



# **Third Local Implementation Plan Draft Strategic Environmental Assessment (SEA) Environmental Report**

London Borough of Bexley

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### Comments

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1.3.3	Consultation Draft
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### Comments

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## List of Acronyms

Acronym	Definition
AAWT	Annual Average Weekday Travel
AMINC	Area of Metropolitan Importance for Nature Conservation
AQFA	Air Quality Focus Area
AQMA	Air Quality Management Areas
AQS	Air Quality Strategy
CCG	Clinical Commissioning Group
CHD	Coronary Heart Disease
CPZ	Controlled Parking Zones
DfT	Department for Transport
EqIA	Equalities Impact Assessment
EU	European Union
GLA	Greater London Authority
Ha	Hectare
HGV	Heavy Goods Vehicle
HLF	Heritage Lottery Fund
IA	Important Areas
IMD	Indices of Multiple Deprivation
KSI	Killed or Seriously Injured
LBB	London Borough of Bexley
LIP	Local Implementation Plan
LIP3	Third Local Implementation Plan
LSOA	Lower Layer Super Output Area
MTS	Mayor's Transport Strategy
NAQS	National Air Quality Strategy
NATA	New Approach to Appraisal
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen oxides
OAPF	Opportunity Area Planning Framework
ODPM	Office of the Deputy Prime Minister
ONS	Office of National Statistics
PM <sub>10</sub>	Particulate Matter 10
PTAL	Public Transport Accessibility Level
RPZ	Residential Parking Zone
CRE	Cory Riverside Energy
SEA	Strategic Environmental Assessment
SINC	Sites of Importance for Nature Conservation
SLINC	Sites of Local Importance for Nature Conservation
SMI	Site of Metropolitan Importance
SNCI	Site of Nature Conservation Importance
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
STP	School Travel Plans
SuDS	Sustainable Drainage Systems

TAG	Transport Analysis Guidance
TFL	Transport for London
ZEC	Zero Emission Capable



## 1. Non-Technical Summary

### 1.1 Introduction

This non-technical summary of the draft SEA Environmental Report outlines the Strategic Environmental Assessment (SEA) for the draft Third Local Implementation Plan (LIP3) of the London Borough of Bexley (LBB). London boroughs are required to produce Local Implementation Plans (LIPs), which set out the boroughs' transport priorities and proposals, to implement the Mayor of London's Transport Strategy (MTS) in accordance with Section 145 of the Greater London Authority Act 1999.

This draft SEA Environmental Report accompanies the Draft LIP3 for LBB to show how the environment has been considered as part of the development of the LIP, what impacts are predicted as a result of the implementation of the LIP, and how they will be mitigated against and monitored. The preparation of the SEA Environmental Report acts as an important check on the LIP helping ensure that the environment has been considered at every stage, and the information collected as part of the SEA process has influenced and informed the draft LIP3.

Waterman has led the preparation of this SEA Environmental Report with input and assistance from the London Borough of Bexley, and statutory consultees.

The report is split into 7 chapters listed below:

- **Chapter 1:** Non-Technical Study
- **Chapter 2:** Introduction
- **Chapter 3:** London Borough of Bexley's Draft LIP3
- **Chapter 4:** Strategic Environmental Assessment
- **Chapter 5:** Baseline and Context
- **Chapter 6:** Appraisal of draft LIP Programme of Investment
- **Chapter 7:** Monitoring

### 1.2 Strategic Environmental Assessment

#### 1.2.1 SEA and the Regulations

The LIP is a document required to be prepared by each London borough to implement the MTS. It comprises a statement of the borough's transport proposals together with a timetable for implementing such proposals and an end date by which all proposals are to be implemented. The latest version of the MTS was published in March 2018.

A SEA of a LIP is required in accordance with the European Union Directive 2001/42/EC on "the assessment of the effect of certain plans and programmes on the environment". The Directive has been transposed into UK law via the Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004 No.1633), known as the SEA Regulations.

#### 1.2.2 SEA Process

SEA guidance sets out the SEA Process as comprising the following key stages:

**Stage A:** Setting context and objectives, establishing the baseline and deciding the scope

**Stage B:** Developing and refining alternative and assessing effects

- Stage C:** Preparing the Environmental Report
- Stage D:** Consulting on the draft plan or programme and the Environmental Report
- Stage E:** Monitoring the significant effects of implementing the plan or programme on the environment.

### 1.2.3 SEA Scoping

A SEA Scoping Report was prepared in August 2018 which set out the approach to the SEA and reported on the outcome of Stage A of the SEA process as described above. Consultation was undertaken with Natural England, Historic England and the Environment Agency on the SEA Scoping Report. Broadly positive responses were received from all three statutory consultees. The comments of Historic England and the Environment Agency are set out below, while Natural England (response received 25/09/18) was happy with the approach and therefore did not comment on this consultation.

