

# APPENDIX 3 – STRATEGIC ENVIRONMENTAL ASSESSMENT SCREENING REPORT



PREPARED FOR ROYAL BOROUGH OF KINGSTON UPON THAMES

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Date March 2023  
Version 1.2

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## REVISION HISTORY

Version	Date	Description	Prepared	Approved
1.0	March 2022	Prepared for client review	MMc	DC
1.1	June 2022	Prepared for final issue	MMc	MM
1.2	March 2023	Prepared following public consultation	NS	MM

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## EXECUTIVE SUMMARY

The purpose of this Strategic Environmental Assessment (SEA) Screening Report is to clearly identify and understand the potential risks to the Royal Borough of Kingston Upon Thames (Kingston Borough)'s local environment which could arise from the Local Flood Risk Management Strategy (LFRMS). This will be achieved by assessing the LFRMS strategic objectives and their accompanying actions within the LFRMS Action Plan against a range of newly formed SEA objectives. These SEA objectives have been produced to encapsulate how the key environmental issues at present within Kingston Borough can be managed and where possible mitigated.

The environmental issues have been drawn from baseline information collected on Kingston Borough which comprises of a range of economic, environmental, and social factors. More specifically, this comprises information on biodiversity, flora and fauna, infrastructure assets, population, public health, air quality, noise pollution, climate change, soil and water, and the historic and cultural environment. From this baseline information eight SEA objectives have been formed.

The SEA objectives are as follows:

- **SEA 1:** Ensure Kingston Borough's increasing population is adequately homed and reduce the population density of neighbourhoods where possible.
- **SEA 2:** Ensure vulnerable residents have adequate access to services and have the necessary support to overcome challenges during and after flood events.
- **SEA 3:** Reduce NO<sub>2</sub> emissions from roads by reducing traffic where possible and encourage more environmentally friendly forms of transport.
- **SEA 4:** Prevent any further decline in the ecological quality of waterbodies and enhance the WFD status of rivers where possible.
- **SEA 5:** Promote sustainable development to reduce and mitigate the potential impacts of climate change.
- **SEA 6:** Maintain and enhance biodiversity and habitats which may be at threat from the effects of severe weather events induced by climate change.
- **SEA 7:** Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.
- **SEA 8:** Minimise noise pollution from major transport links, where possible.

The screening analysis assessed the five LFRMS strategic objectives against each SEA objective to determine the level of effect that the strategic objective would have on that SEA objective. There were a range of neutral to major positive effects on the SEA objectives, with the majority of outcomes being minor positive effects. Neutral outcomes imply that there would be no correlation between the potential effects of the LFRMS strategic objectives and actions, and the SEA objectives identified. There were no negative effects presented to any of the SEA objectives by the LFRMS strategic objectives and thus the LFRMS will not deliver any detrimental consequences to the local environment in Kingston Borough. The LFRMS has offered multi-benefit solutions and opportunities to overcome the key environmental issues, without presenting unfavourable consequences. As a result, the LFRMS

does not require any progression onto further appropriate assessment stages and does not require a full SEA.

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## ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
EA	Environment Agency
GLA	Greater London Authority
HRA	Habitats Regulations Assessment
JSNA	Joint Strategic Needs Assessment
Kingston	Kingston Council
Kingston Borough	Royal Borough of Kingston upon Thames
LAEI	London Atmospheric Emissions Inventory
LFRMS	Local Flood Risk Management Strategy
LLFA	Lead Local Flood Authority
LSOA	Lower Super Output Area
NO <sub>2</sub>	Nitrogen Dioxide
PM <sub>10</sub> and PM <sub>2.5</sub>	Particulate Matter of 10µm diameter or below and 2.5µm diameter or below respectively
SEA	Strategic Environmental Assessment
SINC	Sites of Importance for Nature Conservation
SLWP	South London Waste Plan
SuDS	Sustainable Drainage System
Sutton	Sutton Council
Sutton Borough	London Borough of Sutton

# 1 INTRODUCTION

## 1.1 Purpose of screening

A Strategic Environmental Assessment (SEA) is designed to review any plans, strategies and actions which would be likely to cause significant environmental effects to a specified area. As per the [European SEA Directive \(2001\)](#) a SEA should evaluate any potential environmental issues which could occur when the proposed policies are implemented. These include any impacts to economic, environmental, or social factors. Once these policies have been reviewed, if their effects are regarded too impactful on the local and wider environment, alternatives should be considered.

The purpose of this SEA Screening Report is to assess the actions presented by the Royal Borough of Kingston Upon Thames (Kingston Borough) Local Flood Risk Management Strategy (LFRMS) and to clearly identify and understand the potential risks and implications that these actions may have to the local and wider environment. This will be done by assessing the LFRMS strategic objectives and their accompanying actions within the LFRMS action plan. Following the result of this screening process an informed decision can be made on whether it is required for the LFRMS to progress to the full assessment stages as detailed below.

## 1.2 Methodology

The guidance for this SEA process is taken from the [Government website](#). It states that there are five stages to a full SEA, each with their own respective tasks which must be completed to meet their objectives. Stage A is the Screening Report which is contained within the extent of this document. [Table 1-1](#) Summary table of stages in a SEA below details the remaining stages which would need to be completed if this screening stage suggests that a full assessment is required.

**Table 1-1 Summary table of stages in a SEA**

SEA Stages		SEA Tasks
<b>Screening Stage</b>	<b>Stage A:</b> 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.
<b>Full Assessment Stages</b>	<b>Stage B:</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.
	<b>Stage C:</b> Preparing the environmental report.	C1: Preparing the environmental report.
	<b>Stage D:</b> 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.
	<b>Stage E:</b> 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

A requirement of this SEA Screening Report was that a number of questions were to be directed at statutory consultation bodies including the Environment Agency (EA), Historic England and Natural England. These statutory consultees were requested to respond to these questions during the statutory consultation phase of this document. The questions can be found under their relevant task sections throughout this Screening Report, as well as within the full list below. There were no changes required resulting from the feedback from the EA or Natural England, while Historic England have provided comments to which changes have been made accordingly. The recommendations from Historic England are further detailed in [7.2](#).

#### 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 additional policies, documents, plans or legislation do you think should be taken into consideration?

#### Task A2: Baseline data

3. Do you agree that all 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 included in this SEA screening assessment?
5. As far as you are aware, is the baseline data accurate and up to date?

**Task A3: Environmental issues affecting the borough**

6. Do you agree that these are the main environmental issues relating to the strategy affecting Kingston Borough?
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 Kingston Borough? 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 Kingston Borough? If not, which objectives do you feel are unsuitable and why?
10. Are there any other SEA objectives that you believe should be included? If so, please give details.

**Task A5: Screening analysis**

11. Do you think that the baseline indicators in Chapter 3 provide a relevant measure for these proposed SEA objectives?
12. Do you have any comments on the proposed method for the assessment of the SEA objectives with the Local Flood Risk Management Strategy objectives and actions?

**Further Comments**

13. Are you satisfied that the SEA Screening Report has arrived at a correct conclusion?
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

Kingston has been granted the role of Lead Local Flood Authority (LLFA) under the [Flood and Water Management Act \(FWMA\) \(2010\)](#). This role entails the statutory responsibility to develop, maintain and apply a LFRMS which sets out their aims and objectives in managing local flood risk within their borough. Subsequent documents consist of an Action Plan outlining the delivery of these actions, a monitoring and reviewing plan to track progress, a Habitats Regulations Assessment (HRA) Screening Report, and this document, the SEA Screening Report. The SEA Screening Report is a statutory requirement of any LFRMS where there are potential harmful impacts to the local environment, and its purpose is outlined earlier in [Section 1.1](#).

