

APPENDIX 4 – STRATEGIC ENVIRONMENTAL ASSESSMENT SCREENING REPORT



PREPARED FOR THE LONDON BOROUGH OF SUTTON

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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 London Borough of Sutton (Sutton 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 Sutton Borough can be managed and where possible mitigated.

The environmental issues have been drawn from baseline information collected on Sutton 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, climate change, soil and water, and historic and cultural environment. From this baseline information nine SEA objectives have been formed.

These SEA objectives are as follows:

- **SEA 1:** Ensure all of Sutton Borough's critical infrastructure has sufficient protection from flooding.
- **SEA 2:** Ensure Sutton Borough's increasing population is adequately homed.
- **SEA 3:** Ensure vulnerable residents have access to reactive and emergency services and have the necessary support to overcome challenges during and after flood events.
- **SEA 4:** Increase community participation in activities that reduce obesity rates.
- **SEA 5:** Reduce NO₂ emissions from roads by reducing road traffic where possible and encourage and enable alternative, more environmentally friendly forms of transport.
- **SEA 6:** Promote sustainable development to reduce and mitigate the potential impacts of climate change.
- **SEA 7:** Preserve the nationally declining species found in Sutton Borough while enhancing biodiversity and making habitats more resilient to the effects of severe weather events induced by climate change.
- **SEA 8:** Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.
- **SEA 9:** Prevent and enforce against any further decline in the ecological quality of ordinary watercourses, while enhancing their WFD ecological status 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 Sutton 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
AQS	Air Quality Strategy
EA	Environment Agency
HAR	Heritage at risk
HRA	Habitats Regulations Assessment
JSNA	Joint Strategic Needs Assessment
Kingston	Kingston Council
Kingston Borough	Royal Borough of Kingston upon Thames
LFRMS	Local Flood Risk Management Strategy
LLFA	Lead Local Flood Authority
LSOA	Lower Super Output Area
MAFP	Multi-Agency Flood Plan
MOL	Metropolitan Open Land
NO ₂	Nitrogen Dioxide
PM ₁₀ and PM _{2.5}	Particulate Matter of 10µm diameter or below and 2.5µm diameter or below respectively
RMA	Risk Management Authority
SEA	Strategic Environmental Assessment
SIL	Strategic Industrial Location
SINC	Sites of Importance for Nature Conservation
SuDS	Sustainable Drainage System
Sutton	Sutton Council
Sutton Borough	London Borough of Sutton

1 INTRODUCTION

1.1 Purpose of screening

The purpose of a Strategic Environmental Assessment (SEA) is to review the possible environmental impacts which could occur to a specified area because of the plans, strategies and actions implemented. The [European SEA Directive \(2001\)](#) states that the SEA should evaluate any potential impacts to economic, environmental or social factors when the proposed policies are implemented. Following a review of the policies, alternatives should be considered if their effects are regarded as too impactful on the local and wider environment.

This SEA Screening Report will assess the actions presented by the Local Flood Risk Management Strategy (LFRMS) for the London Borough of Sutton (Sutton Borough), and clearly define the potential risks and implications that these actions may have to the local and wider environment in Sutton Borough. To achieve this, the LFRMS strategic objectives and their accompanying actions within the LFRMS action plan will be evaluated in the screening assessment. Following the result of this screening process, an informed decision can be made on whether the LFRMS is required 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 a full SEA is comprised of five stages, each with 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
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 risks.
		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 remaining environmental effects of implementing the plan.
	Stage C: Preparing the environmental report.	C1: 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

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 that all the relevant policies, documents, plans and legislation that relate to or could affect the Local Flood Risk Management Strategy have been included?
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 included herein is appropriate to the Local Flood Risk Management Strategy that is being developed? If no, why do you not agree?
4. Do you have, or know of, any additional baseline indicators or data that should be included in this SEA screening assessment? Please can you include links to this additional information in an email.
5. As far as you are aware, is the baseline data accurate and up to date? If no, please send links to updated data.

Task A3: Environmental issues affecting the borough

6. Do you agree that these are the main environmental issues relating to the strategy affecting Sutton Borough? If no, what are the main issues that relate to the strategy?
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 Sutton 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 Sutton 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? If so, how?
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. Do you have any comments on the conclusions of the SEA Screening Report?
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

Sutton is the appointed Lead Local Flood Authority (LLFA) under the [Flood and Water Management Act \(FWMA\) \(2010\)](#). Under this LLFA role, Sutton holds the statutory responsibility to develop, maintain and apply a LFRMS. This document should set out aims and objectives to manage local flood risk within Sutton Borough. Subsequent documents should consist of an Action Plan outlining the delivery of these actions, a monitoring and reviewing plan to track progress, and this SEA Screening Report. The SEA Screening Report is a statutory requirement of any LFRMS where there are potential impacts to the local environment, and its purpose is outlined earlier in [1.1](#). Despite the inclusion of a Habitats Regulations Assessment (HRA) Screening Report as a supporting document in the Kingston LFRMS, it was decided by the Senior Biodiversity Officer in Sutton that

an updated HRA would not be required for this LFRMS since there have been no changes in landscape geomorphology which could have increased any possible linkages from Sutton Borough to any of the European sites at risk since the previous LFRMS's HRA from 2014.