- The Historic England response (received 24/09/18) requested the SEA:
  - Objectives address the “Conservation [sic] and enhance the Borough’s natural, built and historic environment”;
  - Inclusion of further relevant plans and programmes which should be reviewed;
  - Expansion of the baseline to include further information on the condition of heritage assets; and
  - Ensuring decision making criteria inform the SEA framework and incorporate environmental issues.
- The Environment Agency response (received 4/10/18) requested the SEA:
  - Lists further relevant plans and programmes;
  - References the Thames Estuary 2100 Plan;
  - Clarifies flood risk, existing river defences and flood storage relating to the soil and water hydrogeology section; and
  - Considers the requirements of the Water Framework Directive and opportunities to incorporate improvements to help deliver the objectives of the Water Framework Directive.

The above comments have been considered in the preparation of the draft SEA Environmental Report.

## 1.3 Baseline Characteristics

Baseline information is collected for two main reasons:

- Providing a basis for predicting and monitoring environmental or other sustainability effects; and
- Identifying problems and alternative ways of dealing with them.

A summary of the LBB baseline and key issues is presented below.

### 1.3.1 Population

The majority of LBB is residential, alongside large areas of open space and industrial activity. Two areas within the Borough are categorised as Opportunity and Intensification areas<sup>33</sup>: The Bexley Riverside, and Thamesmead and Abbey Wood areas. The Borough has a wide frontage with the River Thames and is one of the greenest boroughs within Greater London.

Around half of LBB’s residents are employed in trade, administrative services, education and construction professions<sup>15</sup>.

### Key issues

- LBB ranks eighth in London for multiple deprivation (with first being the least deprived Borough). Multiple deprivation index is calculated by taking into account factors such as income, employment, health, crime, barriers to housing and services, living access and education, skills and training; and
- The north of LBB (Thamesmead, North End and Erith) has the highest deprivation and unemployment in LBB, additionally there is also a patch to the south of LBB (Foots Cray and North Cray) which displays similar characteristics.

### 1.3.2 Human Health

Health in LBB is generally good; however, there are areas of poorer health in the north of the Borough. Childhood obesity is over average for England and an ageing population in the Borough means that cardiovascular disease and strokes are becoming a growing cause of death in adults. The relatively low density of development, poor crossings and hills in areas such as Belvedere and Erith make walking and cycling less attractive and there is a high proportion of car use. A number of schools and communities are sited along busy roads including the A2, A20 and A201.

Road transport can also be a significant source of vibration and noise. The A2, A223, A2000, A207 and A206 all experience relatively high noise levels.

Rail transport and infrastructure can also be a significant source of vibration and noise to those areas adjacent to the three railway lines in the Borough.

### Key issues

- The majority of residents use cars as their primary source of transport. LBB residents walk and cycle less than average when compared to the rest of the Greater London;
- The Borough has low access to public transport evidenced by LBB's Public Transport Accessibility Level (PTAL) ratings for the Borough's district centres. PTAL ratings are rated from 0 (worst) to 6b (best). There are some pockets of high accessibility near rail stations;
- Areas which suffer from higher levels of deprivation are disproportionately affected by limited accessibility; and
- There is a continued need to improve road safety and reduce road traffic noise whilst encouraging higher levels of non-motorised transport.

### 1.3.3 Biodiversity and Ecology

LBB has a wide range of nature conservation sites, many of which are associated with the extent of amenity green space within the Borough. There are four Local Nature Reserves, eight areas of Metropolitan Importance for Nature Conservation, and 40 Borough Grade I/II Sites of Nature Conservation Importance.

The River Cray is designated for nature conservation and is part of the Mayor of London's Blue-Ribbon Network. The River Cray, Crossness Marshes and Barnes Cray pastures all are habitats for a number of protected species.

### Key issues

- New rail links may have negative impacts on nature conservation and biodiversity, especially if the proposals are in or adjacent to areas of public open space or nature conservation;

- There may be negative impacts to local biodiversity and ecology as a result of any proposed roads or transport infrastructure to relieve traffic on main roads; and
- There may be an impact from vehicle emissions on designated nature conservation sites in LBB.

### 1.3.4 Soil and Water

There are two main rivers in the Borough (excluding the River Thames): The River Cray, and River Darrent, which both flow into the River Thames to the north of the Borough.

The north of LBB and land adjacent to the River Cray are located within an area at high risk of flooding (Flood Zone 3). The River Cray is classed as poor to moderate for ecological quality and good for chemical quality<sup>38</sup>.

