

London Borough of Southwark

# Local Flood Risk Management Strategy 2023 - 2029

## Strategic Environmental Assessment



# Executive summary

A Strategic Environmental Assessment (SEA) is a review of a proposed plan or strategy to determine if there is a potential that the delivery of actions will negatively impact local environments. As part of this there are five stages of assessment, this document serves to complete the first stage, Stage A – Screening. This SEA Screening Report has identified and evaluated the Southwark borough's Local Flood Risk Management Strategy (LFRMS), assessing its strategic objectives and associated actions.

To complete the screening assessment a variety of environmental and socio-economic baseline data was collected and reviewed. These factors include:

1. Biodiversity, flora and fauna
2. Infrastructure assets
3. Population
4. Public health
5. Air quality
6. Climate factors
7. Soil and water
8. Historic and cultural environments

From the baseline information gathered, 15 environmental, social and economic issues have been documented which could potentially be exacerbated by the delivery of the LFRMS and its actions. These have been reviewed to determine what associated problems these could have with regards to flood risk management tasks.

Based on these issues a set of eight SEA objectives have been generated which are:

- **SEA 1:** To conserve and enhance green spaces and designated conservation areas to support the security and growth of protected habitats and species.
- **SEA 2:** To support biodiversity net gain across Southwark within developments, supporting local ecological, social and health benefits.
- **SEA 3:** To protect critical infrastructure and ensure that new development appropriately considers and mitigates the impacts of increased flood risk.
- **SEA 4:** To support residents in protecting their properties from flood risk through education and financial support/ advice.

- **SEA 5:** To ensure that social and economic inequalities are addressed by prioritising areas for investment and development effectively.
- **SEA 6:** To improve the physical and mental health of residents by supporting access to green spaces, improving air quality and access to health care.
- **SEA 7:** To effectively support new development and infrastructure in preparing for the impacts of extreme temperature/ weather.
- **SEA 8:** To conserve and enhance heritage features and their environments by protecting them from decay and development pressures where flood risk or water table changes are a threat.

These SEA objectives have subsequently been assessed against the proposed LFRMS strategic objectives. This concluded whether there would be a positive, neutral or negative impact posed by the delivery of the LFRMS actions. It has been concluded that the LFRMS is unlikely to pose any detrimental effect to environmental and socio-economic issues raised within Southwark.

This screening assessment has undergone a statutory consultation process enabling statutory consultees (Environment Agency, Natural England and Historic England) to review and feedback on the scope and results of the SEA Screening Report. Following this the SEA underwent a public consultation alongside the main LFRMS document and other accompanying appendices. Comments received then informed updates to the final versions of the LFRMS documents.

# Contents

Executive summary .....	2
Figures and tables .....	4
Abbreviations .....	5
1. Introduction .....	6
1.1 Purpose of screening .....	6
1.2 Local Flood Risk Management Strategy .....	6
1.3 SEA Screening Report methodology .....	7
1.4 Consultation process .....	7
1.5 SEA consultation questions .....	8
2. Identification of relevant policies .....	9
2.1 Task A1 summary .....	9
2.2 Relevant policies .....	9
2.3 Task A1 consultation questions .....	10
3. Baseline information .....	11
3.1 Task A2 summary .....	11
3.2 Southwark borough characteristics .....	11
3.3 Baseline information .....	11
3.4 Task A2 consultation questions .....	14
4. Identification of environmental, social and economic issues .....	15
4.1 Task A3 summary .....	15
4.2 Local environmental, social and economic issues .....	15
4.3 Task A3 consultation questions .....	17
5. SEA objectives .....	18
5.1 Task A4 summary .....	18
5.2 SEA objectives .....	18
5.3 Task A4 consultation questions .....	18
6. Screening analysis of the LFRMS .....	19
6.1 Task A5 summary .....	19
6.2 Screening analysis .....	19
6.3 Screening analysis outcomes .....	20
6.4 Task A5 consultation questions .....	23
7. Conclusions and next steps .....	24
7.1 Conclusions .....	24
7.2 Consultation of the SEA .....	24
7.3 Final comments consultation questions .....	24

# Figures and tables

Figure 3-1 Photograph of Silver Birch trees with the Shard building in Southwark .....	13
----------------------------------------------------------------------------------------	----

Table 1-1 Summary table of stages in delivering a SEA .....	7
Table 2-1 Links to policies, legislation and documents which impact the SEA .....	9
Table 3-1 The number of sites with special designations in Southwark .....	11
Table 3-2 The percentage of Southwark assets for each significance band in relation to flood risk .....	12
Table 3-3 The numbers of properties in Southwark at risk for various rainfall events .....	12
Table 3-4 Number and classifications of historical and cultural assets .....	14
Table 4-1 Environmental, social and economic issues and their potential associated problems .....	15
Table 6-1 Scoring matrix of LFRMS strategic objectives against the SEA objectives .....	19
Table 6-2 Legend criteria for Table 6-1 .....	19
Table 6-3 Justifications for the screening outcomes of LFRMS strategic objective A against the SEA objectives .....	20
Table 6-4 Justifications for the screening outcomes of LFRMS strategic objective B against the SEA objectives .....	20
Table 6-5 Justifications for the screening outcomes of LFRMS strategic objective C against the SEA objectives .....	21
Table 6-6 Justifications for the screening outcomes of LFRMS strategic objective D against the SEA objectives .....	22

# Abbreviations

Abbreviation	Definition
FCERM	Flood and Coastal Erosion Risk Management
HRA	Habitats Regulations Assessment
JSNA	Joint Strategic Needs Assessment
LFRMS	Local Flood Risk Management Strategy
LLFA	Lead Local Flood Authority
LNR	Local Nature Reserve
NPPF	National Planning Policy Framework
PFRA	Preliminary Flood Risk Assessment
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessment
SINC	Site of Importance for Nature Conservation
SNAP	Southwark's Nature Action Plan
Southwark borough	The geographical area known as the London Borough of Southwark.
Southwark Council	The local authority who governs the London Borough of Southwark.
Statutory Consultees	Historic England, Natural England and the Environment Agency
SWMP	Surface Water Management Plan
WFD	Water Framework Directive

# 1. Introduction

## 1.1 Purpose of screening

The purpose of conducting this Strategic Environmental Assessment (SEA) is to assess whether any significant environmental issues may be caused by the delivery of the Local Flood Risk Management Strategy (LFRMS) within Southwark.