### 1.4.2 Local area information

Kingston Borough is the southwestern most of London's 32 boroughs and shares its northwest border along which the River Thames flows, with its neighbour the London Borough of Richmond upon Thames. Other neighbouring boroughs include the London Boroughs of Merton (east), Wandsworth (northeast), and Sutton (southeast). Kingston operates a Shared Environment Service

with the London Borough of Sutton (Sutton Borough), sharing the management of local flood risk through the LLFA team. The River Thames runs northwards through Kingston town centre along the boroughs' western edge, and acts as a divide between itself and The London Borough of Richmond upon Thames.

### 1.4.3 LFRMS strategic objectives

The five strategy objectives identified within the LFRMS have been listed below. As a result of the collaborative partnership between Kingston and Sutton's LLFAs, the strategic objectives have been shared across both boroughs, to aid in the joint delivery of their flood risk management duties. The strategic objectives are later assessed against the subsequently identified SEA objectives as part of the screening analysis matrix in [6.2](#).

- A. Improve our knowledge and understanding of the different risks of flooding in Kingston Borough / Sutton Borough.
- B. Proactively encourage sustainable solutions for the management of local flood risk which take account of climate change.
- C. Use planning powers to appropriately mitigate flood risk to or caused by developments across Kingston Borough / Sutton Borough.
- D. Educate, encourage, and empower local residents, businesses and landowners to take action on reducing flood risk.
- E. Nurture collaborative partnerships with key organisations and Risk Management Authorities (RMAs), including for funding and resources.

## 1.5 Consultation process

The SEA Screening Report underwent a consultation process in April and May 2022, where three statutory consultees, the EA, Historic England, and Natural England were consulted. The 14 SEA consultation questions which were posed to the consultees are listed in [1.3](#) can also be found repeated under their relevant task sections throughout this Screening Report. Public consultation occurred between December 2022 and January 2023 and all of the participating community, internal and strategic stakeholders were given an opportunity to provide feedback on any/all of the LFRMS documents including this SEA Screening Report. Similarly to the Statutory consultation, any necessary changes following the public consultation were made prior to the final version of the LFRMS and associated documents being published.

## 2 IDENTIFICATION OF RELEVANT POLICIES

### 2.1 Task A1 summary

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 and are covered in 2.2 below.

### 2.2 Relevant policies

It is important to consider relevant policies and legislations at a range of levels including international, national, regional, and local. These policies have been presented in Table 2-1 Table of relevant policies to the SEA. For some of these legislations there is an overlap with those included within *Section 1* of the LFRMS.

**Table 2-1 Table of relevant policies to the SEA**

<b>International</b>
<a href="#">Convention for the Protection of the Archaeological Heritage of Europe (1985)</a>
<a href="#">EU Biodiversity Strategy for 2030 (2020)</a>
<a href="#">EU Birds Directive (2009)</a>
<a href="#">EU Floods Directive (2007)</a>
<a href="#">EU Habitats Directive (1992)</a>
<a href="#">EU Water Framework Directive (2000)</a>
<a href="#">European Landscape Convention (2000)</a>
<a href="#">European SEA Directive (2001)</a>
<a href="#">The European Convention on the Protection of Archaeological Heritage (1992)</a>
<b>National</b>
<a href="#">Ancient Monuments &amp; Archaeological Areas Act 1979</a>
<a href="#">Biodiversity 2020: A strategy for England’s wildlife and ecosystem services (2011)</a>
<a href="#">Civil Contingencies Act (2004)</a>
<a href="#">Climate Change Act (2008)</a>
<a href="#">DEFRA: 25 Year Environment Plan (2018)</a>
<a href="#">Future Water: The Government’s Water Strategy for England (2008)</a>
<a href="#">Environment Act (2021)</a>
<a href="#">Environmental Protection Act (1990)</a>
<a href="#">Flood and Water Management Act (2010)</a>
<a href="#">Flood Risk Regulations (2009)</a>
<a href="#">Land Drainage Act (1991)</a>
<a href="#">Natural Environment and Rural Communities Act (2006)</a>
<a href="#">National Flood and Coastal Erosion Risk Management Strategy for England (NFCERMS) (2020)</a>
<a href="#">National Planning Policy Framework (2012, revised 2021)</a>
<a href="#">National Planning Practice Guidance (2016, revised 2021)</a>
<a href="#">National Standards for Sustainable Drainage Systems (2011)</a>
<a href="#">Planning (Listed Buildings &amp; Conservation Areas) Act 1990</a>
<a href="#">The Pitt Review - Lessons learned from the 2007 summer floods (2007)</a>
<a href="#">The SuDS Manual C753F (2007)</a>
<a href="#">The UK Biodiversity Action Plan (1994)</a>

<a href="#">Water Act (2014)</a>
<a href="#">Meeting our Future Water Needs: A National Framework for Water Resources (2020)</a>
<b>Regional</b>
<a href="#">City of London Biodiversity Action Plan (2021-2026)</a>
<a href="#">London Regional Flood Risk Appraisal (2018)</a>
<a href="#">Mayor of London’s Climate Change Adaptation Strategy (2011)</a>
<a href="#">Thames Catchment Flood Risk Management Plan (2009)</a>
<a href="#">Thames Estuary 2100 Flood Risk Management Plan (2012)</a>
<a href="#">Thames River Basin District, River Basin Management Plan (2015)</a>
<a href="#">London Sustainable Drainage Action Plan (2016)</a>
<a href="#">South London Waste Plan (SLWP) (2019)</a>
<a href="#">The London Plan (2021)</a>
<b>Local</b>
<a href="#">Kingston Preliminary Flood Risk Assessment (2011 – updated in 2017)</a>
<a href="#">Kingston Climate Change and Sustainability Communication and Engagement Strategy (2011-2014)</a>
<a href="#">Kingston Local Plan (Core Strategy) (2012)</a> (New Local plan is in development for the Summer 2022)
<a href="#">Kingston Climate Emergency – Initial Assessment (2019)</a>
<a href="#">Local Implementation Plan SEA (2019)</a>
<a href="#">Kingston Surface Water Management Plan (2011, updated in 2019)</a>
<a href="#">Kingston Review of Sites of importance for Nature Conservation (2020)</a>
<a href="#">Kingston University Biodiversity Action Plan (2020-2024)</a>
<a href="#">Kingston Strategic Flood Risk Assessment (2021)</a>
<a href="#">Kingston Air Quality Action Plan (2021-2026)</a>
<a href="#">Kingston Local Development Scheme</a> (Projected to be completed by the end of 2023)
<a href="#">Good Practice Guide – Biodiversity &amp; The Development Process in Kingston Upon Thames (n.d.)</a>

### 2.3 A1 consultation questions

Questions 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 additional policies, documents, plans or legislation do you think should be taken into consideration?

