London Borough of Redbridge

Local Flood Risk Management Strategy

Strategic Environmental Assessment

2024-2030

Executive summary

The purpose of a Strategic Environmental Assessment (SEA) is to assess whether the delivery of a plan or proposal is likely to have any significant effect on the environment. There are fives stages to the SEA process, of which this report is the first stage ('Stage A the screening assessment'). This Screening Report serves to identify and understand any potential environmental impacts that may arise from the implementation of the strategic objectives of the Local Flood Risk Management Strategy (LFRMS) and the actions of the associated Action Plan. Based on the outcome of this assessment, a decision can be made on whether to progress to the later stages of the SEA process.

The baseline information reviewed for this SEA Screening Report looked at the following environmental, social and economic indicators:

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

Consideration of the baseline information for these indicators revealed a number of factors impacting on the characteristics of the London Borough of Redbridge (Redbridge) which could affect or be affected by the implementation of flood risk management within the borough. Redbridge borough is expecting an increase in population, with the largest increase to be amongst those over 50. A growing and aging population will bring increased demand for services and infrastructure. Along with the need to provide for populations growth, Redbridge is also seeking to further develop its metropolitan centres, such as Ilford town centre, and capitalise on the new transport connections like the Elizabeth Line along with the demands of the Stansted Corridor. Development is likely to increase the pressure on the open areas and natural environments of the borough. Redbridge, as with the whole of London, has issues with air quality and water quality which have the potential to be compounded by development. Climate change, which has the potential to exacerbate issues for other factors, will become an increasing hazard in the future adding additional pressure to infrastructure and the environment.

Based on the issues identified through examining the baseline information, the following SEA objectives have been created:

- **SEA 1:** To protect and enhance green spaces for the benefits to local ecology, and important social and health benefits for residents.
- **SEA 2:** To prioritise biodiversity net gain in policy and development for the conservation and security of important habitats and species.
- **SEA 3:** To ensure the protection of critical infrastructure from future flood risk and that new developments consider future risk to minimise future disruption to services.
- **SEA 4:** To mitigate flood risk for residents by encouraging community engagement and education on actions that can be taken along with access to funding.

- **SEA 5:** To address the inequalities within the Redbridge borough by ensuring investment and development is focused effectively.
- **SEA 6:** To consider future climate extremes in planning for transport, infrastructure, and services to ensure greater resilience and mitigate future impacts.
- **SEA 7:** To protect local heritage features from pressures of future developments and flood risk.

The strategic objectives of the LFRMS were then assessed for any potential impact on the identified SEA objectives. The outcomes of the screening analysis indicate that the LFRMS and the associated Action Plan are not likely to have a detrimental impact on any of the SEA objectives. It is predicted that the LFRMS strategic objectives will have between a neutral and positive impact on the SEA objectives. Through this Screening Report, the impact of delivery of the LFRMS on environmental issues has been considered and no negative outcomes are expected. Progression of the LFRMS to further stages of the SEA process is therefore not required.

Contents

Figures and tables

Acronyms and abbreviations

Abbreviation	Definition
AQMA	Air Quality Management Area
EA	Environment Agency
FWMA	Flood and Water Management Act
JSNA	Joint Strategic Needs Assessment
LFRMS	Local Flood Risk Management Strategy
LLFA	Lead Local Flood Authority
Redbridge borough	The geographic area of the London Borough of Redbridge
Redbridge Council	The administrative Council of the London Borough of Redbridge
SEA	Strategic Environmental Assessment
SINC	Sites of Importance for Nature Conservation

1. Introduction

1.1 Purpose of screening

The purpose of a Strategic Environmental Assessment (SEA) is to consider the environmental impacts of a proposed plan in order to provide a high level of environmental protection in its delivery. Prior to the enactment of a plan or programme, the Environmental Assessment of Plans and Programmes Regulations (2004) (which implements the European SEA Directive (2001)) requires the preparation of a publicly available report. This report should identify and assess the likely effects on the environment that implementation of the plan or programme could incur.

The purpose of this SEA Screening Report is to identify and assess the potential impact on the environment of the proposed strategic objectives of the Redbridge Local Flood Risk Management Strategy (LFRMS) and the associated Action Plan. The screening process then determines whether a full SEA is required.

