4 years for women and 7 years for men, to 84 years for women and 80 years for men. But despite this, there are several wholly preventable risks to residents of Hounslow having full and healthy lives.

The main preventable risks to health for Hounslow residents largely follow the [Global Burden of Disease](#) study. The JSNA data sources indicate the main preventable risk to health as:

1. Smoking – There are an estimated 28,000 smokers, 14% of all adults in Hounslow.
2. Inactivity and obesity – There are an estimated 126,000 overweight adults (63%) and 54,000 adults that do less than 30 minutes exercise a week (27%)
3. Alcohol – There is an estimated 48,000 adults that consume more than 14 units of alcohol a week (24%)

Based on the [Index of Multiple Deprivation](#), the level of deprivation in Hounslow is in line with the England average, however, there are pockets of deprivation within borough where health and income inequalities are extreme such as north Feltham and Hanworth. This deprivation translates into a stark inequality in life expectancy. For example, a child born in Hounslow Heath is likely to live 8 years longer than one born in Feltham North. Hanworth was identified as the ward with the highest rate of child poverty in the borough (30.8%), while Hounslow South had the lowest (8.1%). Cardiovascular disease and Cancer are the greatest contributors to death.

The General Fertility Rate in Hounslow is higher than the London average at 74 births (per 1000 women of reproductive age). Rates of childhood obesity are on par with the London average, with 1 in 5 children being overweight by age 5 and 1 in 3 children by age 10.

3.3.5 Air Quality

Air pollution is a significant environmental issue in Hounslow and the two pollutants of most concern are nitrogen dioxide (NO₂) and fine particles (PM₁₀ and PM_{2.5}). Road transport is the largest source of all three of these air pollutants and Aviation, due to the proximity to Heathrow Airport, is also a major source of NO₂ in the borough. Emissions from the domestic, public and commercial sectors are also significant sources for all three pollutants. The entire Borough has been declared an Air Quality Management Area for NO₂.

Annual mean NO₂ levels have declined in recent years, particularly in the past three years (2018 - 2022). This is likely due to the reduced volumes of traffic during the COVID 19 pandemic, as well as a gradual shift towards cleaner vehicles with the expansion of London's Ultra Low Emission Zone (ULEZ). PM₁₀ concentration has been more static over the past seven years. All monitoring sites in Hounslow remain below the UK limit value of 40 µg m⁻³ but most still exceed the WHO's guideline value of 20 µg m⁻³. PM_{2.5} is currently monitored at two Hounslow roadside sites: Brentford and Chiswick and annual average concentration have decreased in recent years. In 2021, the recorded levels were all within the UK limit value of 25 µg m⁻³ but they often exceeded the WHO guideline of 10 µg m⁻³. More information of the air quality in Hounslow can be found [here](#).

While Hounslow is meeting the national AQS objectives for NO₂ and PM, these pollutants are damaging to health at any level so remain pollutants of concern. According to the 2017 [JSNA](#) report, air quality causes 200 premature deaths a year. Poor air quality also disproportionately affects the most deprived communities in Hounslow, such as Heston and Cranford, due to their proximity to the strategic road network. Groups particularly susceptible to the harmful effects of air pollution include the elderly and young children. In 2017, three schools were included in the Mayor's Air Quality audit programme due to their location in areas of NO₂ exceedance.

3.3.6 Noise Pollution

Noise pollution reduces the quality of life of Hounslow residents by disturbing sleep patterns and increasing stress levels. The main sources of noise are road traffic, particularly heavy goods vehicles, and aircraft noise from Heathrow (with over 300,000 flights over the borough per annum). The 2017 JSNA for Hounslow estimated that noise affects 60,000 residents.

The latest draft of the [Heathrow Noise Action Plan 2018-2023](#) reviews progress so far and sets out how the impacts of aircraft noise will be managed. Data collected shows that improvements have been made over the last ten years, with the population living within the 55dB Lden level (EU threshold for excess exposure defined in the [Environmental Noise Directive](#)) being 6% lower than in 2006. These improvements are due to a range of measures including new quieter aircraft and revised landing and take-off procedures. In contrast, the improvements to noise at night have not met expected levels and the plan acknowledges that more needs to be done to reduce noise impact at this time. In the future, the introduction of new, even quieter aircraft is expected to improve noise levels further; however, the possible introduction of a third runway brings additional concerns for the residents of Hounslow, due to the increased number of flights and unannounced changes in flight and holding patterns.