## 3 BASELINE INFORMATION

### 3.1 Task A2 summary

The purpose of task A2 is to obtain baseline information on Kingston Borough, which has been collected from a variety of sources including the [Local Implementation Plan \(LIP\) SEA \(2019\)](#) and the [Kingston Joint Strategic Needs Assessment \(JSNA - 2019\)](#). This information has then been used to identify any key environmental issues that exist in Kingston Borough. Although the SEA Screening Report is predominantly focussed on evaluating issues and effects from an environmental perspective, further social and economic baseline indicators have also been integrated to provide a broader scope of any possible impacts from the actions of the LFRMS.

### 3.2 Kingston Borough characteristics

Kingston Borough is the south-western most of London's 32 boroughs, covering an area of 3,726 hectares (ha). The River Thames borders the north-western edge of the borough, where Kingston Borough's Metropolitan Town Centre can be found on its eastern bank. Outside of Kingston town centre, there are three district centres including Sutton, which can be found just south of Kingston town centre, and New Malden and Tolworth which are in the eastern and southern regions of the borough respectively.

Kingston town centre is one of ten Metropolitan Town Centres in Greater London, with many shopping and leisure activities. It is a centre for legal, business, and public services, as well as a higher and further education centre for its surrounding region, provided by Kingston College and Kingston University. It is also a historic town, and its market place is one of the best-preserved examples of medieval street pattern in southeast England.

The predominant character of Kingston Borough is its leafy suburbs surrounding the higher density neighbourhoods which are located closer to the Kingston and Surbiton town centres and along major roads. There are numerous parks, gardens and allotments dispersed throughout Kingston Borough, while the major local nature reserves such as Tolworth Court Farm Fields and Hogsmill Wood are in the south-eastern and central parts of the borough respectively. Kingston Borough also contains many attractions including Chessington World of Adventures, Thames Riverside and the Rose Theatre.

The main transport links in Kingston Borough are the A3 which dissects the borough from southwest to northeast, A243 (Hook Road), A240 (Kingston Bypass), as well as parts of the South Western Railway network which has nine stations scattered across the borough in the main districts previously mentioned, as well as in Malden Manor, Norbiton, Berrylands and Chessington North and South.

### 3.3 Baseline information

The following range of baseline criteria have been chosen because they have been recognised as criteria which can incorporate a variety of potential receptors to the impacts of the LFRMS strategic objectives. The information on the following criteria has been collated from a range of sources that were available at the time of publication. As such, the criteria included may differ between the associated borough authorities of Sutton and Kingston due to the availability of information.

Following the statutory review of this SEA by Historic England, there was feedback suggesting that Greater London Historic Environment Records (GLHER) data should be incorporated into the SEA to

form part of the baseline information for Kingston Borough. GLHER data is available in the form of shapefiles for GIS mapping. Kingston have pledged to undertake such mapping in the future through the inclusion of a subsequent action within the LFRMS’s Action Plan.

### 3.3.1 Biodiversity, flora and fauna

Kingston Borough has a characteristic and unique mix of habitats and species which can be found within its parks, woodlands, meadows, green corridors and private gardens. These have mostly been left untouched, acting as refuges from the vast urbanisation of the neighbouring areas. Most species have become well adapted to the disturbances of the urban environment and have no specialised habitat requirements, while others are more intolerant of human disturbance. According to the [Local Implementation Plan \(LIP\) SEA \(2019\)](#) some of the rare species found within the borough include the pyramidal orchids found in the old meadow of Nigel Fisher Way, the swaths of loosestrife and meadowsweet which can be found in the ancient meadow near Hogsmill River in Surbiton, as well as ten UK Priority Species of Bat.

Kingston Borough has 39 Sites of Importance for Nature Conservation (SINCs) covering 405 ha, which accounts for 10.9% of the borough area. There are also nine Local Nature Reserves which provide quality habitats including the biodiverse hedgerows of Tolworth Court Farm Fields. [Table 3-1](#) Designated sites of natural importance in Kingston Borough lists the Local Nature Reserves and some of the SINCs in Kingston Borough.

**Table 3-1 Designated sites of natural importance in Kingston Borough**

Designation	No. of sites	Site names
Local Nature Reserves	9	<ul style="list-style-type: none"> <li>• Bonesgate Local Nature Reserve</li> <li>• Castle Hill Local Nature Reserve</li> <li>• Coombe Hill Wood Local Nature Reserve</li> <li>• Edith Gardens Local Nature Reserve</li> <li>• Jubilee Wood Local Nature Reserve</li> <li>• Raeburn Open Space Local Nature Reserve</li> <li>• The Hogsmill River Park</li> <li>• The Woods &amp; Richard Jeffries Bird Sanctuary Local Nature Reserve</li> <li>• Tolworth Court Farm Fields Local Nature Reserve</li> </ul>
Sites of Importance for Nature Conservation (SINC)	39	Including: <ul style="list-style-type: none"> <li>• Barwell Estate Lake</li> <li>• Coombe Hill Golf Course</li> <li>• Coombe Wood</li> <li>• Hogsmill Valley, Hogsmill Sewage Works, and Hogsmill River</li> <li>• Kingston Cemetery</li> <li>• Oakhill, "The Woods" and Richard Jefferies Bird Sanctuary</li> <li>• Sixty Acre Wood and Jubilee Wood</li> <li>• Tolworth Court Farm Fields and Medieval Moated Manor</li> <li>• Winey Hill</li> </ul>

### 3.3.2 Infrastructure assets

Kingston Borough holds over 160 cultural infrastructure assets which are largely concentrated around Kingston Town Centre, although there is also a good distribution throughout the borough.

In [Table 3-2](#) Operational Property Assets in Kingston Borough (2010) there is a list of Operational Property Assets from the [Kingston Asset Management Plan \(2010\)](#).

**Table 3-2 Operational Property Assets in Kingston Borough (2010)**

Asset type	No. of assets	Total Value noted in Asset Register (£)
Cemetery/Crematoria buildings	2	1,607,000
Community Centres	11	14,438,000
Community Houses	6	7,350,000
Depots	1	2,530,000
Car Parks	15	39,137,000
Leisure Centres and Pools	5	19,648,000
Libraries	7	4,813,000
Museums/Galleries	1	483,000
Office/Admin. Buildings	7	33,272,500
Residential Homes/Day Centres	14	20,335,000
Schools	24	170,944,000
School Playing Fields (separate from school)	7	589,790
Miscellaneous Operational	19	5,905,000
<b>Total</b>	<b>119</b>	<b>321,052,290</b>

### 3.3.3 Population

According to the baseline information provided by one of the most recent Kingston SEAs, the [South London Waste Plan \(SLWP\) \(2019\)](#), between 2011 and mid 2018 the resident population of Kingston Borough rose by 6% from 160,060 to 175,470. Projected population increments beyond 2018 can be calculated from data supplied by Greater London Authority (GLA) 2016-based Housing Led Projections, GLA 2017-based Trend Projections, and Office for National Statistics 2016-based Sub-National Projections. Using the mean average population predictions from these sources, it has been predicted that Kingston Borough’s population would have further risen to approximately 184,157 by 2021 and then to 206,966 by 2036, accounting for an approximate 12% increase in total. The population density of Kingston Borough is 47.1 residents/ha. The number of households in Kingston Borough has risen by 11.8% from 63,755 to 71,250 between 2011 and 2019 to accommodate the population growth. There are also approximately 0.92 cars owned per household on average.