In terms of ground conditions, both the superficial deposits and the bedrock within the Borough are identified as aquifers, while the Borough also lies within a zone protected for groundwater supplies.

Contamination may exist in the soils and / or groundwater beneath parts of the Borough. Potential leakages, spillages of fuel oils, particulate emissions from vehicle engines and tyre dust, historic land uses, and proximity to landfill could all have impacted land quality.

There are two geological Sites of Special Scientific Interest (SSSIs) one in Lesnes Abbey Woods in Belvedere and Wansunt Pit, in Crayford.

#### Key issues

- An increase in hard surfaces (paved spaces) could reduce surface water runoff to groundwater and increase runoff to watercourses, thus increasing the risk of flooding. Water could also become contaminated with pollutants from the increased hard surfaces therefore reducing the quality of the water entering the water system; and
- Potential land contamination may lead to a requirement to clean up underlying soils and groundwater before redevelopment (commonly known as 'remediation').

### 1.3.5 Air Quality and Climatic Factors

The entire Borough was declared an Air Quality Monitoring Area (AQMA) in 2007 for high levels of annual and daily particulate matter (PM<sub>10</sub>) and annual nitrogen dioxide (NO<sub>2</sub>). Within LBB, the Greater London Authority (GLA) has declared the A206 between Erith Queens Road Roundabout to Northend Roundabout an Air Quality Focus Area (AQFA).

The latest air quality monitoring results published by LBB<sup>36</sup> show levels of PM<sub>10</sub> and NO<sub>2</sub> met the respective National Air Quality Strategy (NAQS) objectives at all four monitoring locations.

CO<sub>2</sub> levels within the borough total 700 CO<sub>2</sub> (in kilotonnes), this is below the London average of a total 935 kilotonnes of CO<sub>2</sub>) for the rest of London.

#### Key issues

- In 2007 the entire LBB was designated as an AQMA;
- The GLA has declared an AQFA for the A206 Between Erith Queens Road Roundabout to Northend Roundabout; and
- Monitoring of NO<sub>2</sub> has shown high pollutant concentrations around major roads notably the A2 and A206.

### 1.3.6 Material Assets

LBB's waste moves by road within the Borough to the Cory Riverside Energy (CRE) Waste Facility. CRE Waste Facility in Belvedere within the Borough has been in operation since 2012, collecting waste from across Greater London via the Thames<sup>46</sup>.

#### Key issues

- LBB imports waste from London Boroughs into LBB via the Thames; and
- HGVs associated with waste transfer are likely to contribute to ambient vehicle noise and reduced air quality.

### 1.3.7 Cultural Heritage

LBB is rich in cultural heritage and contains many above ground heritage assets. There are seven Grade I listed, 12 Grade II\* listed, and 143 Grade II listed buildings and around 400 locally listed buildings and structures of local architectural interest. Furthermore, 23 conservation areas are designated within LBB.

The following assets are Heritage at Risk (HAR) a classification which identifies sites that are most at risk of being lost because of neglect, decay or inappropriate development: Parish Church of St Paulinus, Crossness Pumping Station, and Chapel House.

There are four Grade II listed historic parks and gardens: Lamborbey Park, Danson Park, Foots Cray Place and Hall Place. There are also 17 areas of High Archaeological potential within LBB.

#### Key issues

- There is the potential for negative impacts to cultural heritage assets as a result of traffic calming measures, bus priority and car parking facilities. This includes potential effects on the setting of heritage assets and on the significance of individual conservation areas.

### 1.3.8 Landscape

LBB is generally flat along the river front, the land rises inland at Belvedere and Erith. LBB is characterised by numerous designated, protected and enhanced landscape areas.

The eastern part of LBB forms part of the Metropolitan Green Belt. The Green Belt maintains a break between the outer edge of London's built up areas and the settlements of Joyce Green, Dartford, Joydens Wood and Swanley in Kent.

Conservation areas in LBB follow the historic pattern of the old villages that have over time been surrounded by low density development. As a result of this development, larger open spaces have been broken up over time in residential areas of LBB<sup>1</sup>.

#### Key issues

- Several areas in LBB are undergoing regeneration which may result in visual impacts to the townscape and landscape;
- Current patterns of growth in LBB have provided small isolated open spaces in difficult to access places; and
- There are areas of open space access deficiency predominantly located in the centre and south west of LBB - these areas are mostly residential or employment.

## 1.4 Assessment of the LIP3

A series of SEA Objectives have been developed - informed by a review of relevant policy, the baseline environmental data collected as summarised above, and the specific environmental issues experienced by LBB - to provide a means by which the environmental performance of the draft LIP3 can be assessed. The resultant objectives are presented in **Table 1**.