1.4.2 Local area information

Sutton Borough is located on the southern border of Greater London with its neighbouring boroughs, the London Boroughs of Croydon (east) and Merton (north). Sutton Borough also abuts a small section of its north-western border with the Royal Borough of Kingston Upon Thames (Kingston Borough) and operates a Shared Environment Service with Kingston, sharing the management of local flood risk through the LLFA team. The main rivers in Sutton Borough are the River Wandle, Beverley Brook and Pyl Brook which are southern tributaries of the River Thames. The main source of the Wandle rises in Croydon to the southeast and it enters Sutton Borough through the eastern border. It is then merged with the River Wrythe which is sourced from a spring in Carshalton Ponds in Wallington, before conveying northwards and exiting the northern boundary of the borough into the London Borough of Merton. Beverley Brook conveys along the western boundary of the borough through Worcester Park. Pyl Brook conveys northwest from its source in Sutton Common and into The London Borough of Merton where it eventually joins Beverley Brook.

1.4.3 LFRMS strategic objectives

The five strategic objectives identified within the LFRMS have been listed below. Due to the collaborative partnership between Sutton and Kingston'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 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. When the Public consultation occurs between December 2022 and January 2023 all of the participating community, internal and strategic stakeholders will be given an opportunity to provide feedback on any/all of the LFRMS documents. Similarly to the Statutory consultation, any necessary changes following the public

consultation will be made prior to the final version of the LFRMS and associated documents being published in March 2023.

2 IDENTIFICATION OF RELEVANT POLICIES

2.1 Task A1 summary

Task A1 is to identify 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 the Action Plan in relation to the SEA objectives have been compiled. These 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 report.

Table 2-1 Table of relevant policies to the SEA

International
Convention for the Protection of the Archaeological Heritage of Europe (1985)
EU Biodiversity Strategy for 2030 (2020)
EU Birds Directive (2009)
EU Floods Directive (2007)
EU Habitats Directive (1992)
EU Water Framework Directive (2000)
European Landscape Convention (2000)
European SEA Directive (2001)
The European Convention on the Protection of Archaeological Heritage (1992)
National
Ancient Monuments & Archaeological Areas Act (1979)
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)
Future Water: The Government’s Water Strategy for England (2008)
Environment Act (2021)
Environmental Protection Act (1990)
Flood and Water Management Act (2010)
Flood Risk Regulations (2009)
Land Drainage Act (1991)
Natural Environment and Rural Communities Act (2006)
National Flood and Coastal Erosion Risk Management Strategy for England (NFCERMS) (2020)
National Planning Policy Framework (2012, revised 2021)
National Planning Practice Guidance (2016, revised 2021)
National Standards for Sustainable Drainage Systems (2011)
Planning (Listed Buildings & Conservation Areas) Act (1990)
The Pitt Review - Lessons learned from the 2007 summer floods (2007)
The SuDS Manual C753F (2007)

The UK Biodiversity Action Plan (1994)
Water Act (2014)
Meeting our Future Water Needs: A National Framework for Water Resources (2020)
Regional
City of London Biodiversity Action Plan (2021-2026)
London Regional Flood Risk Appraisal (2018)
Mayor of London’s Climate Change Adaptation Strategy (2011)
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)
Local
Sutton’s Surface Water Management Plan (2011) (Updated in 2019/20 but not published online)
Sutton’s Preliminary Flood Risk Assessment (2011 – Updated in 2017)
Sutton’s Strategic Flood Risk Assessment (2015)
Sutton Local Plan (2018)
Sutton’s Nature Conservation Policy Statement (can be found in the Sutton Local Plan (2018) Policy 26)
Sutton Air Quality Action Plan (2019-2023)
Sutton’s Environment Strategy and Climate Emergency Response Plan (2019-2025)
Sutton Biodiversity Strategy (2020-2025)

2.3 A1 consultation questions

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

1. Do you feel that all relevant policies, documents, plans and legislation that relate to or could affect the Local Flood Risk Management Strategy have been included?
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

Task A2 is to obtain baseline information on Sutton Borough, which will be collected from a variety of sources including the [Local Plan \(2018\)](#) and [Sutton's Biodiversity Strategy \(2020-2025\)](#). This information will then be used to identify any key environmental issues which exist in Sutton 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 Sutton Borough characteristics

Sutton Borough is a south London borough covering an area of 4,485 hectares. Within this area is a variety of parks, wildlife areas, open space, leafy suburbs and urban town centres. Sutton Borough's metropolitan town centre is a pedestrianised environment holding over 190 retail units, and is one of four metropolitan centres in south London. The borough holds seven other complimentary district centres which are Cheam, North Cheam, Wallington, Worcester Park, Hackbridge, Rosehill and Carshalton, which each exhibit their own unique character. Sutton Borough also has three Strategic Industrial Locations (SILs) in Kimpton, Beddington and a small part of the Purley Way SIL. There are also a couple of smaller industrial sites being transformed into housing developments including the Felnex Trading Estate and the Wandle Valley Trading Estate in Hackbridge.