The gender divide between Kingston Borough residents is very even, although a slight female majority among residents could be noted (91,128 female to 89,470 male). Over two thirds of residents are aged between 16-64, with the next highest age group 0-15, accounting for 20.1% of residents, while only 13.7% of residents are aged 64+. The ethnic breakdown shows that most residents are White (67.5%). The second most common ethnicity is Black and Minority Ethnic (BAME) which accounts for 32.5%, while Asian or mixed race, Black or mixed race and Chinese largely account for the remaining residents’ ethnicities. According to the Index of Multiple

Deprivation, Kingston Borough is ranked 28<sup>th</sup> most deprived borough in London out of the 32 boroughs.

### 3.3.4 Public health

According to the [Kingston JSNA \(2019\)](#), the life expectancy in Kingston Borough has improved in recent years. During 2015-17 the average life expectancy for women was 84.8 years, which was greater than the national female average of 83.1 years. The same trend can be spotted for men with 81.4 years exceeding the national male average of 79.6 years.

The main causes of death in Kingston Borough in 2018 were cancer (27.8%), diseases of the circulatory system and dementia (25.8%), and diseases of the respiratory system (12.4%), contributing to the total of 1,118 deaths. Suicide rates in Kingston Borough (8.1/100,000) are very similar to the London average (9.6/100,000) according to the [Kingston JSNA \(2019\)](#). Smoking-related mortality is significantly lower than the regional and national average, only 180.9 per 100,000. Motor vehicle accidents contributed to 117 deaths in Kingston Borough between 2015-17 which is also significantly lower than the London and England accident traffic rates. The most common health conditions in Kingston Borough are hypertension, depression, obesity and diabetes, each contributing to >5% of Kingston Borough resident health conditions.

Whilst the majority of Kingston Borough is not deprived, there are some small pockets of deprivation such as Kingston Borough's 'Lower Super Output Area' (LSOA) which is a small area containing approximately 1,500 people. This area falls into the 20% most deprived areas in England as a whole, while there are three other areas which fall into the top 40%. However, the [2019 Index of Multiple Deprivation \(IMD\)](#) suggests that the LSOAs in Kingston Borough have become less deprived since 2015.

### 3.3.5 Air quality

Kingston Borough has been designated as an Air Quality Management Area. The [Kingston Air Quality Action Plan \(2021-2026\)](#) shows a general trend of lower Nitrogen Dioxide (NO<sub>2</sub>) and Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>) concentrations in the southern regions of Kingston Borough near Chessington, where the distance from Kingston Borough's main town centres and central London is greater. Largely the emissions of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> in Kingston Borough as well as Greater London in general, have greatly improved since the previous London Atmospheric Emissions Inventory (LAEIs) in 2013 and 2016. All emissions within Kingston Borough as of 2019 were below the limits set by the World Health Organisation (WHO) guidelines, with the exception of NO<sub>2</sub> along certain major road transport links. NO<sub>2</sub> pollution largely arises as part of the combustion processes from vehicle engines, and thus it is unsurprising that the concentration map from the [London Atmospheric Emissions Inventory \(LAEI\) 2019 Summary note](#) shows the Nitrogen Dioxide (NO<sub>2</sub> (ug/m<sup>3</sup>)) concentrations to be greatest along major roads such as the A3 and Kingston Road, which serve as major transport links in and out of London.

The Air Quality Action plan has identified road transport as the predominant source of pollutants within the borough. Therefore, Kingston has set up two Air Quality Focus areas, at the A3 Kingston Bypass and Kingston Bridge. [Table 3-3](#) displays the general emissions summary for Kingston Borough provided by the [LAEI \(2019\)](#).

**Table 3-3 Emission Types, Sources and Amounts in Kingston Borough**

Emission Type	Emission Source	Emissions (tonnes/annum)
NO <sub>x</sub>	Domestic	59.7
	Industrial and Commercial	171.2
	Miscellaneous	2.0
	Transport	352.2
	<b>Total</b>	<b>585.1</b>
PM10	Domestic	20.53
	Industrial and Commercial	70.79
	Miscellaneous	1.59
	Resuspension	20.65
	Transport	49.37
	<b>Total</b>	<b>162.93</b>
PM2.5	Domestic	20.51
	Industrial and Commercial	21.80
	Miscellaneous	1.07
	Resuspension	0.77
	Transport	25.31
	<b>Total</b>	<b>69.46</b>
CO <sub>2</sub>	Domestic	187,955
	Industrial and Commercial	57,330
	Miscellaneous	71
	Transport	142,234
	<b>Total</b>	<b>387,590</b>

### 3.3.6 Noise pollution

Noise pollution in Kingston Borough can induce stress and disrupt resident’s sleeping patterns which diminishes the overall quality of life within the borough. Through consulting Round 3 of the [DEFRA Strategic noise mapping \(2017\)](#) it is evident that the majority of noise pollution in Kingston Borough comes from the major transport links such as the A3. This is particularly the case in the southwest of the borough by Chessington, closer to where large volumes of road traffic will be heading towards Kingston Borough from the M25. In this area, noise pollution can reach 75+ decibels on the road, and there is an average dispersion of 55-60 dB(A) across a radius of approximately 1km from the A3. This noise pollution trend is also seen along Beverley Way and Robin Hood Way, north of New Malden.

There is also noise pollution from the Crossrail 2, most significantly between Surbiton and New Malden, but to a lesser extent on the northern and southern forks towards Kingston station and Chessington. This pollution is also less dispersed in comparison to the pollution from the main roads in Kingston Borough, travelling only 400-500 m at most. The main noise action planning areas are in the stretch of A3 between Ditton Hill and New Malden, along Beverley Way and within Kingston town centre where there is also significant noise pollution.

### 3.3.7 Climate change

Climate change will deliver significant impacts to Kingston Borough through more extreme weather events and sea level rise which could induce adverse effects to a variety of characteristics within the borough. According to the [UK Climate Projections in 2018 \(UKCP18\)](#) the UK will have ‘a greater

chance of warmer, wetter winters and hotter, drier summers' heading into the future. Southern England is projected to receive significantly warmer summers with anomalies of between 4-7°C above the norm by 2061-2080, while the temperatures reached in the 2018 heatwave could be surpassed by up to 50% by 2050. These extreme heatwaves are likely to negatively impact the health and welfare of Kingston Borough residents and could also impact the biodiversity of wildlife by displacing species and introducing non-native species and pests.

Precipitation patterns are also likely to become more extreme, with 20-30% less precipitation expected in summer months, and 20-30% more precipitation during winter months within south-eastern England by 2061-2080. This is likely to induce droughts in the summer which would put additional pressure on aquifers and reservoirs, while flooding will become a more frequent result of extreme storm events in the winter. Kingston Borough is most likely to suffer from surface water flooding which can cause large scale disruption and become contaminated with sewage leading to health concerns.

### 3.3.8 Soil and water

The underlying bedrock geology of Kingston Borough is uniform across the borough, consisting of Thames Group – clay, silt, sand, and gravel, with superficial River Terrace Deposits (undifferentiated) – sand and gravel.

The EU Water Framework Directive is a legislative approach to managing and protecting water. Physical works can modify the size and shape of a watercourse to reduce or increase the flow, while removing sediment and vegetation or introducing artificial materials can have a similar effect. These modifications can come at the expense of ecological quality and thus each waterbody is assessed in terms of water-quality and given an ecological score. Targets have been set for all waterbodies to achieve 'good ecological status' by 2027 based on a range of indicators.