The draft SEA Objectives (**Table 1**) were agreed with LBB Council Officers during a workshop in July 2018 and confirmed following consultation on the SEA Scoping Report. Each SEA Objective has been clearly referenced to the individual 'topics' within the SEA Directive.

A series of assessment criteria associated with each SEA Objective were developed in parallel, to assist with the assessment of the draft LIP3.

Table 1 SEA Objectives

SEA Objective	SEA Topic
1. Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	Air Quality Human Health Population
2. Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	Human Health
3. Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	Human Health
4. Conserve and enhance the borough's natural, built and historic environment.	Biodiversity Fauna, Flora Soil Material Assets Cultural Heritage Landscape
5. Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS (Sustainable Drainage Systems).	Water
6. Promote sustainable transport of waste.	Material Assets
7. Contribute to healthy streets by reducing the need / desire to travel by car and enable residents to choose active modes of transport	Human Health
8. Increase access to services, social and economic opportunities.	Population
9. Promote social inclusion and equality.	Population
10. Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.	Population

The assessment of the LIP3 was undertaken by a team of three people comprising two SEA assessors and one transport planner who undertook a series of workshops during which the proposed projects and

programmes within the draft LIP3 were consistently assessed against the SEA objectives and associated assessment criteria. As part of the assessment, the magnitude, geographical extent, timescales, permanence and levels of certainty for each predicted effect were also considered.

## 1.5 Summary of Assessment

The assessment identified that when the package of measures contained in the draft LIP3 are put into place they will result in largely positive effects in respect of the SEA Objectives, in particular in relation to the following which summarises how the draft LIP3's three-year indicative Programme of Investment for period 2019/20 to 2021/22 meets the SEA Objectives:

- *Objective 1: Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve – especially in areas of poorest air quality:*

The proposed suite of Programmes and Projects will collectively work to increase a change in forms of transportation used in Bexley, with more use of public transport, walking and cycling.

Furthermore, the air quality programme includes a package of measures specifically designed to reduce emissions from road traffic and air pollution. Most of the measures are either minor or moderate positive when considered against this SEA Objective.

- *Objective 2: Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations:*

The package of measures designed to introduce transportation change coupled with those aimed at changing people's behaviour when making transport choices will collectively serve to reduce traffic movements from cars, which should in turn reduce transportation noise. The proposed Projects are generally considered to be minor positive in respect of this SEA Objective, with a limited number of instances where moderate positive impacts are recorded.

- *Objective 3: Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices:*

By tackling car use via those measures designed to encourage greater use of public transport, walking and cycling, there should also be improvements in traffic volumes and congestion. The majority of measures scored as minor positive against this SEA Objective, with a small number scoring as moderate positive including those improvements specifically aimed at improving the quality of the built environment and reducing traffic levels within it.

- *Objective 7: Contribute to healthy streets by reducing the need / desire to travel by car and enable residents to choose active modes of transport:*

The proposed suite of LIP3 Programmes and Projects score positively against this SEA Objective, ranging from minor to substantial positive. Unsurprisingly the Healthy Streets Programme itself is considered likely to result in substantial positive outcomes in the majority of cases, where measures are proposed which will encourage people to use forms of transport involving physical activity - i.e. walking and cycling. The Vision Zero, Smarter Measures and Accessibility Programmes also score well against this SEA Objective as they encourage a reduction in car use and promote safer environments for those walking, cycling and using public transport. The majority of other Projects are also recognised as contributing positively to the achievement of this SEA Objective.

- *Objective 8: Increase access to services, social and economic opportunities:*

This SEA Objective scored positively in relation to a large number of Projects, with the remainder having no connection. Scores range from minor to moderate positive, associated with improved



transport choices, journey times and reliability, all resulting in improved access to services and jobs and other community facilities.

- *Objective 9: Promote social inclusion and equality:*

A large number of the proposed Projects also score positively in relation to this SEA Objective for similar reasons to those set out for SEA Objective 8 above - namely improved transport choice, accessibility and connectivity between types of transport, with measures designed for implementation across the Borough including in deprived areas. While not all the Projects exhibited a connection with this SEA Objective, those that did were assessed as resulting in a minor or moderate positive effect.

- *Objective 10: Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough:*

Improved transport choices, safer environments for all transport users in particular pedestrians and cyclists, reduced journey times and congestion, better connectivity and increased accessibility are also assessed positively in relation to SEA Objective 10, with these all being factors likely to support economic growth, competitiveness and regeneration and increase the attractiveness of the Borough as a place to invest. A large proportion of the proposed Projects again scored positively against this SEA Objective, with these scores ranging from minor to moderate positive.