This investigation is required under the [European SEA Directive \(2001\)](#). This legislation requires a SEA to be undertaken for any prospective plans or strategies which may have the potential to cause environmental damage. This SEA Screening Report will evaluate the LFRMS strategic objectives and their respective actions to determine whether they have the potential to cause environmental issues to worsen. Alternative options or mitigations may be considered for the delivery of the LFRMS in order to reduce any possible negative impacts that are identified.

Screening is undertaken to determine if there will be a significant negative effect on the local or wider environment, including economic, environmental and social factors. If there is found to be a significant negative impact, then progression onto later stages of the SEA process will be required.



## 1.2 Local Flood Risk Management Strategy

### LFRMS summary

The Southwark LFRMS presents how the Lead Local Flood Authority (LLFA) will deliver flood risk management. This is based on the local flood risk for Southwark and is supported by outputs from other strategic documents. In conjunction with the LFRMS a detailed action plan has been produced listing actions the LLFA will take to manage flood risk. A Habitats Regulations Assessment (HRA) Screening Report has also been completed alongside this SEA Screening Report.

### LFRMS strategic objectives

The LFRMS has produced a set of four strategic objectives:

- A. To improve community awareness of local flood risks and the authorities responsible for managing them.
- B. To collaborate with internal departments, organisations, authorities and partnership groups to support successful communication in managing flood risk.
- C. To support development across Southwark encouraging the integration of Sustainable Drainage Systems (SuDS) within planning designs to promote sustainable multi-beneficial solutions that contribute to wider social, economic and environmental outcomes.
- D. To apply knowledge on local flood risk to assist in improving Southwark's resilience to the impacts of climate change.

This document has assessed the LFRMS strategic objectives against each of the eight SEA objectives to determine if the LFRMS and associated actions will have any potential negative effects on economic, environmental and social issues within Southwark.

### 1.3 SEA Screening Report methodology

A full SEA is separated into five stages, a summary of this is set out in *Table 1-1*.

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

	SEA Stages	SEA Tasks
Screening Stage	<b>Stage A:</b> Setting the context and objectives, establishing the baseline and deciding on the scope.	A1: Identifying relevant policies, plans, 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.
Appropriate Assessment Stages	<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.
	<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.		

### 1.4 Consultation process

The SEA Screening Report is required to undergo both a statutory consultation and a public consultation. The statutory consultees for the SEA are the Environment Agency (EA), Natural England and Historic England. The consultation questions set out in *Section 1.5* will be asked to the statutory consultees, whereas for the general public consultation a set of overarching questions were provided as part of the consultation strategy that was produced to support the LFRMS. The public consultation took place in Summer 2023. Following the consultations the feedback was reviewed and appropriate changes made to the SEA and other LFRMS documents as necessary.



## 1.5 SEA consultation questions

### Task A1: Legislation, plans and policies

1. Do you feel we have included all relevant policies, documents, plans and legislation that relate to or could affect the LFRMS?
2. If not, what additional documentation do you think should be included, please provide links?

### Task A2: Baseline data

3. Do you agree that the baseline data we have included is appropriate to the LFRMS that is being developed? If no, please give reason(s).
4. Do you have, or know of, any additional baseline indicators or data that should be added into this SEA Screening Report? Please provide any appropriate links and/or documents.
5. As far as you are aware, is the baseline data correct? If no, please provide any appropriate links and/or documents with correct data.

### Task A3: Environmental issues affecting Southwark

6. Do you agree that these are the main environmental issues relating to the LFRMS affecting the Southwark borough? If no, what are the main issues you believe should be included?
7. Are there any other environmental issues that you believe should be added into this SEA Screening Report? If so, please give details.
8. Do you consider any of these environmental issues to not affect Southwark? 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 the Southwark borough?
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 have any comments on the method for the assessment of the SEA objectives with the LFRMS strategic objectives?
12. Do you agree with the screening analysis of each of the LFRMS strategic objectives? If not, please give reasons as to why you would screen a certain objective differently.

## Conclusion and further comments

13. Do you have any comments on the conclusions that we have made in this SEA Screening Report?
14. Do you have any additional comments or suggestions for this SEA Screening Report?





# 2. Identification of relevant policies

## 2.1 Task A1 summary

Task A1 is to identify relevant policies, plans and programmes and environmental protection objectives. This has been completed by collating all appropriate policies, documents and legislation that has the potential to effect or influence the LFRMS in relation to the SEAs purpose.

## 2.2 Relevant policies

All relevant plans, policies, strategies, legislation at local, regional, national and international level have been taken into account. These are listed in *Table 2-1*.