Sutton Borough has large areas of integral Green Belt and Metropolitan Open Land (MOL), comprised of the Cuddington Green Belt, the significantly larger Woodcote Green Belt, and 18 other MOL areas. Sutton Borough's many parks and open spaces, such as Manor Park and Beddington Park, provide areas for recreational and physical activity to promote social interaction, health, and well-being. There are also 54 Sites of Importance for Nature Conservation (SINCs) in Sutton Borough, many of which are being extended as part of the [Local Plan \(2018\)](#), such as Belmont Pastures, Queen Mary's Wood and Wellfield Plantation and Grasslands.

The main transport links within Sutton Borough are Carshalton Road (A232) which runs east to west through Carshalton and Sutton town centre; and Belmont Rise (A217) Oldfields Road which runs south to north past Cheam and through West Sutton and Rosehill. Sutton Borough also has Southern and South Western Railway links, with stations in close proximity to all the aforementioned district and town centres.

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 Kingston and Sutton due to the availability of information. This may be particularly noticeable for the absence of noise pollution information in this SEA in comparison to Kingston's SEA. This was because the types of noise pollution reported in Sutton Borough were largely from noise nuisance and neighbour disputes which were seen as unrelated to any of the LFRMS strategic objectives or their actions.

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 Sutton Borough. GLHER data is available in the form of shapefiles for GIS mapping. Sutton 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

The parks and open spaces in Sutton Borough are integral to the quality of life of the borough’s residents and wildlife. A survey from [Sutton’s Biodiversity Strategy \(2020-2025\)](#) claims that almost 90% of residents visit the parks during the year with half this amount visiting on a weekly basis for various activities including exercise, wildlife observations and dog walking. Sutton Borough has more than 464 hectares of parks, open space, wildlife areas, lakes and waterways among other green features such as allotments and highway verges.

Sutton has set targets in the Greener Borough chapter of its Environmental Strategy to plant 2,000 trees between 2018-2022 and enhance the overall biodiversity without reducing any green space in the borough. One way in which Sutton is achieving this by applying an ‘uplift’ of 20% or two ‘biodiversity units’ per hectare of land developed (whichever is greater) to ensure a net gain is achieved.

Sutton Borough holds a surprising array of wildlife considering its positioning on the edge of Greater London. These include rare and nationally declining species such as the small blue butterfly, the flowering plant greater yellow rattle, invertebrates such as stag beetles and birds such as the skylark. [Table 3-1](#) Designated sites of natural importance in Sutton Borough lists all of the Local Nature Reserves and some of the SINCS in Sutton Borough.

Table 3-1 Designated sites of natural importance in Sutton Borough

	Designation	No. of sites	Site names
Local Nature Reserves	Wetland	4	<ul style="list-style-type: none"> • Anton Crescent Wetlands • Carew Manor Wetlands • Kimpton Balancing Pond and Buffer Strip • Wandle Valley Wetlands
	Grassland	10	<ul style="list-style-type: none"> • Avenue Primary School Nature Area • Belmont Pastures • Carshalton Road Pastures • Cuddington Meadows • Devonshire Avenue Nature Area • Roundshaw Downs • Sutton Common • Therapia Lane Rough • The Warren • Wellfield North
	Woodland	3	<ul style="list-style-type: none"> • Queen Mary’s Woodlands • Ruffett and Bigwood • The Spinney

Designation	No. of sites	Site names
Sites of Importance for Nature Conservation (SINC)	54	<ul style="list-style-type: none"> • The River Wandle • Poulter Park Riverside • Wandle Valley Wetland among others, which can be found in Sutton's Biodiversity strategy

3.3.2 Infrastructure assets

There is a significant number of infrastructure assets at risk of surface water flooding in Sutton Borough. Information from the EA's Risk of Flooding from Surface Water Map suggests that Carshalton, Trafalgar Avenue, Worcester Park, Hackbridge and Sutton Junction are the key areas identified to be susceptible to surface water flooding. The approximate numbers of infrastructure assets which could be affected by surface water flooding have been taken from the [Sutton LFRMS 2019](#), and are shown below in [Table 3-2](#) Infrastructure assets potentially at risk of surface water flooding in Sutton. The assets are split into two main types of infrastructure; residential and non-residential, the latter of which can be further separated into commercial and industrial, critical infrastructure and other. For clarification, critical infrastructure includes the likes of fire, police and ambulance stations, health and education facilities, care homes and electricity substations. The types of infrastructure have also been divided into three risk level categories, which are low risk, medium risk, and high risk. Low risk is defined as between a 0.1% and 1% chance of flooding within this area each year. Medium risk is defined as between a 1% and 3.3% chance of flooding within this area each year. Finally, high risk is defined as a greater than 3.3% chance of flooding within this area during each given year.

Table 3-2 Infrastructure assets potentially at risk of surface water flooding in Sutton Borough

Type of Infrastructure		Level of Risk		
		Low	Medium	High
Residential		16,300	5,200	2,000
Non-Residential	Commercial and Industrial	1,300	510	220
	Critical Infrastructure	140	65	40
	Other	60	25	10
	Non-Residential Total	1,500	600	270
Total		17,800	5,800	2,270

3.3.3 Population

According to the [Sutton Joint Strategic Needs Assessment \(JSNA\)](#) of 2017, the population of Sutton Borough is due to increase by 12.7% between 2014-2024, from 191,123 to approximately 223,300. The projections have also indicated an ageing population, with the oldest age groups of residents expected to see the greatest percentage increase of 29.1%. This comes as a result of a further positive trend in life expectancy of Sutton Borough residents, increasing by 3 or 4 years between 2001-03 to 2013-15. The life expectancy was 80.8 years for males and 83.5 years for females in 2013-15, similar to the London and England averages. This is expected to have increased further at present, following the developing positive trend in life expectancy since 2001-03.