For SEA Objectives 4 and 5, namely *Conserve and enhance the Borough's natural, built and historic environment* and *Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS*, a combination of potential positive and negative effects was identified. Positive effects are generally predicted to arise where specific aspects of a proposed Project were assessed as likely to deliver some environmental improvement or enhancement, for example public realm and greenway improvements resulting in landscaping, tree planting and the incorporation of SuDS. However, in other cases, there could be adverse environmental effects associated with the implementation of particular Projects, depending on their specific design and location, and in the absence of any measures specifically designed to counter the adverse effect (typically referred to as 'mitigation measures'). Such effects could include visual intrusion especially upon sensitive features, disturbance to habitats / loss of biodiversity, and increase in surface water run-off / flooding. Further consideration is given to those specific mitigation measures that could help lessen such effects at detailed design stage in **Section 1.6** below.

## **1.6 Mitigation**

As indicated in **Section 1.5** above, the assessment of proposed individual Projects demonstrates that the majority of the LIP3 is likely to have positive effects in relation to the SEA Objectives. Where the SEA has identified the potential for negative effects to occur, particularly in relation to Objective 4 and Objective 5, it may be necessary to consider specific mitigation measures when the Project is taken forward.

The below mitigation measures should be employed when implementing the specific Projects proposed within the draft LIP3:

- Ensure Projects where flood risk is increased include appropriate measures to minimise the risk of flooding, including SuDS where possible / practical;
- Minimise the loss of habitats as a result of Projects and where this is unavoidable, ensure off-setting measures are in place;
- Create and enhance habitats wherever possible and appropriate;



- Ensure the design of any physical works do not directly or indirectly affect heritage assets, including their settings;
- Seek to limit 'street clutter' which could arise from the implementation of a number of Projects (e.g. lighting columns, signage, electricity charging points) and which could cumulatively result in an adverse effect upon character of the townscape, including heritage features in some circumstances, considering co-location of required equipment where possible; and
- Ensure the implementation of new and replacement street lighting which minimises unnecessary light spill and which is designed to be sensitive to bats.

In relation to the long-term interventions up to 2041, in particular the four specific Projects proposed (namely the DLR and Elizabeth Line extensions, the public transit corridor and the road-based river crossings) due to their scale and nature will all be subject to more detailed impact assessment at the project stage. Mitigation measures are likely to comprise both inherent mitigation (designed in to the scheme) together with additional measures to be secured alongside their implementation and will be identified as the design of each project progresses.

## 1.7 Monitoring

A series of Indicators and targets for monitoring the effects of the LIP3 were developed with LBB.

The SEA Directive requires the monitoring of significant effects of the LIP3's plans and programmes, in order to decide whether the effects of the plan or programme are as anticipated. The success or otherwise of the plans and programmes will in turn inform future revisions of the plan.

A series of measures have been devised, designed to enable the performance of LIP3 to be monitored throughout its implementation period. These monitoring measures have been clearly linked back to the respective SEA objectives to ensure continuity between the assessment and implementation stages.

Each monitoring measure comprises an indicator of relevance to the SEA objective in question, together with a target where it is possible to identify one that is both meaningful and measurable. Where a specific target is not proposed, an indication is provided of the 'direction of travel' which is sought (i.e. either increase / decrease).

For consistency and compatibility, the indicators and targets also include those that are proposed for monitoring the performance of LIP3 within the LIP document itself. Other monitoring measures include: national indicators and targets of relevance to the LIP (e.g. for air quality); monitoring already undertaken by TfL and LBB in relation to the LIP process; other environmental monitoring measures extracted and adapted from LBB's Annual Monitoring Report; and other relevant measures devised where data is available and able to be manipulated to determine the performance of the LIP against the SEA Objectives.

The relevant monitoring indicators and targets are detailed in **Table 33**. These have been discussed and agreed in advance with relevant officers at LBB, who will be responsible for undertaking the monitoring.

LBB will report progress against the SEA targets annually. As indicated above, many of the targets are the same as those included in the draft LIP3, which will also be reported annually.

LBB will monitor the environmental outcomes of the draft LIP3 for any unforeseen environmental effects and, if necessary, LBB will take remedial action if any negative outcomes are identified.

## 2. Introduction

### 2.1 Purpose of Report

This report comprises a Strategic Environmental Assessment (SEA) Environmental Report which has been undertaken in relation to the London Borough of Bexley's (LBB's) emerging draft Local Implementation Plan (LIP); a statutory document which has been prepared by LBB to implement the London Mayor's Transport Strategy within its administrative area. This SEA Environmental Report sets out the context for the SEA, outlines the methodology that has been employed to guide the assessment process and presents the likely significant effects of the LIP.