There are two waterbodies defined by the [EU Water Framework Directive](#) in Kingston Borough:

- The Beverley Brook is a tributary of the Thames, flowing along the north-eastern borough boundary
- The River Hogsmill is a tributary of the Thames, flowing through the middle of the borough from the east to the northwest

Both waterbodies have moderate ecological statuses, although the potential of their ecological quality has likely been reduced by their heavily hydro-morphologically modified sections. It is worth noting that the ecological quality is due to poor biological quality for diatoms, while the conditions are more favourable for macrophytes, macroinvertebrates and fish.

### 3.3.9 Historic and cultural environment.

Kingston Borough's rich and distinctive history dates back to Saxon times, with much of its architecture still visible within its five historic cores: Kingston Town, Surbiton Town, Coombe, Old/New Malden and Tolworth/Chessington. There are many key cultural, architectural and archaeological heritage sites in Kingston Borough which are registered on [Historic England](#), these can be found listed below in [Table 3-4](#) Historical and cultural assets in Kingston Borough.

**Table 3-4 Historical and cultural assets in Kingston Borough**

Type of classification	No. Assets	Examples of Heritage assets
Conservation Areas	26 (227 ha = 7.4%)	Kingston Old Town, Kingston Vale, Old Malden, Fishponds Park
Areas of Special Local Character	18	Tudor Estate, The Berg Estate, Cranes Park, Albert and Victoria Roads
Listed Buildings Grade I, II or II*	3 (I) 146 (II) 13 (II*)	Clattern Bridge, Church of St Andrew, Roman Catholic Church of St Raphael
Scheduled Ancient Monuments	6	Coombe Conduit, Castle Hill Earthwork, Ivy Conduit, Brick reservoir, Clattern Bridge, Gallows Conduit
Archaeological Priority Areas	27	Stevens Eyots, Ravens Ait, Kingston Hill, Barwell Court farm
Local and District Parks	31	Beverley Park, Fishponds Park, Manor Park, Sir Frances Barker Recreation Ground
Historic Parks or Gardens	0	

Kingston Borough’s Heritage assets listed in *Table 3-4* Historical and cultural assets in Kingston Borough are inclusive of a number of Heritage at Risk (HAR) assets. The [HAR register](#) It is an important programme to identify which assets are most at risk of being lost as a result of neglect, decay or inappropriate development. Kingston Borough’s HAR assets are identified in *Table 3-5* Heritage assets at risk in Kingston Borough below on request from Historic England.

**Table 3-5 Heritage assets at risk in Kingston Borough**

Type of classification	No. of assets	Heritage Assets
Conservation Areas	3	Coombe Wood, Fairfield / Knights Park, Grove Crescent
Listed Buildings Grade II	6	Church of St Matthew, Former Head Post Office at 42 Eden Street, Kingston Telephone Exchange, Lambeth uncovered coal store including tower and attached tunnels, Garden and boundary walls to Cimero, Mortuary Chapels

### 3.4 A2 consultation questions

Questions asked during the consultation exercise based upon the baseline indicators that have been chosen:

3. Do you agree that all 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 included in 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

Task A3 is to identify environmental issues and problems from the information gathered from policies from Task A1, and from analysis of the baseline information from Task A2. This will assist in determining any existing environmental issues which could affect the implementation of the actions from the LFRMS. It could also help anticipate any potential issues which could arise from the actions of the LFRMS.

## 4.2 Local environmental issues

From examining the baseline information from 3.3, the following environmental issues have been distinguished and presented in *Table 4-1* Environmental issues and their potential associated problems. All the key environmental issues identified have been assigned a corresponding LFRMS strategic objective(s), which suggests the actions required to resolve or improve the issue.

**Table 4-1 Environmental issues and their potential associated problems**

Key issues	Potential associated problems	LFRMS Strategic objective(s) to resolve this issue
Population increasing	<ul style="list-style-type: none"> <li>Greater need for new development to accommodate for a growing population</li> <li>Increase in number of residents at risk from flooding</li> </ul>	A B C D
Population density increasing	<ul style="list-style-type: none"> <li>An increase in the number of residents in concentrated areas means more people at risk if flooding were to occur there</li> <li>Diseases would likely have faster transmission rates in densely populated areas</li> </ul>	A C D
Areas of deprivation	<ul style="list-style-type: none"> <li>Residents living in deprived areas may not have sufficient access to appropriate housing, health care and education</li> <li>Residents living in deprived areas may require more adequate protection from flooding and assistance to overcome the secondary impacts of flooding</li> </ul>	A C D E
Life expectancy increasing	<ul style="list-style-type: none"> <li>More elderly residents may require better protection during flood events and need more support to overcome their lasting impacts</li> </ul>	A C D E
Air quality targets not met (NO <sub>2</sub> )	<ul style="list-style-type: none"> <li>Could lead to health problems in vulnerable residents with asthma, COPD or Chronic heart disease</li> </ul>	B

	<ul style="list-style-type: none"> <li>• This could put further pressures on the NHS and local healthcare services on the back of the COVID-19 Pandemic</li> <li>• A localised greenhouse gas emissions can aggravate climate change effects</li> </ul>	
Inadequate water quality	<ul style="list-style-type: none"> <li>• Detrimental effects to some local biodiversity and ecology</li> <li>• Risk of not achieving 'good' ecological status by WFD deadlines</li> <li>• Potential for safe/successful recreational activities such as fishing, or water sports are hindered</li> </ul>	B
Extreme weather events are to become more common in line with climate change	<ul style="list-style-type: none"> <li>• Flood events are likely to become more frequent due to the increase in frequency and intensity of precipitation events</li> <li>• More droughts likely to occur during summer months, putting pressure on water resources. This will be intensified by significant projected population growth</li> </ul>	A B C
Biodiversity, flora, and fauna impacted by climate change	<ul style="list-style-type: none"> <li>• Droughts could cause plants to dry out</li> <li>• Floods could destroy habitats in SINCs and Nature reserves</li> <li>• Changing weather patterns could favour invasive species, which could further outcast native species</li> </ul>	A B D
Historic and cultural environments could be impacted by climate change induced flooding and storm events	<ul style="list-style-type: none"> <li>• Historic and/or cultural architecture could be lost to more severe flood or storm events which are expected with climate change</li> </ul>	A B C D E
Heritage assets at risk from neglect, decay or developmental pressures where flood risk or changes to the water table are a risk	<ul style="list-style-type: none"> <li>• Areas where there is likely to be a significant loss or risk to landscape and heritage assets</li> <li>• A significant impact upon the historic and cultural environment and/or peoples enjoyment of it</li> </ul>	A C E
Noise Pollution from Major Transport Links	<ul style="list-style-type: none"> <li>• Noise pollution can induce stress and disrupt residents sleeping patterns</li> <li>• It diminishes the overall aesthetic of an area</li> </ul>	B C

### 4.3 A3 Consultation Questions

Questions asked during the consultation exercises based upon the environmental issues that have been identified:

6. Do you agree that these are the main environmental issues relating to the strategy affecting Kingston?
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 Kingston? If so, please give details.