3.3.7 Soil and Water

The main rivers in Hounslow are the River Thames, River Crane, River Brent, Duke of Northumberland's River, Lower Feltham Brook, Felthamhill Brook and Portlane Brook. The borough is bounded by the River Thames to the east, the River Crane to the west and south, and the River Brent to the east. The confluence of the River Crane into the River Thames is at the borough boundary on the edge of Isleworth. The Duke of Northumberland's River is a man-made tributary of the River Crane from the 16th century. It flows into the River Crane near Hatton and Hounslow Heath, before separating outside the borough boundary in Twickenham, flowing through Isleworth and into the River Thames. The River Brent flows into the River Thames in Brentford. It has been

heavily modified between Hanwell and Brentford in order to straighten the river channel. This stretch of the river forms part of the Grand Union Canal.

There are nine [EU Water Framework Directive \(2000\)](#) waterbodies in Hounslow, of which only one is currently achieving their WFD target of 'good' status. The WFD waterbodies are shown in Table 3-4 WFD waterbodies in Hounslow and their status *Table 3-4* along with their associated Hydromorphological designation, ecological quality status and physico-chemical quality status.

Table 3-4 WFD waterbodies in Hounslow and their status

Waterbody name	Code	Hydromorphological designation	Ecological status	Physico-chemical quality
Lower Brent	GB106039023590	Highly modified	Poor	Moderate
Portlane Brook	GB106039023451	Highly modified	Moderate	Moderate
Crane	GB106039023030	Natural	Moderate	Moderate
Kempton Park East Reservoir	GB30642614	Artificial	Good	N/A
Grand Union Canal: Uxbridge to Hanwell Locks, Slough Arm, Paddington Arm	GB70610078	Artificial	Good	moderate
Thames Upper	GB530603911403	Highly modified	Moderate	High
Upper Duke of Northumberland's River	GB806100108	N/A	N/A	N/A
Lower Duke of Northumberland's River	GB806100095	N/A	N/A	N/A
King George VI Reservoir water transfer	GB806100096	Artificial	Moderate	Moderate

3.3.8 Historic and Cultural Environment

There are a number of key cultural, architectural, and archaeological heritage sites within Hounslow which have been outlined in *Table 3-5*.

Table 3-5 Historical and cultural assets in Hounslow

Type of classification	No. of assets	Examples of infrastructure
Grade I listed buildings	23	Including Boston Manor House and Chiswick House
Grade II listed buildings	557	Including Bedford House and Eynham House
Locally listed building	115	Including Feltham Magistrates Court
Scheduled monuments	7	
Registered parks and gardens	3	Osterley Park Syon Park Gunnersbury Park
Archaeological Priority Areas (APAs)	11	Cranford and Cranford Moat The River Thames Bank and Foreshore

Type of classification	No. of assets	Examples of infrastructure
		Staines Road / London Road – Line of Roman Road
World Heritage Sites	1*	Kew World Heritage Site

*Note: buffer zone of the Kew World Heritage site extends within Hounslow's boundary (along the banks of River Thames)

Historic England's 2017 register of 'Heritage at Risk' (combining listed buildings and conservation areas together with archaeology) includes, for Hounslow, one Grade I building, Boston Manor House (owned and managed by LB Hounslow), and four Grade II* buildings two of which are within Gunnersbury Park (jointly owned by the London boroughs of Hounslow and Ealing). A further seven Grade II buildings are classed as at risk within the park, alongside another eight across the Borough. Of these five are actual buildings, two are bridges and one is a boundary wall.

3.4 A2 Consultation Questions

Questions to be asked during the consultation exercise based upon the baseline indicators that we have chosen:

3. Do you agree that the baseline data we have included herein is appropriate to the Local Flood Risk Management Strategy that is being developed?
4. Do you have, or know of, any additional baseline indicators or data that should be added into this SEA screening assessment?
5. As far as you are aware, is the baseline data correct?

4 IDENTIFICATION OF ENVIRONMENTAL ISSUES

4.1 Task A3 Summary

The aim of Task A3 is to identify any existing or possible future environmental issues across the borough which could affect, or be affected by, the implementation of the LFRMS. The issues are summarised in *Table 4-1*. They have been determined from the review of documents in Task A1 and the analysis of the baseline information in Task A2.

4.2 Local Environmental Issues

By examining the baseline information from *Section 3.3₂*, the following environmental issues have been distinguished and presented in *Table 4-1*. The potential flood risk issues associated with these wider environmental issues as well as the proposed LFRMS objectives that may help mitigate these issues have also been outlined.