3.3.4 Public health

Mortality rates in Sutton Borough have been progressively improving, with lower than the average rates in comparison to London and England, making Sutton Borough one of the healthier boroughs in England according to the [Sutton JSNA \(2017\)](#). There are variations within Sutton Borough however, with more disadvantaged electoral wards such as Sutton South and Wandle Valley having significantly higher mortality rates than other areas such as Nonsuch and Worcester Park. Mortality rates from preventable causes are declining in line with the London and England average. While cancer continues to account for the highest proportion of deaths in the under 75 age group, this has been decreasing over time along with cardiovascular deaths.

Obesity rates of children ages 4-11 within Sutton Borough are lower and therefore better than the London and national rate. For adults, the obesity rates are greater than the London average but lower than the national average, with 60.5% of adults over 16 years old being overweight or obese. Work is continuing across the borough to promote a healthier environment and opportunities for exercise which can help to reduce obesity rates across the borough.

Sutton Borough is one of the [least deprived](#) London boroughs, although there are wards with pockets of relative deprivation such as Beddington South, Belmont, Wandle Valley, Sutton Central and St Helier. Between 2010-15 many Lower-layer Super Output Areas (LSOAs) within Sutton Borough have become less deprived in comparison with the rest of England, although some LSOAs have shifted to a relatively more deprived decile, including The Wrythe, Beddington South and Belmont.

3.3.5 Air quality

According to [Sutton's Air Quality Action Plan 2019-2023](#) Sutton Borough is within the UK's Air Quality Strategy (AQS) limit values for Particulate Matter (PM₁₀) but not for Nitrogen Dioxide (NO₂). Sutton Borough must meet the EU annual average and hourly limit for NO₂ and the World Health Organisation's air quality guidelines for PM₁₀ (Particulate Matter of 10µm diameter and below) and PM_{2.5} (Particulate Matter of 2.5µm diameter and below). Therefore, in 2013 a borough wide Air Quality Management Area was declared for NO₂ and PM₁₀ due to significant breaches within locations associated with Sutton Borough's road network. The Air Quality Focus Areas such as Central Road in Worcester Park, Woodcote Road in Wallington and Sutton Park Road in Sutton Borough were identified as having higher levels of pollution and human exposure. [Sutton's JSNA 2017](#) suggests that Sutton Borough's concentrations of NO₂ and PM₁₀ had steadily decreased between 2009 and 2015 according to measurements from Sutton Borough's Air Quality Monitoring Stations. This trend is likely to continue in the future with the implementation of actions in the Air Quality Action Plan.

3.3.6 Climate change

According to the latest [UK Climate Projections in 2018 \(UKCP18\)](#), Sutton Borough will experience more extreme storm events, hotter and drier summers, and warmer and wetter winters, which could induce adverse effects to a variety of characteristics within the borough. Consequently, Sutton Borough residents are projected to experience increased exposure to higher temperatures, flooding and drought conditions. Locations and layout designs of new and existing developments are being adapted to be more resilient to climate change, which will be supported through the upcoming update of the Strategic Flood Risk Assessment (SFRA).

Mean summer temperatures are expected to increase by 2.7°C and 3.9°C from 1961-1990, by the 2050s and 2080s respectively. Built-up areas are increasingly vulnerable to localised heat waves resulting from the ‘urban heat island’ effect. Effective mitigation measures should be introduced to protect the health of Sutton Borough’s residents and wildlife. According to [Sutton Local Plan \(2018\)](#), 85% of the boroughs water supply comes from groundwater extraction, with the remaining 15% coming from Bough Beech reservoir. Domestic water use in Sutton Borough has increased by approximately 50l/p/d since the 1970s. With increased probability of drought conditions caused by climate change, groundwater recharge and river flows will be diminished, significantly impacting water security and wildlife habitats.

Precipitation patterns are also projected to become more frequent and severe leading to flooding events in Sutton Borough. The latest projections suggest that the number of heavy rain days (rainfall >25mm) will increase by a factor of between 2 and 3.5 in winter and between 1 and 2 in summer by 2080s. Sutton Borough is more likely to suffer from surface water flooding based on these projections which can cause large scale disruption to communities and infrastructure. This also increases the likelihood of surface water contamination and sewage overflows leading to environmental and public health concerns.

3.3.7 Soil and water

There are three water bodies defined by the [EU Water Framework Directive \(WFD\)](#) in Sutton Borough which have each been assessed in terms of water quality and given ecological scores. These water bodies are listed as follows:

- Beverley Brook (Motspur Park to Thames) and Pyl Brook at West Barnes water body, which flows out of the northwest region of Sutton Borough into the London Borough of Merton

The River Wandle has been divided into two separate water bodies:

- Wandle (Carshalton Branch at Carshalton) Water Body, which is entirely confined within Sutton Borough, flowing north from Carshalton towards Hackbridge
- Wandle (Croydon to Wandsworth) and Graveney Water Body, which enters the borough boundary of Sutton Borough from the London Borough of Croydon in the east and conveys northwest before conjoining with the other Wandle waterbody. It then also conveys through the northern borough boundary into The London Borough of Merton.