## 5 SEA OBJECTIVES

### 5.1 Task A4 summary

The purpose of Task A4 is to develop the SEA objectives and framework. To do this, a list of eight SEA objectives have been established from the key environmental issues raised in Task A3, in addition to the local knowledge and understanding relating to flood risk management. The performance of the LFRMS will subsequently be assessed against these SEA objectives in [6.2](#).

### 5.2 SEA objectives

Below is a list of eight SEA objectives which will be assessed against each strategic objective of the LFRMS. These SEA objectives can also be used to provide assessment objectives for any future reviews of the progress made by Kingston to deliver its action plan tasks.

- **SEA 1:** Ensure Kingston Borough’s increasing population is adequately homed and reduce the population density of neighbourhoods where possible.
- **SEA 2:** Ensure vulnerable residents have adequate access to services and have the necessary support to overcome challenges during and after flood events.
- **SEA 3:** Reduce NO<sub>2</sub> emissions from roads by reducing traffic where possible, and encourage more environmentally friendly forms of transport.
- **SEA 4:** Prevent any further decline in the ecological quality of waterbodies and enhance the WFD status of rivers where possible.
- **SEA 5:** Promote sustainable development to reduce and mitigate the potential impacts of climate change.
- **SEA 6:** Maintain and enhance biodiversity and habitats which may be at threat from the effects of severe weather events induced by climate change.
- **SEA 7:** Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.
- **SEA 8:** Minimise noise pollution from major transport links, where possible.

### 5.3 A4 consultation questions

Questions 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 Kingston? If not, which objectives do you feel are unsuitable and why?
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

Task A5 is to assess the scope of the SEA against the LFRMS strategic objectives to establish whether there will be no effect, a potential effect, or a potentially significant effect on the SEA objectives. A matrix has been created below in [6.2](#) to assess each SEA objective against the corresponding LFRMS strategic objective.

## 6.2 Screening analysis

The assessment outcomes of each LFRMS strategic objective against each SEA objective are presented below in [Table 6-1](#) Scoring matrix of LFRMS strategy objectives against SEA objectives. [Table 6-2](#) Legend criteria for Table 6-1 supports this matrix by displaying the assessment criteria which has been used. Through consulting [Table 6-1](#) Scoring matrix of LFRMS strategy objectives against SEA objectives, it is evident that there are no LFRMS objectives which will impose a negative impact to the chosen SEA objectives. Instead, the analysis illustrates that there will be a range of neutral to major positive effects on the SEA objectives, with the majority of outcomes being minor positive effects. Neutral outcomes imply that there would be no correlation between the potential effects of the LFRMS strategic objectives and actions, and the SEA objectives identified.

**Table 6-1 Scoring matrix of LFRMS strategy objectives against SEA objectives**

		SEA Objective							
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8
LFRMS Strategy Objective	A	++	+	0	+	0	+	+	0
	B	+	0	+	+	+	+	+	++
	C	++	+	0	+	+	+	+	0
	D	0	++	0	++	+	+	+	0
	E	+	+	0	+	+	++	++	0

**Table 6-2 Legend criteria for Table 6-1**

++	Major positive effect on SEA objective.
+	Minor positive effect on SEA objective.
0	Neutral effect on SEA objective and/or dependant on implementation.
-	Minor negative effect on SEA objective.
--	Major negative effect on SEA objective.
?	Uncertain

## 6.3 Screening analysis outcomes

### 6.3.1 LFRMS strategic objective A

Strategic objective A is to improve the knowledge and understanding of the different risks of flooding within Kingston Borough. This can have both major and minor positive effects to the SEA objectives identified. There were no negative effects to any of the SEA objectives and thus strategic objective A can be screened out at this stage.

Table 6-3 Strategic objective A screening analysis outcomes

Level of effect on SEA objective	SEA objective	Justification for how strategic objective A impacts this SEA objective
<b>Major Positive</b>	<b>SEA 1:</b> Ensure Kingston Borough’s increasing population is adequately homed and reduce the population density of neighbourhoods where possible.	A greater knowledge and understanding of the various flood risks in Kingston Borough would ensure that decisions made for new housing development to satisfy the increasing population would be appropriate and at more resilient to flooding
<b>Minor Positive</b>	<b>SEA 2:</b> Ensure vulnerable residents have adequate access to services and have the necessary support to overcome challenges during and after flood events.	A greater knowledge and understanding of the different flood risks in Kingston Borough can provide a more accurate representation of which residents are at risk. This knowledge would assist in better preparing any relevant RMAs so that they help vulnerable residents during a flood event.
	<b>SEA 4:</b> Prevent any further decline in the ecological quality of waterbodies and enhance the WFD status of rivers where possible.	A greater knowledge and understanding of the different flood risks in Kingston Borough can identify how pollution could be carried into watercourses and hence identify where mitigation measures would need to be implemented.
	<b>SEA 6:</b> Maintain and enhance biodiversity and habitats which may be at threat from the effects of severe weather events induced by climate change.	A greater knowledge and understanding of the different risks of flooding to Kingston Borough would generate greater awareness for how biodiversity can be preserved and how habitats might be potentially impacted by flooding and thus how they could be made more resilient to these impacts.
	<b>SEA 7:</b> Ensure heritage assets are conserved and enhanced where appropriate and made	A greater knowledge and understanding of flood risk in Kingston Borough would assist in analysing how vulnerable historic and cultural

	resilient to severe weather events induced by climate change.	sites might be potentially impacted by flooding. This will allow for identification of how they should be better protected as well as improving understanding about how occasional flooding could potentially cause harm to them (including the potential loss of their significance). Groundwater-specific impacts should be particularly considered should heritage assets be in areas at risk.
<b>Neutral</b>	<b>SEA 3:</b> Reduce NO <sub>2</sub> emissions from roads by reducing traffic where possible and encourage more environmentally friendly forms of transport.	SEA 3 had no correlation to strategic objective A
	<b>SEA 5:</b> Promote sustainable development to reduce and mitigate the potential impacts of climate change.	SEA 5 had no correlation to strategic objective A
	<b>SEA 8:</b> Minimise noise pollution from major transport links, where possible.	SEA 8 had no correlation to strategic objective A
<b>Minor Negative</b>	N/A	None of the SEA objectives were negatively impacted by strategic objective A
<b>Major Negative</b>	N/A	None of the SEA objectives were significantly negatively impacted by strategic objective A

### 6.3.2 LFRMS strategic objective B

Strategic objective B is to proactively encourage sustainable solutions for the management of local flood risk while taking climate change into account. This will have a positive effect on the majority of the SEA objectives identified. There were no negative effects towards any of the SEA objectives and thus strategic objective B can be screened out at this stage.