Table 4-1 Environmental issues and their potential associated problems

Key Environmental issues	Potential Associated Flood Risk Issues	Proposed LFRMS objective
Increase in local population	<ul style="list-style-type: none"> • Increase in the number of residents at risk of flooding • Greater need for new development to accommodate the growing population 	<ul style="list-style-type: none"> • B • C • D
Increase in life expectancy	<ul style="list-style-type: none"> • Increased number of vulnerable residents at risk of flooding 	<ul style="list-style-type: none"> • C • D
Higher deprivation levels	<ul style="list-style-type: none"> • Uneven response to flood risk • Greater dependency on council or charity donations to support property flood resilience 	<ul style="list-style-type: none"> • B • C • D
Ethnically diverse population	<ul style="list-style-type: none"> • Need to ensure flood risk information is accessible in different languages 	<ul style="list-style-type: none"> • A • C
High inactivity and obesity levels	<ul style="list-style-type: none"> • Lack of green infrastructure to promote activity also has an impact on flood risk 	<ul style="list-style-type: none"> • B
Increased amount of development	<ul style="list-style-type: none"> • Reducing the amount of impermeable ground surface thereby increasing flood risk due to increased runoff volumes • Decreased land available for flood alleviation, natural flood management, and sustainable drainage schemes 	<ul style="list-style-type: none"> • A • B • D
Decrease in biodiversity	<ul style="list-style-type: none"> • Degradation of local ecology can reduce the amount of riparian vegetation essential for flood storage • Changes to habitats needed for flood risk management 	<ul style="list-style-type: none"> • A • B

Key Environmental issues	Potential Associated Flood Risk Issues	Proposed LFRMS objective
Loss of Green Belt land	<ul style="list-style-type: none"> Reduced capacity for flood storage which may increase flooding downstream. 	<ul style="list-style-type: none"> A B
Poor air quality (particularly NO₂ and PM)	<ul style="list-style-type: none"> Additional numbers of vulnerable people at risk of flooding (increased respiratory illness) Future flood risk management mitigation work could contribute to air pollution during construction 	<ul style="list-style-type: none"> A B
Climate change impacts	<ul style="list-style-type: none"> Increased potential for extreme weather patterns, including more prolonged and/or intense storm events Greater number of residents and/or businesses at risk of flooding due to frequency/intensity of precipitation events 	<ul style="list-style-type: none"> A B C D
Depletion of water resources	<ul style="list-style-type: none"> Increased pressure on water supplies increasing the pressure for sustainable water management systems Reduction in natural groundwater recharge rates may make groundwater flooding more unpredictable 	<ul style="list-style-type: none"> B C
Increased in pressure on assets and services	<ul style="list-style-type: none"> Increase pressure on sewer system may result in capacity issues such as sewer surcharge and flooding. Increase pressure on flood risk management assets can reduce their performance. 	<ul style="list-style-type: none"> A B C D
Low water quality status of the WFD waterbodies in Hounslow	<ul style="list-style-type: none"> Possibility of not attaining 'good' ecological status by WFD deadlines Low water quality status could cause damaging effects to local biodiversity and ecology 	<ul style="list-style-type: none"> A B
Hounslow's waterbodies are also under pressure from physical modification, sewage discharge and invasive non-native species	<ul style="list-style-type: none"> Physical modification for flood defences affects the natural flow of the rivers, impact the ecological health of the river. The invasion of non-native species can negatively impact on the biodiversity and the success of nature-based flood risk management schemes. 	<ul style="list-style-type: none"> A B

Key Environmental issues	Potential Associated Flood Risk Issues	Proposed LFRMS objective
<p>Heritage assets are at risk from neglect, decay, or development pressures</p>	<ul style="list-style-type: none"> • Flooding presents a direct threat to heritage assets with the potential harm or loss of their significance. • Flood risk management measures on heritage assets and their settings can also impact heritage assets (water related/dependent assets) • Flooding also has implications for the repair and maintenance of these assets. • Changes to groundwater flows can impact preserved organic and paleo-environmental remains. • Lowered groundwater table from flood risk mitigation measures can lead to degradation through dewatering (re-wetting can also be harmful). 	<ul style="list-style-type: none"> • A • B • C

4.3 A3 Consultation Questions

Questions to be asked during the consultation exercises based upon the environmental issues that we have identified:

6. Do you agree that these are the main environmental issues relating to the strategy affecting Hounslow?
7. Are there any other environmental issues that you believe should be added into this SEA? If so, please give details.
8. Do you believe that any of these environmental issues do not affect Hounslow? If so, please give details.

5 SEA OBJECTIVES

5.1 Task A4 Summary

The performance of the LFRMS will be judged against the SEA objectives. These objectives are based upon the environmental issues identified in Task A3 as well as local knowledge and understanding relating to flood risk management.