The purpose of each of the Chapters of this SEA Environmental Report is set out in **Table 2** below.

Table 2 Structure and Contents of the SEA Report

SEA Environmental Report Chapter	Purpose
<b>Chapter 1:</b> Non-Technical Summary	Provides a non-technical summary of the SEA Environmental Report <b>Chapters 2 - 7.</b>
<b>Chapter 2:</b> Introduction	Introduces the Draft Third LIP and what it aims to achieve and sets out an overview of the major issues which may affect the Borough's future.
<b>Chapter 3:</b> London Borough of Bexley's Draft Local Implementation Plan 3	Presents the requirement for, and purpose of, the draft LIP and its relationship to the Mayor of London's Transport Strategy (MTS).
<b>Chapter 4:</b> Strategic Environmental Assessment	Outlines the legal requirements for the SEA and its component parts, including links with the SEA Directive.
<b>Chapter 5:</b> Baseline and Context	Summarises the baseline environment.
<b>Chapter 6:</b> Appraisal of draft LIP Programme of Investment	Describes the SEA methodology for assessing the effects of the draft LIP and presents a summary of the assessment and proposed mitigation measures.
<b>Chapter 7:</b> Monitoring	Provides an approach to monitoring the effects of implementing the draft LIP.

## 3. London Borough of Bexley's Draft Local Implementation Plan

### 3.1 Introduction

#### 3.1.1 Statutory Requirements

The LIP is a statutory document prepared by each London Borough to implement the MTS within its administrative area. It comprises a statement by a Borough of its transport proposals, together with a timetable for implementing such proposals and an end date by which all proposals are to be implemented.

Statutory provisions for the preparation of the draft LIP are set out in the Greater London Authority (GLA) Act 1999<sup>2</sup> (s.145) which states:

*"... as soon as reasonably practicable after the Mayor has published the transport strategy .... each London Borough Council shall prepare a plan (a 'Local Implementation Plan') containing its proposals for the implementation of a transport strategy in its area ...."*

The latest version of the MTS<sup>3</sup> was published in March 2018.

#### 3.1.2 LBB's draft LIP Preparation and Process

LBB's first LIP was approved in March 2006 for the period 2005 to 2010. Its second LIP was approved in June 2011 for the period 2011 / 2012 to 2013 / 2014. The draft third LIP (hereafter referred to as 'draft LIP3') is being submitted for consultation in October 2018 (accompanied by this SEA Environmental Report) following the publication of the new MTS<sup>3</sup> in March 2018.

LBB's draft LIP3 has been prepared in accordance with the Mayor of London's 'Guidance for Borough Officers on developing the Third Local Implementation Plan'<sup>8</sup> issued by Transport for London (TfL) in March 2018. It covers the period of the revised MTS (namely the next 20 years) and includes a three-year programme of investment starting in 2019 / 2020 with delivery proposals for the period 2019 / 2020 to 2021 / 2022. The Mayor of London's guidance makes specific reference to Policy 25 of the Mayor's Transport Strategy which states that: *"... The Boroughs shall prepare and implement Local Implementation Plans (LIPs) containing proposals for the implementation of the Mayor's Transport Strategy in their area. Each LIP should also contain a delivery plan and a monitoring plan..."*

#### 3.1.3 Content of the Draft LIP3

To achieve the above, the draft LIP3 (which this SEA Environmental Report accompanies) contains the following information:

- Local socio-economic, demographic and transport context;
- Borough transport objectives;
- A delivery plan of interventions; and
- A performance and monitoring plan.

#### 3.1.4 Timescales

Timescales for submitting the draft LIP3 are defined in TfL's Borough Bulletin Note 3<sup>4</sup> as follows:

- Mayor published LIP3 Guidance - **23 March 2018**
- Boroughs submit consultation draft LIP3 to TfL / others - **2 November 2018**

- TfL responds to consultation - **7 December 2018**
- Boroughs submit final LIP3 to TfL - **16 February 2019**
- Mayoral review of final LIPs - **March 2019**

LBB is submitting its draft LIP3 to TfL in accordance with the above timetable.

This SEA Environmental Report accompanies the draft LIP3, the scope of which is outlined in the SEA Scoping Report<sup>5</sup> (provided to statutory consultees for comment on 30 August 2018).

### 3.2 The Mayor's Transport Plan

The overall MTS vision is threefold:

- Healthy streets and healthy people, including traffic reduction strategies;
- A good public transport experience; and
- New homes and jobs.

The MTS has an overarching aim for 80% of all trips across London to be by walking, cycling or using public transport by 2041, compared with 63% today. Although 80% mode share by sustainable transport is the headline figure, TfL acknowledges that some Boroughs would not be able to achieve this mode share by sustainable transport by 2041, but it is expecting all Boroughs to work towards this aim.