Table 2-1 Links to policies, legislation and documents which impact the SEA

<b>International</b>
<a href="#">UNESCO World Heritage Convention (1972)</a>
<a href="#">Convention for the Protection of the Architectural Heritage of Europe (1985)</a>
<a href="#">EU Habitats Directive (1992)</a>
<a href="#">The Valletta Treaty (<i>formally European Convention on the Protection of Archaeological Heritage</i>) (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="#">EU Floods Directive (2007)</a>
<a href="#">EU Birds Directive (2009)</a>
<a href="#">EU Biodiversity Strategy for 2030 (2020)</a>
<b>National</b>
<a href="#">Ancient Monuments &amp; Archaeological Areas Act (1979)</a>
<a href="#">Wildlife and Countryside Act (1981)</a>
<a href="#">Environmental Protection Act (1990)</a>
<a href="#">Planning (Listed Buildings &amp; Conservation Areas) Act (1990)</a>
<a href="#">Land Drainage Act (1991)</a>
<a href="#">The UK Biodiversity Action Plan (1994)</a>
<a href="#">Civil Contingencies Act (2004)</a>
<a href="#">Natural Environment and Rural Communities Act (2006)</a>
<a href="#">The Pitt Review - Lessons learned from the 2007 summer floods (2007)</a>
<a href="#">The SuDS Manual C753F (2015)</a>
<a href="#">Climate Change Act (2008)</a>
<a href="#">Future Water: The Government's Water Strategy for England (2008)</a>
<a href="#">Flood Risk Regulations (2009)</a>
<a href="#">Flood and Water Management Act (2010)</a>
<a href="#">Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011)</a>
<a href="#">National Standards for Sustainable Drainage Systems (2011)</a>
<a href="#">Water Act (2014)</a>
<a href="#">Environmental Permitting Regulations (2016)</a>
<a href="#">DEFRA: 25 Year Environment Plan (2018)</a>
<a href="#">National Flood and Coastal Erosion Risk Management (FCERM) Strategy for England (2020)</a>

<a href="#">Meeting our Future Water Needs: A National Framework for Water Resources (2020)</a>
<a href="#">Environment Act (2021)</a>
<a href="#">National Planning Policy Framework (2012, revised 2021)</a>
<a href="#">National Planning Practice Guidance (2016, revised 2022)</a>
<b>Regional</b>
<a href="#">Thames Catchment Flood Risk Management Plan (2009)</a>
<a href="#">Mayor of London's Climate Change Adaptation Strategy (2011)</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 Regional Flood Risk Appraisal (2018)</a>
<a href="#">London Environment Strategy (2018)</a>
<a href="#">Zero carbon London: A 1.5°C compatible plan (2018)</a>
<a href="#">The London Plan (2021)</a>
<a href="#">Thames Estuary 2100: 10-Year Review (2022)</a>
<a href="#">Thames Estuary 2100 Plan (2023)</a>
<b>Local</b>
<a href="#">Southwark's Preliminary Flood Risk Assessment (PFRA) (2011) (Addendum 2017)</a>
<a href="#">Southwark's SINC Review Report (2016)</a>
<a href="#">Southwark's Strategic Flood Risk Assessment (SFRA) (2017)</a>
<a href="#">Southwark's Nature Action Plan (SNAP) (2020)</a>
<a href="#">Southwark Tree Management Policy (2020)</a>
<a href="#">Southwark's Climate Change Strategy (2021)</a>
<a href="#">Southwark's Climate Change Action Plan (2021)</a>
<a href="#">Southwark's Joint Strategic Needs Assessment (JSNA) (2022)</a>
<a href="#">Southwark's Local Plan (2022)</a>
<a href="#">Southwark's Surface Water Management Plan (SWMP) (2022)</a>
<a href="#">Southwark's Air Quality Strategy and Action Plan (2023 to 2027)</a>

### 2.3 Task A1 consultation questions

1. Do you feel we have included all relevant policies, documents, plans and legislation that relate to or could affect the LFRMS?
2. If not, which additional documentation do you think should be included?

# 3. Baseline information

## 3.1 Task A2 summary

Task A2 is to collate data and information from a variety of sources to understand the environmental setting within Southwark. This will cover information on biodiversity, flora & fauna, infrastructure, population, public health, climate, soil / water and historical / cultural factors. The SEA Screening Report should review these types of information so that social and economic indicators can also be considered to provide an in-depth assessment of potential impacts that may be posed by the delivery of the LFRMS action plan.

## 3.2 Southwark borough characteristics

Southwark is located within Central London along the south side of the River Thames. The Southwark borough is neighboured by the London Boroughs of Lewisham, Lambeth and Bromley. The topography of Southwark rises further south and slopes downwards towards the River Thames in the North. The Northern half of Southwark is categorised within the EA's Flood Zones 2 & 3.

Rail assets within Southwark include South-eastern railway lines, London Overground rail services, Thames Link rail services and the London Underground Jubilee and Northern Lines. The majority of Southwark is heavily urbanised with several district town centres of Rotherhithe, Peckham, Borough and Dulwich. There are several notable open spaces which include Peckham Rye Park & Common, Burgess Park, Southwark Park and Dulwich Park.

## 3.3 Baseline information

### Biodiversity, flora and fauna

Southwark has 516 hectares of natural green space, including over 215 parks and open spaces. There are also many significant habitats present which include ancient woodland, secondary woodland, lakes, reedbeds, native hedges and meadows.

A great number of important species exist in Southwark which are of international and national importance. These include, bats, reptiles, stag beetles, birds, butterflies, orchids and corky fruited water dropwort ([SNAP, 2020](#)).

There are 90 Sites of Importance for Nature Conservation (SINCs) in Southwark which are categorised into levels of Metropolitan, Borough or Local importance detailed in *Table 3-1*. Examples of Local Nature Reserves (LNRs) include Sydenham Hill Wood and Nunhead Cemetery. Examples of registered parks and gardens include Dulwich Park and Belair Park. Additional sites within these categories can be found by following the links provided in the table below.