5.2 SEA Objectives

The SEA objectives that we propose to use for comparison against the objectives and associated actions of the LFRMS, as well as future reviews of the LFRMS, are:

- **SEA 1:** Conserve and enhance biodiversity, flora, and fauna in Hounslow.
- **SEA 2:** Prevent any decline in the quality or quantity of water resources and enhance the WFD status of rivers where possible.
- **SEA 3:** Increase physical activity amongst Hounslow residents.
- **SEA 4:** Provide support to vulnerable and deprived communities.
- **SEA 5:** Improve air quality and reduce CO₂ by establishing more green travel networks.
- **SEA 6:** Conserve, and where appropriate enhance, the significance of heritage assets (both designated and non-designated) and their setting.
- **SEA 7:** Support the restoration of Hounslow's waterbodies back to their natural state.

Please note that these SEA objectives are distinct from the LFRMS objectives, but they may overlap in some cases. However, a specific SEA objective to prevent any increase in flood risk at or from any site has not been included herein because this underpins the entire LFRMS and would therefore cause unnecessary duplication. This also underpins the reason as to why flood risk issues have not specifically been included within the baseline indicators and the list of environmental issues within the borough. Therefore, a flood risk SEA objective has been screened out of this report. Despite this it should be noted that any schemes to mitigate the risk of flooding will aim to achieve progress towards the above six SEA objectives, where cost/benefit analysis demonstrates that it is cost effective to do so.

5.3 A4 Consultation Questions

Questions to be asked during the consultation exercises based upon the SEA objectives we proposed for assessment against the Local Flood Risk Management Strategy:

9. Do you agree that these proposed SEA objectives are suitable in the context of Hounslow?
10. Are there any other SEA objectives that you believe should be included? If so, please give details.

6 SCREENING ANALYSIS OF THE LOCAL FLOOD RISK MANAGEMENT STRATEGY

6.1 Task A5 summary

The aim of Task A5 is to identify any potential effects, either positive or negative, that the LFRMS objectives may have on the SEA objectives. The matrix shown in *Table 6-1* was used to do this.

6.2 Screening Analysis

The screening analysis shown in *Table 6-1* presents the outcomes of each LFRMS strategic objective when compared to the SEA objectives to determine either a neutral, positive or negative outcome. This evaluation shows that none of the LFRMS objectives are likely to have a negative effect on any of the SEA objectives, therefore Hounslow believes that the implementation of the LFRMS will not have any detrimental effect on the environment or the issues identified in Task A3. It is also noted that all LFRMS objectives are likely to have a positive impact on one or more of the SEA objectives.

Table 6-1 Scoring matrix of LFRMS strategy objectives against SEA objectives (legend in Table 6-2)

		SEA Objective Number						
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7
LFRMS Strategy Objective Number	A	+	+	0	+	+	+	+
	B	+	+	+	+	+	+	+
	C	0	0	0	+	0	+	0
	D	0	0	0	+	0	+	+

Table 6-2 Legend criteria for Table 6-1

+	Positive effect on SEA objective.
-	Negative effect on SEA objective.
0	Neutral effect on SEA objective and/or dependent on implementation.

6.3 Assessment of Screening Report and Strategy Objectives

6.3.1 LFRMS Strategic Objective A

Objective: *Establish and maintain collaborative partnerships with key internal and external stakeholders, such as other Hounslow departments, utility companies, and other risk management authorities to maximise joint-working opportunities.*

The analysis of strategic objective A shows that it will likely have positive impacts on six of the seven SEA objectives; SEA 1, 2, 4, 5, 6 and 7. LFRMS strategic objective A aims to establish and maintain collaborative partnership with other RMAs and stakeholders to maximise joint-working opportunities. Collaborative partnerships such as the river catchment partnerships (Crane Valley and Brent Catchment) are aimed at improving and restoring the entire river systems and the actions of these groups will likely have multiple benefits for both flooding, water quality and biodiversity throughout these river systems (SEA 1, 2 and 7). Working with other stakeholders such as TWUL or internal Hounslow departments to implement SuDS schemes throughout the borough will also provide benefits for water quality and biodiversity (SEA 1, 2 and 5). Working with local charity groups such as Age UK can help support vulnerable people to increase their resilience, providing benefits to SEA 4. Engaging and consulting with stakeholders such as Historic England and other conservation groups will help minimise the risk of flooding affecting heritage assets is minimised and ensures that flood risk mitigation measures do not impact heritage assets. This strategic objective is not likely to have any impact on SEA objective 3. In conclusion, this LFRMS strategic objective can be screened out at this stage of the SEA process.