1.2 Methodology

A SEA has five stages which are summarised in *Table 1-1*. This SEA Screening Report is the outcome of Stage A and covers the tasks outlined within that stage. Progression beyond the Screening Stage is only required if potential significant environmental impacts from the LFRMS and associated Action Plan are identified during Stage A. If this is the case, the SEA moves to Stage B which collects information in preparation for the environmental report which is produced during Stage C. Stage D is a public consultation reviewing the SEA with the plan that it accompanies. Stage E evaluates and responds to the outcomes from Stage D.

Table 1-1 Stages of delivery of a SEA

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

SEA Stages		SEA Task
	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

For completion of the SEA Screening stage, this Screening Report is reviewed by statutory consultees. The questions listed below were responded to and the feedback incorporated into the report prior to the public consultation phase. The questions correspond to the tasks outlined in Stage A of the methodology.

Task A1: Legislation, plan and policies

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

Task A2: Baseline data

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

Task A3: Environmental issues affecting the borough

6. Do you agree that these are the main environmental issues relating to the strategy affecting Redbridge?
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 Redbridge? 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 Redbridge?
10. Are there any other SEA objectives that you believe should be included? If so, please give details.

Task A5: SEA methodology

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

Conclusion and further comments

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

1.4 Summary of Local Flood Risk Management Strategy

Redbridge has the role of Lead Local Flood Authority (LLFA), as mandated under the Flood and Water Management Act (FWMA) (2010). Redbridge LLFA must maintain a LFRMS, updated every six years or if it is affected by any major changes to legislation. The LFRMS outlines how the LLFA and other Risk Management Authorities (RMAs) will manage flood risk within the Redbridge borough, including from surface water, groundwater, and ordinary watercourses. The LFRMS for Redbridge outlines the strategic objectives for managing flood risk from all sources which are as follows:

Strategic Objective A

To improve knowledge and understanding of flood risk in Redbridge and wider catchments.

Strategic Objective B

To deliver successful and targeted flood alleviation schemes which maximise wider social, economic and environmental benefits.

Strategic Objective C

To develop knowledge and access to funding to improve the resilience of communities and future development.

Strategic Objective D

To ensure development appropriately mitigates flood risk by prioritising the use of Sustainable Drainage Systems (SuDS) and by aiming to achieve greenfield runoff rates.

Strategic Objective E

To support successful communication between stakeholders and the effective engagement of communities to enable improvements to flood risk management.

Strategic Objective F

To address climate change impacts by improving sustainability and working towards carbon neutral targets.

The actions to achieve the strategic objectives are set out in the accompanying Action Plan.

1.5 Consultation process

This SEA Screening Report will go through a consultation process involving three statutory consultation bodies: the Environment Agency (EA), Historic England and Natural England. The feedback from this consultation process will then be reviewed and the SEA updated accordingly. The public consultation of the LFRMS and associated documents, including the SEA, will then take place and the feedback incorporated into the final versions of the documents.

2. Identification of relevant policies

2.1 Task A1 summary

Task A1 identifies any policies, plans and programmes, and environmental protection objectives that may impact upon the LFRMS and its proposed actions. All policies, documents and legislation that may be relevant to the implementation of the LFRMS with regards to the SEA objectives have been compiled.

2.2 Relevant policies

Task A1 requires the consideration of policy and legislation across a range of levels which may all impact the LFRMS: international, national, regional and local. *Table 2-1* presents all relevant legislation.

Table 2-1 Links to relevant policy, legislation and documents

International
UNESCO World Heritage Convention (1972)
Convention for the Protection of the Architectural Heritage of Europe (1985)
EU Habitats Directive (1992)
The Valletta Treaty (formally European Convention on the Protection of Archaeological Heritage) (1992)
EU Water Framework Directive (2000)
European Landscape Convention (2000)
European SEA Directive (2001)
EU Floods Directive (2007)
EU Birds Directive (2009)
EU Biodiversity Strategy for 2030 (2020)
National
Ancient Monuments and Archaeological Areas Act (1979)
Wildlife and Countryside Act (1981)
Environmental Protection Act (1990)
Planning (Listed Buildings & Conservation Areas) Act (1990)
Land Drainage Act (1991)
The UK Biodiversity Action Plan (1994)
Civil Contingencies Act (2004)
Natural Environment and Rural Communities Act (2006)
The Pitt Review (2007)
The SuDS Manual C753F (2007)
Climate Change Act (2008)
Future Water: The Government's Water Strategy for England (2008)
Flood Risk Regulations (2009)
Flood and Water Management Act (2010)
Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011)
National Standards for Sustainable Drainage Systems (2011)
Water Act (2014)