TfL has issued trajectories for a range of metrics to be used to assess progress against the above overarching aim. The MTS Outcomes are based on policies 2 – 21b of the MTS; the full suite of MTS Outcome aims, and a summary of the associated measures are set out in **Table 3** below.

Table 3 MTS Outcome Aims and Measures

MTS Outcome Aim	Measure
<b><i>Healthy streets and healthy people</i></b>	
1a: London's streets will be healthy, and more Londoners will travel actively.	Londoners to do at least 20 minutes of active travel each day by 2041.
1b: London's streets will be healthy, and more Londoners will travel actively.	70% of Londoners will live within 400m of the London-wide strategic cycle network by 2041.
2a: Vision Zero – deaths and serious injuries from all road collisions to be eliminated from our streets.	65% reduction in KSIs by 2022.
2b. Vision Zero – deaths and serious injuries from all road collisions to be eliminated from our streets.	70% reduction in KSIs by 2030. By 2030, no one will be killed in or by London buses. Zero KSI's by 2041.
2c. Everyone will be able to feel safe and secure when travelling on the street.	N/A
3a: London's streets will be used more efficiently and have less traffic on them.	10-15% reduction in vehicle-kilometres by 2041.
<sup>6</sup> 3c: London's streets will be clean and green – traffic will fall, and congestion kept in check, allowing more efficient operations.	Household car ownership. 250,000 fewer cars owned in London by 2041.
4a: London's streets will be clean and green – a 72% reduction in CO2 emissions from road transport by 2041.	Reduction in CO2 emissions [in tonnes] from road transport.

MTS Outcome Aim	Measure
4b: London's streets will be clean and green – a 94% reduction in road transport NOx emissions by 2041.	Reduction in NOx emissions [in tonnes] from road transport.
4c: London's streets will be clean and green – a 45% reduction in road transport PM10 emissions by 2041.	Reduction in PM10 emissions [in tonnes] from road transport.
4d: London's streets will be clean and green – a 53% reduction in road transport PM2.5 emissions by 2041.	Reduction in PM2.5 emissions [in tonnes] from road transport.
<b>A good public transport experience</b>	
5: The public transport network will meet the needs of a growing London – between 14 and 15 million trips will be made by public transport every day by 2041.	Increased number of trips per day by public transport.
6. Public transport will be safe, affordable and accessible to all – everyone will be able to travel spontaneously and independently.	Reduce on average the difference between total network and step-free network journey times by 50% by 2041.
7. Journeys by public transport will be pleasant, fast and reliable.	Bus speeds [in mph] will improve by approx. 5-15% London -wide by 2041, with improvement expected in inner London. Reduction in crowding on rail and Underground services by around 10-20 per cent.
<b>New homes and jobs</b>	
8. Active, efficient and sustainable travel will be the best option in new developments	Reduction in car dependency. Improved rail and bus services will improve connectivity.
9. Transport investment will unlock the delivery of new homes and jobs	Rail capacity to central London will increase by more than 80 per cent, with new public transport services improving connectivity and reducing crowding, enabling the delivery of new homes across London.

In response to the MTS, the draft LIP sets out overarching Borough transport objectives with an associated delivery and monitoring strategy, with reference to the Mayor's priority areas.

### 3.3 Draft Local Implementation Plan Objectives

The draft LIP3 presents LBB's Transport Objectives to set out how the Council will work towards achieving the MTS goals. LBB's Transport Objectives are presented in **Table 4** below.

Table 4 Draft LIP3 London Borough of Bexley Transport Objectives

Draft LIP3 London Borough of Bexley Transport Objectives	
1.	To encourage as much movement as possible to use sustainable modes of transport (public transport, walking and cycling)
2.	To provide good networks for pedestrians and cyclists particularly in growth areas and linking them to the communities beyond
3.	To support more reliable and faster bus services through bus priority measures with segregation from other traffic as much as possible
4.	To create healthy streets and pleasant routes

### Draft LIP3 London Borough of Bexley Transport Objectives

5. To improve the accessibility of the transport network to assist access to jobs, local amenities and other destinations
6. To promote safe travel on the road network and support delivery of measures to reduce road collisions and work towards Vision Zero
7. To support road danger reduction through physical road safety measures, travel planning and education, training and publicity programmes
8. To seek improvements to air quality by supporting the use of zero emission capable (ZEC) vehicles
9. To protect significant green corridors
10. To encourage sustainable drainage systems and greening measures through the planning process
11. Encourage the use of the River Thames as a transport corridor especially for freight, including safeguarding wharves used for this purpose
12. Provision of excellent public transport links with rail stations, existing communities and other growth nodes
13. Support delivery of safe and secure public transport network
14. To work with TfL and the Mayor to deliver a Government-led extension of the Elizabeth line to Ebbsfleet
15. To secure the key transport infrastructure investment of an extension of the DLR from Gallions Reach through Thamesmead to Belvedere; the completion of a public transit corridor from North Greenwich to Slade Green and the completion of road-based river crossings connecting Belvedere with Rainham and Thamesmead with Gallions Reach