Targets have been set for all water bodies to achieve ‘good ecological status’ by 2027 based on a range of indicators as listed in the classifications table of the EA’s [catchment data explorer](#). As of 2019, Beverley Brook water body and the Croydon to Wandsworth branch of the River Wandle water body have been given a ‘moderate ecological status’, while the Carshalton branch of the Wandle has been given a ‘poor ecological status’. It is likely that the ecological quality has been severely impacted by the heavily hydro-morphologically modified sections which have been straightened for industrial, sewage disposal and flood risk management purposes, leaving much of the Wandle channel hardened with concrete and steel piping.

3.3.8 Historic and cultural environment

Sutton Borough has a rich history, with reminders of the fine Victorian and Edwardian architecture scattered throughout the borough. Particularly, the large estates which characterised the borough

until the 19th century are still present in Carshalton and Cheam. There are also notable industrial heritage sites along the banks of the River Wandle. The key cultural, architectural and archaeological heritage sites are detailed below in [Table 3-3](#) Historical and cultural assets in Sutton Borough.

Table 3-3 Historical and cultural assets in Sutton Borough

Type of classification	No. of assets	Examples of Heritage assets
Conservation Areas	15	Beddington Village, Carshalton Park, Wallington Green
Areas of Special Local Character	22	Anne Boleyn’s Walk, Beddington Corner, Burton Estates
Listed Buildings Grade I, II or II*	1 (I) 195 (II) 14 (II*)	Beddington Place (Great Hall), Bramblehaw Cottage, Carshalton House
Scheduled Ancient Monuments	6	Dovecote, Beddington Park and Milestone in Brighton Road
Archaeological Priority Areas	21	Bandon Hill Roman Cemetery, North Downs Fringe and Springline, Wandle Alluvium
Historic Parks and Gardens	5	Beddington Park and the Grange, Nonsuch Park

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

Table 3-4 Heritage assets at risk in Sutton Borough

Type of classification	No. of assets	Heritage Assets
Conservation Areas	1	Sutton Town Centre High Street Crossroads
Listed Buildings Grade II	5	Orangery wall to Beddington Place, Grotto in Carshalton Park, Churchyard walls on Church Road, Garden walls at Beddington Place, Boundary walls to Beddington Place
Listed Buildings Grade II*	1	Parish Church of St Mary the Virgin

3.4 A2 consultation questions

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

3. Do you agree that all the baseline data 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?

4 IDENTIFICATION OF ENVIRONMENTAL ISSUES

4.1 Task A3 summary

Task A3 identifies environmental issues and problems within 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 and it will aid in anticipating any potential issues which could arise from implementation of the actions in the Action Plan.

4.2 Local environmental issues

From examining the baseline information from 3.3, the following environmental issues have been identified and presented in *Table 4-1* Environmental issues and their potential associated problems. All of the key environmental issues identified have been assigned a proposed corresponding LFRMS strategic objective 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
Significant number of infrastructure assets at high risk from flooding	<ul style="list-style-type: none"> • Flooding could cause major disruption to life in Sutton Borough if critical infrastructure at high risk was impacted by flooding • Thousands of residential homes are at high risk and could be flooded • Hundreds of businesses are at high risk from flooding and could be severely impacted by flooding, damaging stock and causing prolonged periods of disruption to sales 	A B C
Rising local population	<ul style="list-style-type: none"> • Greater need for new development to accommodate for a growing population • Increasing number of residents and/or businesses at risk from flooding 	A B C D
Ageing population	<ul style="list-style-type: none"> • A larger proportion of elderly residents who may be more vulnerable to health problems • Elderly residents could also need more support during and after flood events. However, there is a map of vulnerable resident locations included in the Multi- 	A C D E

Key issues	Potential associated problems	LFRMS Strategic objective(s) to resolve this issue
	Agency Flood Plan (MAFP), which will assist with evacuations during the event of a flood.	
Adult obesity rates are above the London average	<ul style="list-style-type: none"> • Obese residents are more at risk of health problems including cardiovascular illnesses and diabetes 	B
Some Lower Super Output Areas (LSOAs) have shifted to more deprived deciles	<ul style="list-style-type: none"> • Increased deprivation increases the likelihood of residents being unable to pay for insurance on their property and possessions • Increased deprivation could mean that residents are less able to be aware about local flood risks 	A C D E
UK Air Quality Strategy (AQS) limit values for Nitrogen Dioxide (NO ₂) are not being met	<ul style="list-style-type: none"> • Air quality limit values will continue to not be met • Air pollution from NO₂ can generate a localised greenhouse effect which intensifies the rate of global warming and climate change • There could be associated health problems with the air pollution, such as cancers and respiratory illnesses 	B
Climate change brings about more severe storm events and more extreme temperatures	<ul style="list-style-type: none"> • Higher temperatures in the summer can bring associated health problems including heat stroke • More intense and prolonged periods of rainfall will increase the prevalence and severity of flood events • Nationally declining species which can be found in Sutton Borough may be at risk and need to be protected from climate change impacts • Historic and cultural architecture could be damaged or lost to these more severe floods • Droughts could add pressure to water resources within the borough, impacting both residents and wildlife 	A B C D E

Key issues	Potential associated problems	LFRMS Strategic objective(s) to resolve this issue
Water Quality of Water Framework Directive (WFD) waterbodies could be greatly improved	<ul style="list-style-type: none"> • Poor ecological status and overall water quality in WFD waterbodies can impact biodiversity and bring about health issues to some species • Recreational activities such as fishing, or water sports could be impacted by poor water quality 	B D
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"> • Areas where there is likely to be a significant loss or risk to landscape and heritage assets (including archaeology) • A significant impact upon the historic and cultural environment and/or people's enjoyment of it 	A C E

4.3 A3 Consultation Questions

Questions 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 affecting Sutton Local Flood Risk Management Strategy?
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 Sutton? 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 9 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

A list of SEA objectives can be found below 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 Sutton to deliver its action plan tasks.