National
DEFRA: 25 Year Environment Plan (2018)
Meeting our Future Water Needs: A National Framework for Water Resources (2020)
National Flood and Coastal Erosion Risk Management Strategy for England (NFCERMS) (2020)
Environment Act (2021)
National Planning Policy Framework (2012, revised 2021)
National Planning Practice Guidance (2016, revised 2021)
Regional
Thames Catchment Flood Risk Management Plan (2009)
Mayor of London's Climate Change Adaptation Strategy (2011)
Thames Estuary 2100 Flood Risk Management Plan (2012)
Thames River Basin District, River Basin Management Plan (2015)
London Regional Flood Risk Appraisal (2018)
The London Plan (2021)
South East Inshore Marine Plan (2021)
Local
Redbridge's Biodiversity Action Plan
Roding, Beam and Ingrebourne Catchment Partnership Action Plan
Redbridge's Preliminary Flood Risk Assessment (2011)
Redbridge's Surface Water Management Plan (2011)
Redbridge's Conservation Area Management Proposals (2014)
Redbridge's Highway Asset Management Strategy (2015)
Local Plan Opportunity Sites (2018)
Redbridge's Local Plan 2015-2030
Redbridge's Air Quality Action Plan 2020-2025
Redbridge Local Development Scheme (2020)
Redbridge's Climate Change Action Plan (2021)

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, what additional documentation do you think should be included, please provide links?

3. Baseline information

3.1 Task A2 summary

Task A2 is to collect baseline information relevant to the SEA with regards to the LFRMS. Information is collated from a variety of sources including the Office for National Statistics, the EA and from Redbridge Council. This information is then used to determine key environmental issues that may exist in Redbridge. Whilst the SEA Screening Report is chiefly concerned with effects of the LFRMS on the environment, both social and economic baseline information are included to widen the scope of potential impacts being considered.

3.2 Redbridge borough characteristics

Redbridge is situated in north-east London and borders the County of Essex to the north, and the London Boroughs of Waltham Forest, Havering, Barking and Dagenham, and Newham. Redbridge covers an area of 55km^2 and is predominantly urbanised and residential but retains a number of public parks and open spaces, including Hainault Forest Country Park and parts of Epping Forest which are Sites of Special Scientific Interest (SSSIs). The River Roding is the largest river flowing through Redbridge with the largely culverted Cran Brook and Seven Kings Water being the other two main rivers.

The north-east of the Redbridge borough forms the highest point, sloping south-west towards the River Roding, beside the M11 and A406. Ilford, in the south of the Redbridge borough, is the main metropolitan town centre, with district town centres including Barkingside, Gants Hill, South Woodford and Wanstead. Redbridge is served by ten tube stations, along with four Elizabeth line stations at Chadwell Heath, Goodmayes, Seven Kings and Ilford.

3.3 Baseline information

3.3.1 Biodiversity, flora and fauna

The Redbridge borough is predominantly urbanised but 48% remains green space as outlined in the Redbridge Local Plan (2018), with open spaces more concentrated towards the north and east. There are 36 Council-managed parks and open spaces, shown on the Parks and Open Spaces section of Redbridge Council's mapping tool. These parks and open spaces provide many habitat types and support a number of protected species including eight bat species, badgers, great crested newts and reptiles such as grass snakes and common lizards (Redbridge Biodiversity Action Plan).

There are multiple local Sites of Importance for Nature Conservation (SINCs). The SINCs and those with national, European and international protection can be viewed on the Planning and Land section of Redbridge Council's mapping tool. The number of different kinds of designated sites within Redbridge is set out in *Table 3-1.* Epping Forest at the western edge of Redbridge is a protected SAC as it has important beech forest habitat and both wet and dry heath habitats. There are many habitat types across Redbridge with old woodlands and hedgerows of particular importance.

The River Roding flowing north to south in the east of Redbridge forms an important ecological corridor through the borough and creates a linear connection of green space through east London out towards Essex.