Table 3-1 The number of sites with special designations in Southwark

Designation	No. of sites
<a href="#">Total no. SINCs</a>	90
<a href="#">Sites of Metropolitan Importance for Nature Conservation</a>	3
<a href="#">Sites of Borough Importance for Nature Conservation</a>	43
<a href="#">Sites of Local Importance for Nature Conservation</a>	44
<a href="#">Local Nature Reserves</a>	7
<a href="#">Registered parks and gardens</a>	5

Southwark Council understands the value that trees have to offer within an urban environment and aims to protect current trees and woodlands. Trees offer many benefits in terms of tackling the impacts of climate change and air pollution, as well as providing habitats for species and supporting local biodiversity.

## Infrastructure assets

There are a range of critical infrastructure assets within Southwark which must have mitigations in place to protect them in emergencies. Critical infrastructure assets must not have their access or purpose impeded by hazards or developments. The need for access or protections decreases through the levels for designated infrastructure assets as shown in *Table 3-2*.

Table 3-2 The percentage of Southwark assets for each significance band in relation to flood risk

Significance Band	% of no. of Southwark Assets
High	74%
Medium	8%
Low	1%
Very Low	1%
No Drivers	16%

Southwark also has a variety of green infrastructure assets which have the opportunity to offer multiple benefits and should work with the implementation of flood risk management.

Outputs from Southwark's recent [SWMP \(2022\)](#) have produced the number of properties at risk of surface water flooding for a variety of rainfall events. These are shown in *Table 3-3*. This demonstrates the significant amount of property and infrastructure in Southwark which is predicted to be at risk of flooding from surface water.

Table 3-3 The numbers of properties in Southwark at risk for various rainfall events

	Residential	Commercial	Other	Total
1 in 30-year rainfall event	1,674	257	434	2,365
1 in 100-year rainfall event	5,028	832	1,270	7,130
1 in 1000-year rainfall event	16,678	2,861	4,341	23,880

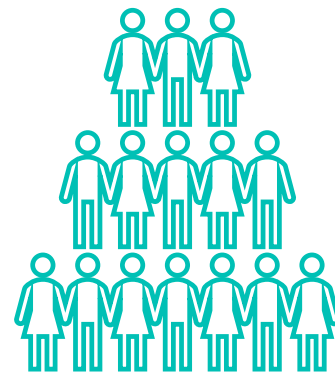
Southwark also has flood defence infrastructure along the banks of River Thames which form part of the Thames Tidal Defence System. This includes walls and embankments as well as flood gates, outfalls and pumps.

## Population

Southwark has a population of around 320,000 people with an average age of 33.9 years ([JNSA, 2022](#)). This is a lower than average age for the population compared to the rest of England. There is a similar male and female population within Southwark of approximately 160,800 males and 159,200 females. It is estimated that Southwark's population will increase at a faster rate than the national average. It is predicted that there will be an increase of 17,000 people living in Southwark by 2030, with largest population increases expected in the Old Kent Road, Canada Water and Elephant & Castle areas, due to redevelopment initiatives.

The population of Southwark is very diverse with residents with a range of ethnicities and backgrounds. The [JNSA \(2022\)](#) estimates that 51% of Southwark residents have a white ethnic background compared to 84% nationally.

Under the Indices of Deprivation, Southwark is considered to be one of the most deprived local authorities in England. Improvement has been noted between 2015 to 2019, however approximately 21% of Southwark's population currently live in communities that are ranked within the most deprived nationally.



## Public health

The [JNSA \(2022\)](#) states that 14% of residents in inner-London have a disability, which would be approximately 44,800 people in Southwark. Mobility, stamina / fatigue and mental health and the three highest ranking types of impairment for residents within Southwark.

The urban health index for Southwark reviewed 68 neighbourhoods categorising them into strong (top 20 areas), neutral and weak (bottom 20 areas). Southwark has a mixture of these categories. All neighbourhoods in the south of Southwark rank as strong, however some central and north-west areas were ranked as weak. This process reviewed 42 social and environmental indicators to assess urban living on residents' health. The full urban health index for Southwark can be viewed [here](#).

## Air quality

There is a big focus on air quality within London, particularly central areas due to significant evidence that shows the impacts of air pollution on health. There are different risks posed by short-term or long-term exposure to air pollution, but long-term exposure has a much greater risk. Long-term exposure could result in the worsening of respiratory conditions such as asthma and chronic respiratory disease, as well as causing premature death.

Poor air quality can also impact on biodiversity (flora and fauna) and buildings ([Air Quality Strategy and Action Plan, 2017](#)). This is due to particulate matter generating acid rain and/or affecting building materials. Sensitive plants and animals could decline due to worsening air quality predicted with the impacts of climate change.

In 2019, Southwark was above the London and England average for percentage of deaths in those aged 30+ due to particulate air pollutions (PM2.5) as stated in the [JNSA \(2022\)](#). The most significant causes of air pollution in Southwark are from road transport and from domestic / commercial fuels mostly from cooking and heating.

## Climate factors

The impacts of climate change are already evident and are expected to worsen. The IPCC found that a global rise above 1.5°C would lead to climate-related risks to human health, livelihoods, food security, human security, water supply and economic growth. London now has a [zero-carbon plan](#) in place to address this temperature increase.

Climate change is likely to harm human health in a variety of ways with increases in deaths due to extreme temperature expected to rise ([Climate Change Strategy, 2021](#)). The risk of insect borne diseases in the UK is also a rising risk caused by climate change.

60% of residents in Southwark live less than ten meters above sea level ([Climate Change Strategy, 2021](#)). The risk of fluvial / tidal flooding is likely to increase due to rising sea levels. Southwark is presently protected by the Thames Tidal Defence system which includes the Thames Barrier and sea wall defences. However these may reduce in effectiveness over time due to the speed at which sea levels are rising. But updates to the EA's Thames Estuary 2100 Plan could help to mitigate these effects.