- **SEA 1:** Ensure all of Sutton Borough’s critical infrastructure has sufficient protection from flooding.
- **SEA 2:** Ensure Sutton Borough’s increasing population is adequately homed.
- **SEA 3:** Ensure vulnerable residents have access to reactive and emergency services and have the necessary support to overcome challenges during and after flood events.
- **SEA 4:** Increase community participation in activities that reduce obesity rates.
- **SEA 5:** Reduce NO₂ emissions from roads by reducing road traffic where possible and encourage and enable alternative, more environmentally friendly forms of transport.
- **SEA 6:** Promote sustainable development to reduce and mitigate the potential impacts of climate change.
- **SEA 7:** Preserve the nationally declining species found in Sutton Borough while enhancing biodiversity and making habitats more resilient to the effects of severe weather events induced by climate change.
- **SEA 8:** Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.
- **SEA 9:** Prevent and enforce against any further decline in the ecological quality of ordinary watercourses, while enhancing their WFD ecological status 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 Sutton? 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 they will have 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 each of the LFRMS strategic objectives.

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. These results were based on best judgement from a qualitative assessment which is further explored in [6.3](#).

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

		SEA Objective Number								
		SEA 1	SEA 2	SEA 3	SEA 4	SEA 5	SEA 6	SEA 7	SEA 8	SEA 9
LFRMS Strategy Objective Letter	A	++	++	++	0	0	+	+	+	++
	B	++	+	0	+	+	+	+	+	+
	C	++	++	+	0	0	+	+	+	+
	D	+	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 knowledge and understanding of the different risks of flooding within Sutton Borough, and this can have both major and minor positive effects to many of the SEA objectives which have been identified. There were no negative effects to any of the SEA objectives and thus LFRMS 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
Major Positive	SEA 1: Ensure all of Sutton Borough’s critical infrastructure has sufficient protection from flooding.	With a greater understanding of different flood risks presented to Sutton Borough, there can be more effective and thorough solutions identified to ensure that Sutton Borough’s critical infrastructure has increased resilience against flooding
	SEA 2: Ensure Sutton Borough’s increasing population is adequately homed.	Greater knowledge and understanding of flood risks in Sutton Borough would better inform planning decisions on new developments to meet population demand. It would help them to continue factoring in climate change considerations and updated predictions to mitigate flooding issues and increase community resilience.
	SEA 3: Ensure vulnerable residents have access to reactive and emergency services and have the necessary support to overcome challenges during and after flood events.	Understanding flood risk helps contribute to the MAFP since emergency planning use mapping of where vulnerable residents live to prioritise their response.
	SEA 9: Prevent and enforce against any further decline in the ecological quality of ordinary watercourses, while enhancing their WFD ecological status where possible.	A greater knowledge and understanding of flood risks in Sutton Borough can identify how pollution could be carried into watercourses, and hence identify where mitigation measures would need to be implemented.
Minor Positive	SEA 6: Promote sustainable development to reduce and mitigate the potential impacts of climate change.	A greater knowledge and understanding of flood risk in Sutton Borough would aid planning enforcement in mitigating flood risk and under climate change considerations.
	SEA 7: Preserve the nationally declining species found in Sutton Borough while enhancing biodiversity and making habitats more resilient to the effects of severe weather events induced by climate change.	A greater knowledge and understanding of flood risk in Sutton Borough would assist in analysing how vulnerable species and habitats might be potentially impacted by flooding. This will allow for identification of how they should be better protected.

	SEA 8: Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.	A greater knowledge and understanding of flood risk in Sutton Borough would assist in analysing how vulnerable historic and cultural 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.
Neutral	SEA 4: Increase community participation in activities that reduce obesity rates.	SEA 4 had no correlation to strategic objective A.
	SEA 5: Reduce NO ₂ emissions from roads by reducing road traffic where possible and encourage and enable alternative, more environmentally friendly forms of transport.	SEA 5 had no correlation to strategic objective A.
Minor Negative	N/A	None of the SEA objectives were negatively impacted by strategic objective A.
Major Negative	N/A	None of the SEA objectives were significantly negatively impacted by strategic objective A.