6.3.2 LFRMS Strategic Objective B

Objective: *Pro-actively encourage holistic and sustainable, nature-based solutions that manage flooding and deliver wider environmental, social, and economic benefits.*

LFRMS strategic objective B will likely have positive impacts on all six of the SEA objectives. This strategic objective is focused on delivering wider environmental, social, and economic benefits to the local community of Hounslow through nature-based solutions (NBS). NBS can provide multiple benefits including improvements to biodiversity, water quality and air quality. This will strongly support SEA objectives 1, 2 and 5. NBS such as natural flood management can also be used to restore river ecosystem thorough schemes such as reinstating wetland ecosystems, removing hard engineered flood defences and de-culverting river stretches. This has direct benefits for SEA objectives 7. LFRMS Strategic Objective B presents opportunities for conserving and enhancing heritage assets through an integrated approach to flood risk management and catchment-based initiatives, including sustaining and enhancing the local character and distinctiveness of historic townscapes and landscapes. This will benefit SEA objective 6. Improving the borough's green infrastructure using NBS will also contribute to the creation of aesthetic, safe and accessible open spaces which can help encourage people to be more active and to spend more time outside. This can be particularly important for vulnerable groups such as the elderly. Therefore, LFRMS strategic objective B may indirectly have a positive impact on SEA objective 3 and 4. This concludes that the LFRMS strategic objective B can be screened out at this stage of the SEA process.

6.3.3 LFRMS Strategic Objective C

Objective: *Engage, educate, and empower local communities to take action and contribute to the management and reduction of flood risk, including through the uptake of flood resilience.*

LFRMS strategic objective C is not likely to have any impact on four out of the seven SEA objectives. However, it is likely that it will have a highly positive impact on SEA objective 4 by providing support to vulnerable groups on flood issues. This strategic objective is aimed at supporting local communities to help build their own resilience to flooding. Vulnerable groups such as the elderly, disabled and low-income households are likely to require more support from the council to understand, prepare for and fund flood protection / recovery measures. It is therefore important that these groups are supported and engaged through this LFRMS strategic objective. This objective is also likely to have benefits to SEA 6 as it presents opportunities for increasing public awareness and understanding of appropriate responses for heritage assets in dealing with flooding and flood risk mitigation measures. This strategic objective can therefore be screened out at this stage of the SEA process.

6.3.4 LFRMS Strategic Objective D

Objective: *Seek to identify funding and resources available for flood risk management, targeting resources where they could have the greatest effects.*

LFRMS strategic objective D will likely have positive impacts on SEA objective 4, 6 and 7. This strategic objective is focused on identifying funding and resources for flood risk management activities. While this is not directly linked to most of the SEA objectives, it is not likely to pose any negative implications on them. The objective may provide better support to vulnerable communities by helping to target resource to areas where they are most needed and may therefore provide positive impacts on SEA objective 4. It may also have a positive impact on SEA objective 6 and 7 through identifying collaborative funding opportunities for schemes that will mitigate flooding while also restoring river systems or improving access, understanding or enjoyment of the historic environment of heritage assets. In conclusion, this strategic objective has been screened out of the SEA process at this stage.

6.4 A5 Consultation Questions

Questions to be asked during the consultation exercises based upon the assessment matrix and screening analysis outcomes:

11. Do you have any comments on the proposed method for the assessment of the SEA objectives against the Local Flood Risk Management Strategy objectives and actions?
12. Do you agree with the screening analysis of each of the Local Flood Risk Management Strategy objectives? If not, please give reasons as to why you would screen certain objectives differently.

7 CONCLUSIONS AND NEXT STEPS

7.1 Conclusions

The overall conclusion of this SEA screening report is that the Hounslow LFRMS strategic objectives do not pose a significant harmful effect on local environmental issues. The outcomes of the screening analysis have shown that the LFRMS strategic objectives are likely to have either neutral or positive impacts on the SEA objectives. Effective flood risk management may offer various benefits to wider environmental issues affecting the borough. In conclusion, the LFRMS has suitably considered the delivery of its actions regarding local environmental issues and does not require progression onto the appropriate assessment stage. The LFRMS does not require a full SEA.

7.2 Consultation of the SEA

The statutory consultation took place in March 2022, consisting of the EA, the Natural England, and Historic England. The feedback received from Natural England and Historic England has been incorporated into the SEA and any corresponding LFRMS documents. Feedback from the Environment Agency and the public will be incorporated into the final versions post-public consultation. Public consultation will commence on May 9th, 2022.

Questions to be asked during the consultation exercises based upon the assessment matrix and screening analysis outcomes:

13. Do you have any comments on the conclusions that have been reached on this SEA screening report of the Local Flood Risk Management Strategy?
14. Do you have any additional comments or suggestions for this SEA screening report?