**Table 6-4 Strategic objective B screening analysis outcomes**

Level of effect on SEA objective	SEA objective	Justification for how strategic objective B impacts this SEA objective
<b>Major Positive</b>	<b>SEA 8:</b> Minimise noise pollution from major transport links, where possible.	Through encouraging more sustainable solutions for the management of local flood risk, it is likely that sustainable drainage systems (SuDS) would be further introduced across Kingston Borough. If more SuDS with noise-reducing materials and methods, as well as other forms of vegetation such as rows of trees were introduced to road verges, it is likely that noise from roads such as the A3 could be absorbed and reduce noise pollution in Kingston Borough.
<b>Minor Positive</b>	<b>SEA 1:</b> Ensure Kingston Borough’s increasing population is adequately homed and reduce the population density of neighbourhoods where possible.	New residential developments in Kingston Borough which are in high flood risk areas should be made resilient to flood risk by implementing SuDS into their design as part of their planning applications.
	<b>SEA 3:</b> Reduce NO <sub>2</sub> emissions from roads by reducing traffic where possible and encourage more environmentally friendly forms of transport.	Air quality can be improved through introducing more vegetation as part of SuDS schemes. Plants can absorb the excess Nitrogen Dioxide into its leaves to create amino acids.
	<b>SEA 4:</b> Prevent any further decline in the ecological quality of waterbodies and enhance the Water Framework Directive (WFD) ecological status of rivers where possible.	The strategic applications of SuDS can improve water quality. This can be done by installing filter strips, rain gardens, tree pits or petrol interceptors on carparks, to decontaminate surface water which may flow into Kingston Borough’s waterbodies.
	<b>SEA 5:</b> Promote sustainable development to reduce and mitigate the potential impacts of climate change.	Incorporating SuDS into the design of new developments can make them more sustainable. This can be achieved through rainwater harvesting options and the inclusion of vegetation which can offset the carbon released throughout construction and operation of the development.

	<p><b>SEA 6:</b> Maintain and enhance biodiversity and habitats which may be at threat from the effects of severe weather events induced by climate change.</p>	<p>SuDS can be integrated into parks and other green areas where there are an abundance species and habitats. SuDS could make these areas more resilient to increasing flood risk induced by climate change, or even create new habitats such as wetlands to boost biodiversity.</p>
	<p><b>SEA 7:</b> Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.</p>	<p>SuDS can be integrated into sites of historic or cultural significance to make them more resilient to increasing flood risk induced by climate change. There are also opportunities for improving the access, understanding and enjoyment of the historic environment as part of the design and implementation of flood risk measures.</p>
<b>Neutral</b>	<p><b>SEA 2:</b> Ensure vulnerable residents have adequate access to services and have the necessary support to overcome challenges during and after flood events.</p>	<p>SEA 2 had no correlation to strategic objective B.</p>
<b>Minor Negative</b>	N/A	<p>None of the SEA objectives were negatively impacted by strategic objective B</p>
<b>Major Negative</b>	N/A	<p>None of the SEA objectives were significantly negatively impacted by strategic objective B</p>

### 6.3.3 LFRMS strategic objective C

Strategic objective C of the LFRMS is to appropriately use planning powers to mitigate developments against flooding. This strategic objective will also have a positive impact to the majority of the SEA objectives identified. There were no negative effects towards any of the SEA objectives and thus strategic objective C can be screened out at this stage.

**Table 6-5 Strategic objective C screening analysis outcomes**

Level of effect on SEA objective	SEA objective	Justification for how strategic objective C impacts this SEA objective
<b>Major Positive</b>	<b>SEA 1:</b> Ensure Kingston Borough’s increasing population is adequately homed and reduce the population density of neighbourhoods where possible.	Planning powers can be used to ensure that the designs of new housing have increased resilience to increasingly severe storm events.
<b>Minor Positive</b>	<b>SEA 2:</b> Ensure vulnerable residents have adequate access to services and have the necessary support to overcome challenges during and after flood events.	Planning powers would help vulnerable residents be more resilient to the impacts of surface water flooding by ensuring that any development plans affecting local services or homes are appropriately mitigated against flooding.
	<b>SEA 4:</b> Prevent any further decline in the ecological quality of waterbodies and enhance the WFD status of rivers where possible.	SuDS can be implemented to improve water quality and these considerations are made as part of planning applications for new developments. Assessments of the risks of groundwater contamination and checks to whether the development is within a Source Protection Zone are also undertaken to make sure the development does not contribute to the deterioration of water quality. This ensures a reduction of flood damage to communities and a reduction of harmful debris or chemicals being transported through surface water into WFD waterbodies. This would preserve or improve water body ecological status and overall water quality which may normally have been reduced after flood events.
	<b>SEA 5:</b> Promote sustainable development to reduce and mitigate the potential impacts of climate change.	Planning powers are in line with the sustainable development goals which address social progress, economic well-being and environmental protection. The environmental objectives particularly have a focus to mitigate and adapt to climate change, including moving to a low carbon economy.

	<p><b>SEA 6:</b> Maintain and enhance biodiversity and habitats which may be at threat from the effects of severe weather events induced by climate change.</p>	<p>Planning powers can be used to improve the resilience of the biodiversity and habitats in an area of development.</p>
	<p><b>SEA 7:</b> Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.</p>	<p>Planning powers can be used to improve the resilience of sites of historical and cultural significance against flooding. These opportunities for conserving and enhancing heritage assets can be delivered as part of an integrated approach to flood risk management and catchment-based initiatives. This included sustaining and enhancing the local character and distinctiveness of historic townscapes and landscapes.</p>
<b>Neutral</b>	<p><b>SEA 3:</b> Reduce NO<sub>2</sub> emissions from roads by reducing traffic where possible, and encourage more environmentally friendly forms of transport.</p>	<p>SEA 3 had no correlation to strategic objective C.</p>
	<p><b>SEA 8:</b> Minimise noise pollution from major transport links, where possible.</p>	<p>SEA 8 had no correlation to strategic objective C.</p>
<b>Minor Negative</b>	<p>N/A</p>	<p>None of the SEA objectives were negatively impacted by strategic objective C</p>
<b>Major Negative</b>	<p>N/A</p>	<p>None of the SEA objectives were significantly negatively impacted by strategic objective C</p>

### 6.3.4 LFRMS strategic objective D

Strategic objective D is to educate, encourage and empower local residents, businesses and landowners to take action on reducing flood risk, which has positive effects on some of the SEA objectives. There were no negative effects towards any of the SEA objectives and thus strategic objective C can be screened out at this stage.

**Table 6-6 Strategic objective D screening analysis outcomes**

Level of effect on SEA objective	SEA objective	Justification for how strategic objective D impacts this SEA objective
<b>Major Positive</b>	<b>SEA 2:</b> Ensure vulnerable residents have adequate access to services and have the necessary support to overcome challenges during and after flood events.	Through educating and empowering vulnerable residents such as those who may be elderly or living within deprived areas, they will be able to have a greater understanding of flood risk and how it could affect them, allowing them to be better prepared and take the necessary actions when flooding is predicted or occurs unexpectedly.
	<b>SEA 4:</b> Prevent any further decline in the ecological quality of waterbodies and enhance the WFD status of rivers where possible.	Educating local businesses and the public about pollution (including drainage misconceptions), fly-tipping, and the development of land in the planning process, can enforce against further decline of the ecological status of waterbodies.
<b>Minor Positive</b>	<b>SEA 5:</b> Promote sustainable development to reduce and mitigate the potential impacts of climate change.	Educating developers and homeowners about climate change can allow them to design and live more sustainably.
	<b>SEA 6:</b> Maintain and enhance biodiversity and habitats which may be at threat from the effects of severe weather events induced by climate change.	Educating Kingston Borough’s residents can give them a greater understanding of how flooding could impact the biodiversity and habitats in their local areas such as in private gardens or local parks and learn how to best protect them.
	<b>SEA 7:</b> Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.	Historic and cultural sites are commonly run by charities and residents who can work with the LLFA on education schemes, SuDS retrofit schemes and co-production opportunities.
<b>Neutral</b>	<b>SEA 1:</b> Ensure Kingston Borough’s increasing population is adequately homed and reduce the population density of neighbourhoods where possible.	SEA 1 had no correlation to strategic objective D.
	<b>SEA 3:</b> Reduce NO <sub>2</sub> emissions from roads by reducing traffic where possible and encourage	SEA 3 had no correlation to strategic objective D.

	more environmentally friendly forms of transport.	
	<b>SEA 8:</b> Minimise noise pollution from major transport links, where possible.	SEA 8 had no correlation to strategic objective D.
<b>Minor Negative</b>	N/A	None of the SEA objectives were negatively impacted by strategic objective D
<b>Major Negative</b>	N/A	None of the SEA objectives were significantly negatively impacted by strategic objective D

### 6.3.5 LFRMS strategic objective E

Strategic objective E involves nurturing collaborative partnerships with key organisations and RMAs, including for funding and resources, and so it will have positive effects towards many of the SEA objectives. There were no SEA objectives negatively affected by strategic objective E and thus it can be screened out at this stage.