Table 3-1 Number of specially designated sites within Redbridge

Designation	No. of sites	Site names
Special Area of Conservation	1	Epping Forest
Site of Specific Scientific Interest	2	Epping Forest Hainault Forest
Local Nature Reserves From Natural England	1	Hainault Lodge
Sites of Metropolitan Importance for Nature Conservation From Redbridge Council	5	Including Epping Forest, Hainault Forest, the River Roding and Claybury Wood
Sites of Borough Importance for Nature Conservation From Redbridge Council	20	Including Claybury Park Grassland, Fairlop Plain and Water, Goodmayes Park and Loxford Water
Sites of Local Importance for Nature Conservation From Redbridge Council	10	Including Cocked Hat Plantation, The Glade at Woodford Bridge and Newbury Park War Memorial Garden

3.3.2 Infrastructure assets

Redbridge has a significant amount of infrastructure assets that are important to protect in the event of an emergency, flooding included. Different types of infrastructure and details on numbers of these assets are outlined in *Table 3-2*, drawn from Redbridge's Infrastructure Delivery Plan (2017).

Table 3-2 Infrastructure assets in the Redbridge borough

Type of infrastructure	Details of assets
Transport	535km of roads (Redbridge - State of highway report July 2017) TfL roads (A12, A406, A4100) Highways England road (M11) 10 underground stations 4 railway stations
Educational	71 schools
Community Facilities	14 community centres 34 sports centres 12 libraries
Green infrastructure	465 hectares of parks and gardens 329 hectares of natural and semi-natural spaces
Health Infrastructure	King Georges Hospital Goodmayes Hospital Hainault Health Centre 46 general practices

3.3.3 Population

Redbridge had an estimated population of approximately 310,300 as of 2021 (Office for National Statistics, 2021). On average the Redbridge borough has a younger population than the national average. 28% of the population is between 0 and 19 years, and 32% are between 25 and 44 years, whilst nationally the proportions are 25% and 26% respectively, as outlined in the Redbridge Joint Strategic Needs Assessment (JSNA) (2020).

The population is expected to grow to 353,000 by 2035, as predicted in the Redbridge (JSNA) (2020), with the projected increase greatest amongst those over the age of 50. The population is expected to grow across all wards, excluding Hainault and Wanstead. The largest population increase is projected to be 45% in Clementswood. Having both a growing and ageing population indicates that there will be increased demand for health and social care, housing and infrastructure (JSNA 2020). The requirements of these services can put pressure on the natural environment through construction and expansion of the built environment which can fragment habitats and impact on biodiversity.

3.3.4 Public health

Public health in Redbridge is varied. Life expectancy is 81.5 years for males and 84.8 years for females, which is higher than both the national and regional averages, as set out in Redbridge JSNA (2020). There is, however, a gap in life expectancy between the most and least deprived areas of the Redbridge borough and this has increased since 2013-15, as it has nationally.

The Redbridge borough has a number of challenges in factors that can have adverse impacts on public health. Employment rates are lower than other London boroughs, numbers in temporary housing are also higher than the London average and rates of physical activity are lower than national and regional averages. Health inequalities are most pronounced between the north-west and southern wards. Any development planned should seek to address and not exacerbate these challenges (JSNA 2020).

3.3.5 Air quality

As outlined in Redbridge's Air Quality Action Plan (AQAP) (2020), air pollution in Redbridge fails to meet the national annual average limit for nitrogen dioxide (NO2) and for particulate matter (PM10) in a number of locations, notably in the south-west of Redbridge, which has a higher concentration of busy roads and more traffic. Due to these exceedances, Redbridge Council designated the whole of the borough as an Air Quality Management Area (AQMA) in 2003.

The primary source of air pollution in Redbridge comes from road transport emissions and is why air pollution is worst closest to the busiest roads and most built-up areas. Redbridge, along with other outer London boroughs, has higher rates of vehicle ownership than the average. This, combined with increased traffic from outside of London, results in congestion which is a key source of pollution of both NO2 and PM10, explained in Redbridge's AQAP (2020). Population growth and subsequent increased travel demand is likely to present challenges for achieving national limit targets.

3.3.6 Climate factors

As a result of climate change, Redbridge is likely to experience an increase in climatic extremes such as an increased number of intense rainfall events and extreme heat events. There will be increased risk of flooding from tidal, fluvial (river), surface water and foul sewer sources due to sea level rise and higher rainfall intensities, as identified in the Regional Flood Risk Appraisal (2018).

Increased climatic extremes are predicted nationally, and Redbridge as part of London, will be particularly vulnerable to heat due to the amplifying effects of urban areas on high temperatures (Redbridge's Climate Change Action Plan (2021)). It is also situated in the south-east region of England which is at risk of drought and greater pressure on water sources.