Approximately 75,000 residents in Southwark face food insecurity, ([Climate Change Strategy, 2021](#)), which means they do not have enough money to buy food. Climate change could increase food insecurity due to increases in prices which could worsen inequality within Southwark.



Figure 3-1 Photograph of Silver Birch trees with the Shard building in Southwark (Credit: Southwark Council)

## Soil and water

There is only a single designated Water Framework Directive (WFD) water body within Southwark which is the Thames Middle water body. The River Thames is the only main river in the Southwark borough and is situated along the northern boundary of Southwark for approximately 7km. The [Thames Middle water body](#) is of moderate ecological status and has the hydro morphological designation of highly modified.

Other watercourses have since been encompassed within sewer networks, for instance the Lost River Peck and Lost River Effra. The WFD does set the target that all water bodies should aim for 'good ecological status' and this should be sort even for non-designated waterbodies.

With the impacts of climate change pressures on water supplies are also increasing. Aquifers and reservoirs are unable to be replenished due to low rainfall during prolonged dry periods. Water scarcity is a growing risk and conserving water becoming an even greater priority.

There are not any nationally or regionally important geological sites within Southwark. Dulwich Mill Pond has previously been identified as an area of potentially local geological importance, in [supplementary planning guidance for Dulwich](#). The underlying geology of Southwark is divided, with the oldest rocks, Upper Chalk Formation, found in the north-east of Southwark. In Bermondsey and Camberwell the rock formation is outcropped; overlying the Upper Chalk Formation is Thanet Sand Formation.



## Historical and cultural environment

There are a variety of historical and cultural assets which have significant value within Southwark. These are designated sites or landmarks which are protected by policies and legislations. The [Southwark Local Plan \(2022\)](#) establishes several specific policies which relate to the protections of these assets.

*Policy 19* – Listed buildings and structures, maintains that development should not harm the significance of a listed building or structure and is required to conserve or enhance the feature.

*Policy 21* – Conservation of the historic environment and natural heritage, states that development should “conserve and enhance the significance of [...] designated and non-designated assets and their settings”, this applies to the assets presented in *Table 3-4* among others.

*Policy 22* – Borough views, states how development should not impede these views and should ensure they are accessible and where possible be enhanced by development.

*Policy 23* – Archaeology, establishes restrictions for development within Archaeological Priority Areas.

Table 3-4 Number and classifications of historical and cultural assets

Type of classification	No. of assets	Example of asset
<a href="#">Grade I listed buildings</a>	4	The George Inn
<a href="#">Grade II listed buildings</a>	878	The St Saviours Southwark war memorial
<a href="#">Grade II* listed buildings</a>	29	The Church of St Augustine
<a href="#">Scheduled ancient monuments</a>	8	The Globe Theatre
<a href="#">Protected linear view</a>	2	Nunhead Cemetery
<a href="#">Other protected views (London Panorama / River Prospect / Townscape View)</a>	3	One Tree Hill
<a href="#">Archaeological Priority Areas</a>	6	APA 1 - North Southwark and Roman Roads
<a href="#">Conservation areas</a>	53	Addington Square
<a href="#">London Squares</a>	7	Trinity Church Square

## Crime

The crime rates experienced in Southwark correlate with those for the whole of London. The most common offences being violence against the person and theft ([JNSA, 2022](#)). Overall from April 2020 to March 2021 over 30,000 offences were recorded in Southwark, which was significantly higher than the London average, but a decline from previous years. The decline is likely to be related to the national lockdowns imposed due to COVID-19.

## Education

Southwark is experiencing a lack of demand for school places, where the supply of school places is now exceeding this demand. This is due to a falling birth rate, net migration from the EU has declined, rising house prices, and changes to benefits. However in this time the standards in schools have risen, in December 2022 98% of Southwark schools were rated by Ofsted as good or outstanding. More information can be found [here](#).



## 3.4 Task A2 consultation questions

- Do you agree that the baseline data we have included is appropriate to the LFRMS that is being developed? If no, please give reason(s).
- Do you have, or know of, any additional baseline indicators or data that should be added into this SEA Screening Report? Please provide any appropriate links and/or documents.
- As far as you are aware, is the baseline data correct? If no, please provide any appropriate links and/or documents with correct data.

# 4. Identification of environmental, social and economic issues

## 4.1 Task A3 summary

Task A3 is to create a list of environmental issues and/or problems based on the baseline criteria collated in Task A2. The purpose of this is to begin to explore the relationship between these issues and flood risk, and therefore how the delivery of the LFRMS may impact these challenges for Southwark.

## 4.2 Local environmental, social and economic issues

Many of the environmental, social and economic issues identified in *Table 4-1* can be specifically linked with climate change because many are either caused by or exacerbated due to climate change. For example, reduction in habitats and decrease in biodiversity, weather extremes and food insecurities.