6.3.2 LFRMS strategic objective B

LFRMS Strategic objective B is to proactively encourage sustainable solutions for the management of local flood risk which also account for climate change. This strategic objective had mostly minor positive effects on the SEA objectives, with one major positive effect. There were no negative impacts on any of the SEA objectives as a result of strategic objective B and this it can be ruled 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
Major Positive	SEA 1: Ensure all of Sutton Borough’s critical infrastructure has sufficient protection from flooding.	Sustainable solutions to managing flood risk could involve the introduction of sustainable drainage systems (SuDS) to critical infrastructure sites such as schools or hospitals, in addition to highway SuDS such as raingardens and tree pits. SuDS can alleviate the volume of overland flow through these sites during a flood event, while also providing other amenity benefits to make the sites more attractive and pleasant to use.
Minor Positive	SEA 2: Ensure Sutton Borough’s increasing population is adequately homed.	New residential developments in Sutton Borough which are in flood risk areas should be made resilient to flood risk by implementing SuDS into their design as part of their planning applications.
	SEA 4: Increase community participation in activities that reduce obesity rates.	SuDS form part of a greener and more aesthetically pleasing environment which could entice more people to go outside for walks and other forms of exercise in their local areas.
	SEA 5: Reduce NO ₂ emissions from roads by reducing road traffic where possible and encourage and enable alternative, 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.
	SEA 6: 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.
	SEA 7: Preserve the nationally declining species found in Sutton Borough while enhancing biodiversity and making habitats more resilient to the effects of	SuDS can be integrated into parks and other green areas where there are vulnerable 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.

	severe weather events induced by climate change.	
	SEA 8: Ensure heritage assets are conserved and enhanced where appropriate and made resilient to severe weather events induced by climate change.	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.
	SEA 9: Prevent and enforce against any further decline in the ecological quality of ordinary watercourses, while enhancing their Water Framework Directive (WFD) ecological status 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 Sutton Borough's waterbodies.
Neutral	SEA 3: Ensure vulnerable residents have access to reactive and emergency services and have the necessary support to overcome challenges during and after flood events.	SEA 3 had no correlation to strategic objective B.
Minor Negative	N/A	None of the SEA objectives were negatively impacted by strategic objective B.
Major Negative	N/A	None of the SEA objectives were significantly negatively impacted by strategic objective B.

6.3.3 LFRMS strategic objective C

LFRMS strategic objective C is to use planning powers to appropriately mitigate flood risk to or caused by developments across Sutton Borough. This strategic objective had a mixture of major and minor positive effects to 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 6-5 Strategic objective C screening analysis outcomes

Level of effect on SEA objective	SEA Objective	Justification for how strategic objective C impacts this SEA objective
Major Positive	SEA 1: Ensure all of Sutton Borough’s critical infrastructure has sufficient protection from flooding.	Planning powers can encourage appropriately mitigated developments via retroactive enforcement and reviewing new applications. Existing critical infrastructure can be adapted to mitigate risks of flooding, while new critical infrastructure developments will be planned in accordance with Sutton’s Local Plan Policy 32 and national guidance.
	SEA 2: Ensure Sutton Borough’s increasing population is adequately homed.	Planning powers can be used to ensure that the designs of new housing have increased resilience to increasingly severe storm events. These developments are safeguarded by Sutton’s SFRA against the current flooding projections.
Minor Positive	SEA 3: Ensure vulnerable residents have access to reactive and emergency services and have the necessary support to overcome challenges during and after flood events.	Planning powers would also 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.
	SEA 6: 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.
	SEA 7: Preserve the nationally declining species found in Sutton Borough while enhancing biodiversity and making habitats more resilient to the effects of severe weather events induced by climate change.	Planning powers can be used to improve the resilience of the biodiversity and habitats in an area of development.
	SEA 8: Ensure heritage assets are conserved and enhanced where appropriate and	Planning powers can be used to improve the resilience of sites of historical and cultural significance against flooding. These opportunities

	<p>made resilient to severe weather events induced by climate change.</p>	<p>for conserving and enhancing heritage assets can be delivered as part of an integrated approach to flood risk management and catchment-based initiatives. This includes sustaining and enhancing the local character and distinctiveness of historic townscapes and landscapes.</p>
	<p>SEA 9: Prevent and enforce against any further decline in the ecological quality of ordinary watercourses, while enhancing their WFD ecological status where possible.</p>	<p>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 or groundwater 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.</p>
Neutral	<p>SEA 4: Increase community participation in activities that reduce obesity rates.</p>	<p>SEA 4 had no correlation to strategic objective C.</p>
	<p>SEA 5: Reduce NO₂ emissions from roads by reducing road traffic where possible and encourage and enable alternative, more environmentally friendly forms of transport.</p>	<p>SEA 5 had no correlation to strategic objective C.</p>
Minor Negative	<p>N/A</p>	<p>None of the SEA objectives were negatively impacted by strategic objective C.</p>
Major Negative	<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