Extreme heat events have an impact on public transport and cause disruption across Redbridge. The effects of climate change are distributed unevenly; it is likely that those on lower incomes and more vulnerable residents will be disproportionately affected (Redbridge's Climate Change Action Plan (2021)).

The changes to the climate that are likely to be experienced will have consequences for species and habitats in the Redbridge area. Any changes are particularly relevant for species and habitats that are already vulnerable or rare, such as the wet heaths and stag beetles found in Epping Forest.

3.3.7 Soil and water

The Environment Agency has identified two waterbodies within the Redbridge borough, recognised under the EU Water Framework Directive (WFD):

- The Lower Roding (Loughton to Thames)
- Seven Kings Water

These waterbodies are used to monitor the implementation of the Thames River Basin Management Plan which sets out measures to prevent deterioration and protect the identified waterbodies. Both rivers identified in the Redbridge borough are heavily modified, meaning the cost of any restoration would be disproportionate to the benefit or unfeasible technically. Both rivers have also been given moderate ecological status, primarily as a result of pollution from the urban area, transport and wastewater.

There are two sites of potential geological importance in the Redbridge borough, identified as geodiversity sites in the London Plan (2021) and recognised as such because of their importance as habitats for biodiversity. These are Fairlop Quarry Complex and Knighton Wood Redbridge. As such, efforts should be made to protect their characteristics. The underlying geology of Redbridge is the London Clay formation with a mixture of claystone and mudstone, and sand and gravels.

3.3.8 Historical and cultural environment

The Redbridge borough has a range of historical and cultural assets, particularly in the west of the borough. These features are protected at a national and local level by certain policies, such as the Planning (Listed Buildings & Conservation Areas) Act (1990) and Redbridge's Local Plan 2015-2030, depending on their designation which is outlined in *Table 3-3.* Heritage assets are of broad social, cultural, environmental, and economic significance to Redbridge borough and for this reason their conservation is important.

The location of these features can be found on Historic England's website, with further information on specific features available from Heritage Gateway. The plan regarding the management of protected features and areas within Redbridge can found here.

Table 3-3 Number and classification of historical and cultural assets

Type of classification	Number of assets	Example of asset

Listed buildings (including those listed locally)	200	St Peter's Church, Aldborough Road
Registered parks and gardens	3	Wanstead Park
Archaeological priority areas	36	Wanstead Flats
Conservation areas (designated heritage assets)	16	Claybury, George Lane, Snaresbrook
Collated from National Heritage List for England (NHLE) and Planning and Land Features - Redbridge		

3.4 Task A2 consultation questions

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

4. Identification of environmental and social issues

4.1 Task A3 summary

The purpose of Task A3 is to identify environmental issues existing within the Redbridge borough, using the baseline information that has been collated. The actions proposed to manage flood risk as part of the LFRMS can then be related to the relevant potential environmental issues identified. From this the potential impacts of the delivery of the LFRMS on environmental issues in the Redbridge borough can be assessed.

4.2 Local environmental issues

Table 4-1 summarises the key environmental issues identified from the baseline information and breaks these down into potential associated problems that are either existing or may arise. These problems are then connected with the relevant proposed LFRMS objective.

Table 4-1 Environmental issues, potential associated problems and related LFRMS objectives

Key environmental / social issues	Potential associated problems	Proposed LFRMS objective
Decline or loss of areas of green space and designated conservation areas	• Loss of habitat and species. • Negative impact on public health due to lack of green, open space. • Potential decrease in air quality. • Potential decrease in water quality in WFD water bodies.	B
Decrease in important or protected habitats / species	• Loss of biodiversity resulting in poorer ecological quality of habitats. • Ecological imbalance of food chains.	B F
Decrease in biodiversity	• Increased vulnerability of species to disease.	B F
Increase in the number of infrastructure assets at risk of flooding	• Increased risk of severe disruption to residents / commuters in event of a flood. • Risk of loss of life in event of a flood due through primary and secondary impacts. • Increased cost of property repairs and insurance premiums.	B D E F
Increase in the number of properties at risk of flooding from different sources	• Increased number of residents at risk of displacement. • Increased cost of property repairs and insurance premiums. • Increased funding required for property protection.	B C E
Borough inequalities	• Uneven distribution of green space leading to uneven access to green and open spaces. • Health disparities between most and least deprived.	B C