Table 4-1 Environmental, social and economic issues and their potential associated problems

Key environmental, social and economic issues	Potential associated problems	Proposed LFRMS objective
Degradation to areas of green space and/or conservation designations	<ul style="list-style-type: none"> <li>Loss of habitats and biodiversity</li> <li>Negative impacts to health due to lack of quality green spaces</li> <li>Loss of carbon sinks, rise in poor air quality</li> </ul>	C D
Reduction in important / protected habitats and/or species	<ul style="list-style-type: none"> <li>Degradation of ecology and biodiversity</li> <li>Failure to protect endangered habitats / species</li> <li>Reduction in ecological diversification</li> </ul>	A B C D
Decrease in biodiversity	<ul style="list-style-type: none"> <li>Increase in diseases spread between species</li> <li>Negative impacts on livelihoods of local people and economy</li> <li>Loss of green space</li> <li>Negative impacts to food production (e.g. allotments)</li> </ul>	C D
Increase in the number of critical infrastructure assets at risk from flooding	<ul style="list-style-type: none"> <li>Severe disruption to residents / commuters / tourists in Southwark in event of significant flood</li> <li>Higher risk of loss of life in event of significant flood due to primary and secondary impacts</li> <li>Rise in cost of property repairs and insurance premiums</li> </ul>	A C
Increase in the number of properties at risk of surface water flooding	<ul style="list-style-type: none"> <li>Lack of funding to support residents in protecting their property</li> <li>Greater number of people in need of education surrounding flood risk</li> <li>Greater number of people at risk of displacement</li> <li>Higher insurance premiums</li> </ul>	A C



Key environmental, social and economic issues	Potential associated problems	Proposed LFRMS objective
Geographic inequalities	<ul style="list-style-type: none"> <li>• Pockets of deprivation exist</li> <li>• Increase in hostilities between areas</li> <li>• Flood risk is less of a priority for residents in deprived areas</li> <li>• Lack of investment towards flood risk in deprived areas due to higher social priorities</li> <li>• Rise in crime rates</li> </ul>	A C
Population inequalities	<ul style="list-style-type: none"> <li>• Minority ethnic groups experiencing poorer quality of life compared to those of white ethnic background</li> <li>• Minority ethnic groups tend to live in areas with higher deprivation</li> <li>• Minority ethnic groups are more likely to develop long term conditions and have poorer mental health</li> <li>• Less opportunity in deprived areas to take action to protect properties from flooding</li> <li>• Flood risk is less of a priority for residents in deprived areas</li> <li>• Residents are less likely to have flood insurance in deprived areas, potentially increasing the local numbers of people suffering with disabilities (particularly mental health)</li> <li>• Disparities in education around flood risk and its mitigation</li> </ul>	A C
Increase in population (natural change and population mobility)	<ul style="list-style-type: none"> <li>• Increased pressure on local services</li> <li>• Pressure for increased development</li> <li>• Greater number of people vulnerable to flooding</li> <li>• Possible loss of permeable land due to increased development</li> <li>• Rise in demand for water supplies</li> </ul>	B C
Wider determinants of health	<ul style="list-style-type: none"> <li>• High numbers of children living in poverty</li> <li>• Higher costs of living likely to worsen living situations for residents</li> <li>• Higher rates of food insecurity</li> <li>• Flood risk is less of a priority for residents in deprived areas</li> </ul>	C D
Decrease in air quality	<ul style="list-style-type: none"> <li>• Increase in cases of respiratory health conditions</li> <li>• Greater numbers of vulnerable people putting pressure on health services</li> <li>• Negative impacts on biodiversity due to pH and nutrient levels in soils and water</li> </ul>	C D
More frequent temperature and weather extremes	<ul style="list-style-type: none"> <li>• Greater numbers of residents, property and infrastructure vulnerable to climate extremes</li> <li>• Increased pressure on health and infrastructure services</li> <li>• School facilities need upgrading to cope with extreme weather events</li> <li>• Water supplies unable to replenish fully following drought conditions</li> </ul>	B C D
Increasing food insecurity	<ul style="list-style-type: none"> <li>• Greater number of people living in poverty</li> <li>• More pressure on food banks</li> </ul>	D
Reduction in water and soil quality	<ul style="list-style-type: none"> <li>• Negative impacts to biodiversity and ecology</li> <li>• Risk of impacting groundwater / aquifer sources</li> <li>• Increase in pollution risks when flooding occurs</li> <li>• Reduction in infiltration rates due to soil compaction/ quality</li> <li>• Loss of plants could reduce interception and increase flood risk</li> </ul>	A C D
Degradation of historical and cultural assets / environments	<ul style="list-style-type: none"> <li>• Harm or loss to the significance of heritage / cultural assets</li> </ul>	B C D

Key environmental, social and economic issues	Potential associated problems	Proposed LFRMS objective
Deterioration of the Thames Tidal Defence System	<ul style="list-style-type: none"> <li>• Increased burden on riparian landowners</li> <li>• Could increase level of tidal flood risk to large areas of the borough, currently considered to have a "reduction in risk of flooding from rivers and the sea" in the event of an asset failure</li> </ul>	B D

### 4.3 Task A3 consultation questions

6. Do you agree that these are the main environmental issues relating to the LFRMS affecting the Southwark borough? If no, what are the main issues you believe should be included?
7. Are there any other environmental issues that you believe should be added into this SEA Screening Report? If so, please give details.
8. Do you consider any of these environmental issues to not affect Southwark? If so, please give details.

# 5. SEA objectives

## 5.1 Task A4 summary

Task A4 is to generate a list of SEA objectives based on the environmental issues raised in Task A3. The SEA objectives are also developed based on local knowledge and understanding relating to flood risk management.

## 5.2 SEA objectives

These eight SEA objectives are a set of aims which have been produced to address the environmental, social and economic issues raised in *Section 4.2*. The purpose of these objectives is to support in the assessment of the LFRMS strategic objectives and actions, these SEA objectives will not be specifically delivered. However the aims sought in these objectives are likely to be addressed through the work of delivering the LFRMS and wider strategies produced by Southwark Council.

The SEA objectives will support in the on-going review of the delivery of the LFRMS Action Plan to assess impacts to these local issues. Any outcomes from these actions which warrant further assessment under these specific legislations Southwark Council will do so.

**SEA 1:** To conserve and enhance green spaces and designated conservation areas to support the security and growth of protected habitats and species.

**SEA 2:** To support biodiversity net gain across Southwark within developments, supporting local ecological, social and health benefits.