LFRMS strategic objective D is to educate, encourage and empower local residents, businesses and landowners to take action on reducing flood risk. This strategic objective has a mixture of major and minor positive effects to the SEA objectives. There were no negative effects posed to any of the SEA objectives and thus strategic objective D 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
<p>Major Positive</p>	<p>SEA 3: Ensure vulnerable residents have access to reactive and emergency services and have the necessary support to overcome challenges during and after flood events.</p>	<p>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 fuller understanding of flood risk and how it could affect them. This will then allow them to be better prepared and take the necessary actions when flooding is predicted or occurs unexpectedly. Sutton’s MAFP outlines how vulnerable people can be identified and supported, such as through door knocking and welfare checks, and sharing information with agencies to allow for better coordinated evacuation.</p>
	<p>SEA 9: Prevent and enforce against any further decline in the ecological quality of ordinary watercourses, while enhancing their WFD ecological status where possible.</p>	<p>Educating local businesses and the public about pollution (including drainage misconnections), fly-tipping, and the development of land in the planning process, can enforce against further decline of the ecological status of waterbodies.</p>
<p>Minor Positive</p>	<p>SEA 1: Ensure all of Sutton Borough’s critical infrastructure has sufficient protection from flooding.</p>	<p>Sutton Borough’s schools are a form of critical infrastructure which can be greatly benefitted by this objective. By educating and encouraging schools to act on flood risk, SuDS can be implemented into their environment providing many amenity benefits and allowing young people in Sutton Borough to learn about and play a part in the flood mitigation within their borough. SuDS in Sutton Schools is an ongoing project aiming to implement more SuDS into schools across Sutton Borough and involve pupils in the process to educate them on flood risk management.</p>
	<p>SEA 4: Increase community participation in activities that reduce obesity rates.</p>	<p>Encouraging residents to participate in local flood risk management will provide them with opportunities to get out and about in their local environment. Spending time outdoors could encourage residents to adopt healthier lifestyle choices.</p>

	SEA 6: 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.
	SEA 7: Preserve the nationally declining species found in Sutton Borough while enhancing biodiversity and making habitats more resilient to the effects of severe weather events induced by climate change.	Informing residents on how flooding impacts the biodiversity and habitats in their local areas such as in their private gardens or local parks could provide them better protection.
	SEA 8: 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.
Neutral	SEA 2: Ensure Sutton Borough’s increasing population is adequately homed.	SEA 2 had no correlation to strategic objective D.
	SEA 5: Reduce NO ₂ emissions from roads by reducing road traffic where possible and encourage and enable alternative, more environmentally friendly forms of transport.	SEA 5 had no correlation to strategic objective D.
Minor Negative	N/A	None of the SEA objectives were negatively impacted by strategic objective D.
Major Negative	N/A	None of the SEA objectives were significantly negatively impacted by strategic objective D.

6.3.5 LFRMS strategic objective E

LFRMS strategic objective E is to nurture collaborative partnerships with key organisations and RMAs, including for funding and resources. This objective brings a mixture of major and minor positive effects to the SEA objectives. No negative effects were produced to any of the SEA objectives 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>SEA 7: Preserve the nationally declining species found in Sutton Borough while enhancing biodiversity and making habitats more resilient to the effects of severe weather events induced by climate change.</p>	<p>Through collaborative partnerships with Natural England, biodiversity and vulnerable 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 Sutton Borough, while accounting for the intensifying storm events caused by climate change.</p>
	<p>SEA 8: 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>SEA 1: Ensure all of Sutton Borough's critical infrastructure has sufficient protection from flooding.</p>	<p>Larger projects such as those involving critical infrastructure may require additional resourcing to allow them to make the most of their funding. Partnerships with the Thames Flood Advisors will provide assistance in early planning to have additional time to secure resources within departments to maximise the spending of their allocated funding.</p>
	<p>SEA 2: Ensure Sutton Borough's increasing population is adequately homed.</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</p>

		ensure that the population of Sutton Borough can be homed and resilient to flooding.
	SEA 3: Ensure vulnerable residents have access to reactive and emergency services and have the necessary support to overcome challenges during and after flood events.	Vulnerable residents require additional support and protection from the impacts of flooding, so it is vital that RMAs such as the emergency services in Sutton Borough are prepared and available to assist them. This can only be delivered through collaborative partnerships with the Metropolitan Police Service, London Fire Brigade, Kingston, and the British Red Cross, as outlined in the MAFP.
	SEA 6: Promote sustainable development to reduce and mitigate the potential impacts of climate change.	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.
	SEA 9: Prevent and enforce against any further decline in the ecological quality of ordinary watercourses, while enhancing their WFD ecological status where possible.	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 Sutton Borough.
Neutral	SEA 4: Increase community participation in activities that reduce obesity rates.	SEA 4 had no correlation to strategic objective E.
	SEA 5: Reduce NO ₂ emissions from roads by reducing road traffic where possible and encourage and enable alternative, more environmentally friendly forms of transport.	SEA 5 had no correlation to strategic objective E.
Minor Negative	N/A	None of the SEA objectives were negatively impacted by strategic objective E.

Major Negative	N/A	None of the SEA objectives were significantly negatively impacted by strategic objective E.
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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 impose any negative effects to any of Sutton Borough’s key environmental attributes. Conversely, these strategic objectives have major and minor positive effects or no effect at all on the Strategic Environmental Assessment objectives. It can be therefore concluded that the LFRMS has addressed the local environment issues which have been identified in Sutton Borough. The LFRMS has no strategic objectives that will present any unfavourable consequences to Sutton Borough’s environment, while simultaneously presenting several multi-benefit solutions and opportunities to manage and where possible mitigate the key environmental issues identified. As a result, the LFRMS does not require any progression onto the 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 Sutton Borough’s heritage assets against flood risk. Sutton 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 Sutton’s Conservation Officers throughout the preparation, assessment, and implementation of the LFRMS. As such, Sutton’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 **4 weeks** during which any stakeholders could participate. The feedback received from the stakeholders was required to be 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 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?