Key environmental / social issues	Potential associated problems	Proposed LFRMS objective
	• Minority ethnic groups in areas of highest deprivation with worse health indicators.	
Population increase	• Increased demand for housing, infrastructure, and local services. • Impact of increased development on the natural environment.	B C D E
Public health challenges	• Gap in health indicators between least and most deprived. • Rise in cost of living causing worse living conditions for residents. • Pressure on health services and increased funding required.	B
Decrease in air quality	• Increased risk of respiratory conditions for residents. • Increased pressure on health services. • Changes in pH and nutrient levels in soils and water causing negative biodiversity impacts.	B F
Increase in extreme temperature and weather events	• More residents exposed to climate extremes resulting in increased pressure on health services. • Disruption to infrastructure, transport, and services.	A C D F
Reduction in water and soil quality	• Negative impacts on habitats / species. • Risk of negative effects for groundwater. • Increased pollution risk when flooding occurs. • Reduced infiltration rates due to soil compaction.	B D F
Degradation of historical / cultural assets	• Loss of significance of historical / cultural assets. • Increased flood risk increasing exposure of heritage assets. • Changes to the water environment and groundwater flows affecting preservations of remains and sites.	B

4.3 Task A3 consultation questions

6. Do you agree that these are the main environmental issues relating to the strategy affecting Redbridge?

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 Redbridge? If so, please give details.

5.SEA objectives

5.1 Task A4 summary

The purpose of task A4 is to create a set of SEA objectives based on the environmental issues identified in Task A3.

5.2 SEA objectives

Seven SEA objectives have been set out to address the key environmental and social issues outlined in *Section 4.2*. The SEA objectives are used in the continuing assessment of the local environmental impacts of the implementation of the LFRMS Action Plan.

SEA 1: To protect and enhance green spaces for the benefits to local ecology, and important social and health benefits for residents.

SEA 2: To prioritise biodiversity net gain in policy and development for the conservation and security of important habitats and species.

SEA 3: To ensure the protection of critical infrastructure from future flood risk and that new developments consider future risk to minimise future disruption to services.

SEA 4: To mitigate flood risk for residents by encouraging community engagement and education on actions that can be taken along with access to funding.

SEA 5: To address the inequalities within the Redbridge borough by ensuring investment and development is focused effectively.

SEA 6: To consider future climate extremes in planning for transport, infrastructure, and services to ensure greater resilience and mitigate future impacts.

SEA 7: To protect local heritage features from pressures of future developments and flood risk and contribute to their conservation and enhancement.

5.3 Task A4 consultation questions

9. Do you agree that these proposed SEA objectives are suitable in the context of Redbridge?

10. Are there any other SEA objectives that you believe should be included? If so, please give details.

6 Screening analysis for the LFRMS

6.1 Task A5 summary

Task A5 analyses the impact of the implementation of the LFRMS objectives against each of the SEA objectives. This is to determine if there will be no effects or any potentially significant environmental effects from delivery of the LFRMS.

6.2 Screening analysis

Each of the LFRMS Strategic Objectives has been analysed for its effect on the SEA objectives with the results of this analysis summarised in *Table 6-1*, using the criteria outlined in *Table 6-2.* A qualitative approach was used to determine the scoring with the justification provided in *Section 6.3*.

Table 6-1 Scoring matrix of LFRMS against SEA objectives

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

Table 6-2 Legend of 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

Each of the LFRMS Strategic Objectives has been analysed for its effect on the SEA objectives with the results of this analysis summarised in *Table 6-1,* using the criteria outlined in *Table 6-2.* A qualitative approach was used to determine the scoring with the justification provided in *Section 6.3*.

6.3.1 LFRMS strategic objective A

To improve knowledge and understanding of flood risk in Redbridge and wider catchments.

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

Outcome	SEA Objective	Justification
Major positive	SEA 3	Increased knowledge and understanding of the flood risk will enable more informed and effective decisions on the protection of infrastructure and location of new developments.
Minor positive	SEA 4	Improving knowledge of flood risk will help to raise the profile and importance of community schemes for flood mitigation and awareness amongst residents for the need for participation.
	SEA 6	Better understanding of flood risk as a whole will ensure better estimations of future flood risk allowing for improved preparation and mitigation for future impacts.
	SEA 7	Better knowledge of flood risk will inform better decisions about measures required for protecting heritage features from current future flood risk.
Neutral	SEA 1	This SEA had very little / no relation to LFRMS strategic objective A.
	SEA 2	This SEA had very little / no relation to LFRMS strategic objective A.
	SEA 5	This SEA had very little / no relation to LFRMS strategic objective A.
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.