**SEA 3:** To protect critical infrastructure and ensure that new development appropriately considers and mitigates the impacts of increased flood risk.

**SEA 4:** To support residents in protecting their properties from flood risk through education and financial support/ advice.

**SEA 5:** To ensure that social and economic inequalities are addressed by prioritising areas for investment and development effectively.

**SEA 6:** To improve the physical and mental health of residents by supporting access to green spaces, improving air quality and access to health care.

**SEA 7:** To effectively support new development and infrastructure in preparing for the impacts of extreme temperature/ weather.

**SEA 8:** To conserve and enhance heritage features and their environments by protecting them from decay and development pressures where flood risk or water table changes are a threat.

## 5.3 Task A4 consultation questions

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

# 6. Screening analysis of the LFRMS

## 6.1 Task A5 summary

Task A5 is to conduct the analysis of the SEA objectives against each of the LFRMS Strategic Objectives. This is to assess the scope of the SEA to determine if there will be no effect, or a potentially significant effect of delivering the proposed LFRMS actions.

## 6.2 Screening analysis

Each of the LFRMS strategic objectives have been analysed against the SEA objectives. The results of this analysis are displayed in *Table 6-1*, with the criteria applied defined in *Table 6-2*. The outcomes reached have been decided based on the best judgment from a qualitative approach. The justifications for the decisions made are detailed in *Section 6.3*.

None of the LFRMS strategic objectives will negatively impact any of the SEA objectives. There are some neutral outcomes where the LFRMS strategic objective does not relate directly to the SEA objective. The overall analysis shows that there is likely to be a mixture of minor and major positive outcomes from the delivery of the LFRMS to the SEA objectives with no foreseen negative impacts.

Table 6-1 Scoring matrix of LFRMS strategic objectives against the SEA objectives

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

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 dependent on implementation.
-	Minor negative effect on SEA objective.
--	Major negative effect on SEA objective.
?	Uncertain

## 6.3 Screening analysis outcomes

Justifications for the decisions made in *Table 6-1* have been described in each of the following tables respectively for each LFRMS strategic objective.

Table 6-3 Justifications for the screening outcomes of LFRMS strategic objective A against the SEA objectives

<b>LFRMS strategic objective A</b> <i>To improve community awareness of local flood risks and the authorities responsible for managing them.</i>		
<b>Outcome</b>	<b>SEA Objective</b>	<b>Justification</b>
Major positive	SEA 4	Raising awareness of flood risk will help residents to identify affordable property flood resilience measures or the LLFA to identify locations where additional funding may be required to deliver targeted flood alleviation schemes (FAS).
	SEA 5	Targeted awareness raising will be made through the delivery of the LFRMS to ensure specific communities are supported effectively.
Minor positive	SEA 1	Improving community awareness of flood risk will help to improve the perception and value of local green spaces to local residents.
	SEA 2	Raising awareness of flood risk mitigations will show residents the importance of also protecting biodiversity and of other additional benefits from natural capital.
	SEA 3	Improvements to community awareness have the potential to feedback to developers on all scales to consider the impacts of flood risk more appropriately.
	SEA 6	This LFRMS strategic objective should offer opportunity to also raise awareness of the benefits of green spaces and how FAS offer multiple benefits such as supporting access to green space and improving air quality.
	SEA 7	Strategic objective A has the potential to offer a minor benefit by sharing knowledge on flood warning systems or extreme weather with developers.
	SEA 8	Supporting communities to better understand their flood risk could support the protection of heritage features.
Minor negative	N/A	None of the SEA objectives are likely to have a minor negative impact by the delivery of LFRMS strategic objective A.
Major negative	N/A	None of the SEA objectives are likely to have a major negative impact by the delivery of LFRMS strategic objective A.
Uncertain	N/A	There were no uncertainties between the SEA objectives and LFRMS strategic objective A.

Table 6-4 Justifications for the screening outcomes of LFRMS strategic objective B against the SEA objectives

<b>LFRMS strategic objective B</b> <i>To collaborate with internal departments, organisations, authorities and partnership groups to support successful communication in managing flood risk.</i>		
<b>Outcome</b>	<b>SEA Objective</b>	<b>Justification</b>
Major positive	SEA 3	Working closely with the local planning authority will ensure that critical infrastructure is protected with appropriate conditions in place for new developments.

**LFRMS strategic objective B**

*To collaborate with internal departments, organisations, authorities and partnership groups to support successful communication in managing flood risk.*

Outcome	SEA Objective	Justification
Minor positive	SEA 1	Liaising with parks and ecology teams will allow coordination on delivering priorities which mutually address conserving green spaces, habitats and species as well as mitigating the impacts of flooding.
	SEA 2	Coordinating between departments will enable mutual opportunities in delivering FASs which also support ecology, social and health benefits.
	SEA 5	Working with other stakeholders will enable mutually beneficial opportunities to take place when delivering FASs which will have the potential to offer social and economic benefits.
	SEA 6	Having improved communication will enable more opportunities for cross-departmental working on FASs which could offer multiple benefits for communities.
	SEA 7	Supporting effective communication in preparing for extreme temperature/ weather will improve the preparedness of residents in Southwark.
	SEA 8	Communicating the risks to heritage and cultural will improve how flood risk management considers these issues.
Neutral	SEA 4	This SEA had very little / no relation to this LFRMS strategic objective.
Minor negative	N/A	None of the SEA objectives are likely to have a minor negative impact by the delivery of LFRMS strategic objective B.
Major negative	N/A	None of the SEA objectives are likely to have a major negative impact by the delivery of LFRMS strategic objective B.
Uncertain	N/A	There were no uncertainties between the SEA objectives and LFRMS strategic objective B.