**Table 6-7 Strategic objective E screening analysis outcomes**

Level of effect on SEA objective	SEA objective	Justification for how strategic objective E impacts this SEA objective
Major Positive	<p><b>SEA 6:</b> Maintain and enhance biodiversity and habitats which may be at threat from the effects of severe weather events induced by climate change.</p>	<p>Through collaborative partnerships with Natural England biodiversity and habitats can become more resilient to severe weather events. Natural England have been vital in the preservation of biodiversity and habitats in SINC's and Nature Reserves in Kingston Borough, while accounting for the intensifying storm events caused by climate change.</p>
	<p><b>SEA 7:</b> Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.</p>	<p>Through collaborative partnerships with Historic England sites of cultural or historic significance can become more resilient to severe weather events. Historic England have been critical to ensuring that the methods of protection for sites of historic and cultural significance are suitable and sufficient, while accounting for the intensifying storm events caused by climate change. Any such sites potentially affected by future flood alleviation schemes will be identified and risks managed appropriately. In addition, by closely working with Historic England opportunities can be identified to enhance the local character and distinctiveness of historic townscapes and landscapes.</p>
Minor Positive	<p><b>SEA 1:</b> Ensure Kingston Borough's increasing population is adequately homed and reduce the population density of neighbourhoods where possible.</p>	<p>Collaborative partnerships can provide information on flood insurance industry updates, Property Flood Resilience grants and funding available, and studies and information on the population for preparedness and resilience of communities. This information will be able to provide useful advice to ensure that the population of Kingston Borough can be homed and resilient to flooding.</p>

	<p><b>SEA 2:</b> Ensure vulnerable residents have adequate access to services and have the necessary support to overcome challenges during and after flood events.</p>	<p>Vulnerable residents require additional support and protection from the impacts of flooding, so it is vital that RMAs such as the emergency services in Kingston Borough are prepared and available to assist them. This can only be delivered through collaborative partnerships with the Metropolitan Police Service, London Fire Brigade, Sutton, and the British Red Cross.</p>
	<p><b>SEA 4:</b> Prevent any further decline in the ecological quality of waterbodies and enhance the WFD status of rivers where possible.</p>	<p>Partnerships with the South East Rivers Trust (SERT) and the EA can be developed to prevent and enforce further decline of the ecological quality of watercourses in Kingston Borough.</p>
	<p><b>SEA 5:</b> Promote sustainable development to reduce and mitigate the potential impacts of climate change.</p>	<p>There are many potential collaborative partnerships for funding such as: Local Enterprise Partnerships, the Flood Defence Grant in Aid, partnerships with Thames Water for ad-hoc funding, partnerships with the EA for Local levy funding and partnerships with the Greater London Authority (GLA) and Forestry Commission who provide Green and Resilient Spaces funding. These collaborative partnerships can generate substantial additional funding for developments. This is particularly crucial since some environmentally sustainable developments such as through nature-based solutions like tree planting, re-wilding or returning to natural channel flow are not within the Highways department’s remit and thus may struggle to attract other forms of funding without these collaborative partnerships. The additional funding from these relationships can facilitate the deliverance of objectives surrounding these sustainable new developments.</p>
<b>Neutral</b>	<p><b>SEA 3:</b> Reduce NO<sub>2</sub> emissions from roads by reducing traffic where possible, and encourage more environmentally friendly forms of transport.</p>	<p>SEA 3 had no correlation to strategic objective E</p>
	<p><b>SEA 8:</b> Minimise noise pollution from major transport links, where possible.</p>	<p>SEA 8 had no correlation to strategic objective E</p>
<b>Minor Negative</b>	<p>N/A</p>	<p>None of the SEA objectives were negatively impacted by strategic objective E</p>
<b>Major Negative</b>	<p>N/A</p>	<p>None of the SEA objectives were significantly negatively impacted by strategic objective E</p>

## 6.4 A5 consultation questions

Questions asked during the consultation exercises based upon the assessment matrix, conclusions, and this SEA Screening Report as a whole:

11. Do you think that the baseline indicators in Section 3 provide a relevant measure for these proposed SEA objectives?
12. Do you have any comments on the proposed method for the assessment of the SEA objectives with the Local Flood Risk Management Strategy objectives and actions?

## 7 CONCLUSIONS AND NEXT STEPS

### 7.1 Conclusions

The findings of this SEA reveal that the proposed LFRMS strategic objectives are not projected to deliver any detrimental consequences to the local environment in Kingston Borough. Instead, these strategic objectives have been shown to offer a varied response of neutral, minor positive and major positive effects. It can be concluded that the LFRMS has appropriately considered the product of its actions regarding the local environmental issues which have been identified in Kingston Borough. The LFRMS has offered multi-benefit solutions and opportunities to manage and where possible mitigate these key environmental issues, without presenting unfavourable consequences. As a result, the LFRMS does not require any progression onto further appropriate assessment stages and does not require a full SEA.

### 7.2 Consultation of the SEA

The Statutory consultation for this SEA Screening Report took place across April and May 2022, where three statutory consultation bodies were consulted. The EA and Natural England responded with no further comments. Historic England provided several comments to which the majority of changes have been made accordingly. In particular, one comment requested the mapping of Kingston Borough's heritage assets against flood risk. Kingston have pledged to undertake such mapping in the future through the inclusion of a subsequent action within the LFRMS's Action Plan. They also had a further recommendation to involve Kingston's Conservation Officers throughout the preparation, assessment, and implementation of the LFRMS. As such, Kingston's Conservation Officers will be included as internal stakeholders as part of the public consultation which is detailed below.

The final stage of this SEA Screening Report was to undergo a public consultation period where the community stakeholders and any remaining strategic and internal stakeholders who had not been consulted until this stage would have an opportunity to feedback on the contents and outcomes of the LFRMS, including any of its accompanying material such as this SEA Screening Report. This public consultation occurred through the medium of an online questionnaire between December 2022 and January 2023, and there was a period of four weeks during which any stakeholders could participate. The feedback received from the stakeholders was incorporated into the final versions of the LFRMS output documents, including this SEA Screening Report. More information about the public consultation can be found in the Kingston LFRMS Communications Strategy.

Any further questions:

13. Are you satisfied that the SEA Screening Report has arrived at a correct conclusion?
14. Do you have any additional comments or suggestions for this SEA Screening Report?