6.3.2 LFRMS strategic objective B

To deliver successful and targeted flood alleviation schemes which maximise wider social, economic and environmental benefits.

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

Outcome	SEA Objective	Justification
Major positive	SEA 4	Increased knowledge and understanding of the flood risk will allow the development and selection of more effective flood alleviation schemes which in turn maximises the benefits provided.

Minor positive	SEA 1	The delivery of successful flood alleviation schemes to maximise social and environmental benefits should prioritise the protection of green spaces which provides those benefits.
	SEA 2	Through delivery of flood alleviation schemes to reduce flooding there should be reduced impacts on green spaces and fewer negative consequences for wildlife as a result of flooding.
	SEA 4	Seeing the delivery of flood schemes will improve the understanding and confidence of residents in actions being taken to mitigate floods and encourage engagement with flood management actions.
	SEA 6	Successful and targeted flood alleviation schemes should afford greater protection to infrastructure assets and improve resilience against impacts of future flooding.
	SEA 7	Flood alleviation schemes should afford greater protection to heritage and cultural assets by reducing their risk of damage from flooding.
Neutral	SEA 5	This SEA had very little / no relation to LFRMS strategic objective B.
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.

6.3.3 LFRMS strategic objective C

To develop knowledge and access to funding to improve the resilience of communities and future development.

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

Outcome	SEA Objective	Justification
Major positive	SEA 4	Greater knowledge of, and access to, funding for communities will be beneficial for the implementation of community and small scale flood alleviation schemes and increase engagement in flood risk management across the Redbridge borough.
Minor positive	SEA 3	Improved access to funding for flood risk alleviation would enable impacts on future developments to be mitigated which would reduce future disruption to services and infrastructure.
	SEA 5	Improved knowledge and access to funding to increase community resilience should work towards reduction of inequalities across the borough as funding can be targeted towards places of greater social and economic vulnerabilities.

Neutral	SEA 1	This SEA had very little / no relation to LFRMS strategic objective C.
	SEA 2	This SEA had very little / no relation to LFRMS strategic objective C.
	SEA 6	This SEA had very little / no relation to LFRMS strategic objective C.
	SEA 7	This SEA had very little / no relation to LFRMS strategic objective C.
Minor negative	N/A	LFRMS strategic objective C is unlikely to have a minor negative impact on any of the SEA objectives.
Major negative	N/A	LFRMS strategic objective C is unlikely to have a major negative impact on any of the SEA objectives.
Uncertain	N/A	There were no uncertainties between the SEA objectives and LFRMS strategic objective C.

6.3.4 LFRMS strategic objective D

To ensure development appropriately mitigates flood risk by prioritising the use of SuDS and by aiming to achieve greenfield runoff rates.

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

Outcome	SEA Objective	Justification
Major positive	N/A	Delivery of LFRMS strategic objective D is not likely to have a major positive impact on any of the SEA objectives.
Minor positive	SEA 3	Mitigation of flood risk through use of sustainable drainage systems and aiming for pre-development runoff rates will reduce flood risk to current and future developments, improving resilience which will reduce disruption from future floods.
	SEA 6	Appropriately mitigating flood risk will account for future flooding as a result of future climate extremes which will improve resilience of transport, infrastructure and services.
	SEA 7	Appropriate mitigation of flood risk through use of SuDS and aims to reach greenfield runoff rates will reduce flood risk to local heritage features.
Neutral	SEA 1	This SEA had very little / no relation to LFRMS strategic objective D.
	SEA 2	This SEA had very little / no relation to LFRMS strategic objective D.
	SEA 4	This SEA had very little / no relation to LFRMS strategic objective D.
	SEA 5	This SEA had very little / no relation to LFRMS strategic objective D.

Minor negative	N/A	LFRMS strategic objective D is unlikely to have a minor negative impact on any of the SEA objectives.
Major negative	N/A	LFRMS strategic objective D is unlikely to have a major negative impact on any of the SEA objectives.
Uncertain	N/A	There were no uncertainties between the SEA objectives and LFRMS strategic objective D.

6.3.5 LFRMS strategic objective E

To support successful communication between stakeholders and the effective engagement of communities to enable improvements to flood risk management.