Table 6-5 Justifications for the screening outcomes of LFRMS strategic objective C against the SEA objectives

**LFRMS strategic objective C**

*To support development across Southwark encouraging the integration of Sustainable Drainage Systems (SuDS) within planning designs to promote sustainable multi-beneficial solutions that contribute to wider social, economic and environmental outcomes.*

Outcome	SEA Objective	Justification
Major positive	SEA 1	SuDS encourage the creation of green spaces and can help to create new habitats and wildlife corridors through urban environments.
	SEA 2	The implementation of SuDS also encourages additional benefits such as improvements to biodiversity and SuDS can provide improved habitats on existing brownfield land.
	SEA 3	Appropriate measures are in place to ensure that development meets the correct standards in terms of mitigating the risks of flooding, this ensuring that critical infrastructure is protected.
	SEA 5	The selection of SuDS will consider where areas are at high risk of flooding, factors such as high levels of inequalities will also be included in site selection for FAS to support the most vulnerable areas.
	SEA 6	SuDS can often support the improvement or introduction of green spaces into urban environments, therefore helping to provide health and social benefits.
	SEA 7	The implementation of SuDS in development will also appropriately consider the impacts of climate change in terms of flood risk (extreme weather) and extreme temperatures.

**LFRMS strategic objective C**

*To support development across Southwark encouraging the integration of Sustainable Drainage Systems (SuDS) within planning designs to promote sustainable multi-beneficial solutions that contribute to wider social, economic and environmental outcomes.*

Outcome	SEA Objective	Justification
Minor positive	SEA 4	Support/ guidance will be given to property owners to help implement SuDS at a property level helping residents to reduce the risk of flooding to homes and buildings.
	SEA 8	By carefully considering developments there is not likely to be any increased flood risk to surrounding buildings as a result of the development. The implementation of SuDS should help ease local flood risk pressures helping to protect local heritage assets.
Neutral	N/A	None of the SEA objectives are likely to have a neutral impact by the delivery of LFRMS strategic objective C.
Minor negative	N/A	None of the SEA objectives are likely to have a minor negative impact by the delivery of LFRMS strategic objective C.
Major negative	N/A	None of the SEA objectives are likely to have a major negative impact by the delivery of LFRMS strategic objective C.
Uncertain	N/A	There were no uncertainties between the SEA objectives and LFRMS strategic objective C.

Table 6-6 Justifications for the screening outcomes of LFRMS strategic objective D against the SEA objectives

**LFRMS strategic objective D**

*To apply knowledge on local flood risk to assist in improving Southwark's resilience to the impacts of climate change.*

Outcome	SEA Objective	Justification
Major positive	SEA 7	Improving knowledge on climate change impacts will ensure that appropriate standards are imposed on developments to consider extreme weather and temperatures.
Minor positive	SEA 1	Working towards resilience against the impacts of climate change will support mutual aims of supporting protected habitats and species.
	SEA 2	Improving resilience to climate change should have secondary benefits of providing biodiversity net gain.
	SEA 3	Planning policy reflecting the need for mitigations against climate change will ensure that development will minimise the impacts of increased flooding.
	SEA 4	Through this LFRMS the LLFA will support the improvement of resilience within Southwark helping to inform residents how to protect their properties.
	SEA 5	Prioritising the area's most at risk from the effects of climate change will aim to support social and economic inequalities being addressed.
	SEA 6	Actions to reduce carbon emissions will help to improve air quality within Southwark, whilst showing the benefits nature can offer to physical and mental health.
	SEA 8	Tackling climate change will help to support water tables in remaining stable.
Minor negative	N/A	None of the SEA objectives are likely to have a minor negative impact by the delivery of LFRMS strategic objective D.
Major negative	N/A	None of the SEA objectives are likely to have a major negative impact by the delivery of LFRMS strategic objective D.



**LFRMS strategic objective D**

*To apply knowledge on local flood risk to assist in improving Southwark's resilience to the impacts of climate change.*

Outcome	SEA Objective	Justification
Uncertain	N/A	There were no uncertainties between the SEA objectives and LFRMS strategic objective D.

#### 6.4 Task A5 consultation questions

11. Do you have any comments on the method for the assessment of the SEA objectives with the LFRMS strategic objectives?
12. Do you agree with the screening analysis of each of the LFRMS strategic objectives? If not, please give reasons as to why you would screen a certain objective differently.

# 7. Conclusions and next steps

## 7.1 Conclusions

The outputs of the SEA Screening Report conclude that the LFRMS is unlikely to pose any detrimental effect to environmental issues within Southwark. Findings have identified that the delivery of the LFRMS is likely to favour mutually beneficial outcomes where the SEA objectives have a relation to the LFRMS strategic objectives.

Therefore, it can be concluded that the LFRMS has appropriately considered the impacts of its action plan in regard to local environmental, economic and social issues. The delivery of flood risk management can offer many beneficial outcomes for a range of factors, provided effective and early communication takes place between stakeholders.

From the findings of this SEA Screening Report, it is concluded that progression onto Stage B is not required, and it is not necessary for a full SEA to be completed.

## 7.2 Consultation of the SEA

A statutory consultation has been undertaken to enable necessary stakeholders to review and provide comments on the scope and analysis of the SEA. Responses received have been appropriately applied to the SEA Screening Report as required before the document was released for public consultation. During the public consultation individuals, such as residents and other stakeholders, had the opportunity to review the SEA Screening Report and provide feedback. Relevant feedback has subsequently been incorporated into the final version of the SEA Screening Report and corresponding LFRMS documents.

## 7.3 Final comments consultation questions

13. Do you have any comments on the conclusions that we have made in this SEA Screening Report of the LFRMS?
14. Do you have any additional comments or suggestions for this SEA Screening Report?