Table 6-7 Justifications for the outcomes of the screening of LFRMS strategic objective E against the SEA objectives

Outcome	SEA Objective	Justification
Major positive	N/A	Delivery of LFRMS strategic objective E is not likely to have a major positive impact on any of the SEA objectives.
Minor positive	SEA 1	More effective communication between stakeholders and communities will have beneficial outcomes for green spaces as knowledge of their importance or arisen issues will be better shared and collaborated on.
	SEA 4	Successful communication between stakeholders and communities will improve engagement of residents as they will feel considered and involved and more aware of opportunities available to them, making important individual action more likely.
	SEA 5	Successful communication between stakeholders and the community will increase awareness of issues and inequalities within the borough making it more possible to resolve them.
Neutral	SEA 2	This SEA had very little / no relation to LFRMS strategic objective E.
	SEA 3	This SEA had very little / no relation to LFRMS strategic objective E.
	SEA 6	This SEA had very little / no relation to LFRMS strategic objective E.
	SEA 7	This SEA had very little / no relation to LFRMS strategic objective E.
Minor negative	N/A	LFRMS strategic objective E is unlikely to have a minor negative impact on any of the SEA objectives.
Major negative	N/A	LFRMS strategic objective E is unlikely to have a major negative impact on any of the SEA objectives.
Uncertain	N/A	There were no uncertainties between the SEA objectives and LFRMS strategic objective E.

6.3.6 LFRMS strategic objective F

To address climate change impacts by improving sustainability and working towards carbon neutral targets.

Table 6-8 Justifications for the outcomes of the screening of LFRMS strategic objective F against the SEA objectives

Outcome	SEA Objective	Justification
Major positive	N/A	Delivery of LFRMS strategic objective F is not likely to have a major positive impact on any of the SEA objectives.
Minor positive	SEA 1	Improvements to the sustainability of developments will mean the mitigation of impacts to the natural environment which is likely to have positive impacts for green spaces and local ecology.
	SEA 2	Improved sustainability and achieving carbon neutral targets will contribute to mitigating impacts of climate change which is important for the security of habitats and species due to vulnerability to changes in natural environment.
	SEA 6	Addressing climate change impacts and making preparation for changes in conditions will improve the resilience of transport, infrastructure, and services.
Neutral	SEA 3	This SEA had very little / no relation to LFRMS strategic objective F.
	SEA 4	This SEA had very little / no relation to LFRMS strategic objective F.
	SEA 5	This SEA had very little / no relation to LFRMS strategic objective F.
	SEA 7	This SEA had very little / no relation to LFRMS strategic objective F.
Minor negative	N/A	LFRMS strategic objective F is unlikely to have a minor negative impact on any of the SEA objectives.
Major negative	N/A	LFRMS strategic objective F is unlikely to have a major negative impact on any of the SEA objectives.
Uncertain	N/A	There were no uncertainties between the SEA objectives and LFRMS strategic objective F.

6.4 Task A5 consultation questions

11. Do you have any comments on the proposed method for the assessment of the SEA objectives against the Local Flood Risk Management Strategy objectives and actions?

12. Do you agree with the screening analysis of each of the Local Flood Risk Management Strategy strategic objectives? If not, please give reasons as to why you would screen a certain objective differently.

7 Conclusions and next steps

7.1 Conclusions

The results of the SEA screening analysis indicate that the delivery of the LFRMS strategic objectives is unlikely to have any negative effects on the environmental issues identified within the Redbridge borough. Where there is relation between the LFRMS objectives and the SEA objectives, LFRMS strategic objectives are expected to result in mostly minor positive impacts, with some major positive impacts.

Improvements to flood risk management in the Redbridge borough will have the benefit of either directly or indirectly improving outcomes for other issues, particularly if community engagement is maximised and funding can be effectively targeted.

This Screening Report can therefore conclude that the LFRMS has fulfilled its obligation to consider the environmental, social and economic impacts of delivery of the Action Plan. It is not recommended that this SEA be progressed to Stage B and a full SEA is therefore not required.

7.2 Consultation of the Strategic Environmental Assessment

This Strategic Environmental Assessment (SEA) Screening Report will undergo a statutory consultation to allow the relevant stakeholders change to review and provide feedback on both the scope and analysis of the SEA. Responses from this consultation will then be reviewed and incorporated into the report before it moves to public consultation. This is an open process and allows anyone from the public to provide their feedback on the SEA Screening Report. Following public consultation, the final version of the SEA Screening Report and the LFRMS will be produced, incorporating this feedback.

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?