### 3.4 Draft LIP3 Delivery Plan

The draft LIP3 sets out a three-year programme of investment starting in 2019/20 and includes delivery proposals for the period 2019/20 - 2021/22 and the targets and outcomes LBB is seeking to achieve; with the greatest detail being provided for the financial year 2019/20. The delivery plan also includes long term interventions to 2041.

The full draft LIP3 delivery plan can be found within the draft LIP3, which this SEA Environmental Report accompanies. A summary of the proposed programmes and projects is presented in **Section 6.4**.

## 4. Strategic Environmental Assessment

### 4.1 SEA Requirements

The requirement for Strategic Environmental Assessment (SEA) emanates from the SEA Directive (European Directive 2001/42/EC)<sup>12</sup> and the Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/1633 as amended)<sup>7</sup>. The Mayor of London’s ‘Guidance for Borough Officers on Developing the Third Local Implementation Plan<sup>8</sup>’ document dated March 2018 states that “... *there is a requirement to undertake a Strategic Environmental Assessment and it is recommended that an Equalities Impact Assessment (EqIA) is also done (which addresses the Borough’s Public Sector Equality Duty<sup>9</sup> ....*” (‘Requirement R5’)). Boroughs are therefore required to undertake both SEA and EqIA of their LIPs in order to demonstrate that they have taken into consideration and where necessary assessed the environmental effects of the LIP alongside the effects on service users, setting out mitigation measures where necessary.

The EqIA is a separate assessment prepared by LBB which is also appended to the draft LIP3.

### 4.2 Key Relevant Guidance

The primary SEA Guidance document is “*A Practical Guide to the Strategic Environmental Assessment Directive - Practical guidance on applying European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment*”<sup>11</sup> published by the then Office of the Deputy Prime Minister (ODPM) in 2005.

The then Department for Transport (DfT) published Transport Analysis Guidance (TAG)<sup>10</sup> “*Strategic Environmental Assessment Guidance for Transport Plans and Programmes TAG Unit 2.11*” in April 2004. TAG Unit 2.11 sets out the “New Approach to Appraisal” (NATA) which integrates the SEA Directive’s requirements with existing transport appraisal processes. Table 3.1 in TAG Unit 2.11 (replicated here as **Table 5**) sets out how NATA correlates with the SEA Directive.

Table 5 New Approach to Appraisal (NATA) Objectives<sup>10</sup>

NATA Objective	NATA Sub-objective	SEA Topic (SEA Directive, Annex If)
Environment	Noise	Human health, population <sup>1</sup> , inter-relationships
	Local air quality <sup>2</sup>	Air, human health, population
	Greenhouse gases	Climatic factors
	Landscape	Landscape
	Townscape	
	Heritage	Cultural heritage including architectural and archaeological heritage
	Biodiversity <sup>3</sup>	Biodiversity, fauna, flora, soil <sup>4</sup>
	Water environment	Water
	Physical fitness	Human health and population
Safety	Accidents	Human health and population
	Security	
Accessibility	Community Severance	Population

NATA Objective	NATA Sub-objective	SEA Topic (SEA Directive, Annex If)
	Access to the transport system	
Economy	Public Accounts	Material Assets <sup>5</sup>
	Business Users and Providers	
	Consumer Users	

**Notes:**

- <sup>1</sup> Population is interpreted broadly, referring to effects on people and quality of life. Many NATA indicators incorporate population.
- <sup>2</sup> The NATA local air quality indicator does not cover regional air quality, though guidance is given on its assessment. Where regional air quality is likely to be an issue, a local objective may be formulated.
- <sup>3</sup> Biodiversity also covers geological interests.
- <sup>4</sup> Soil is not explicitly covered by NATA sub-objectives, but is an underlying factor affecting landscape, heritage, biodiversity and the water environment. Where effects on soil are likely to be important, a local objective should be formulated.
- <sup>5</sup> Material assets are not explicitly covered by NATA sub-objectives but are reflected in the money costs incurred when they are consumed. Where effects on material assets such as infrastructure, property and sterilisation of mineral or other resources are expected to be of particular importance, a local objective should be formulated.

This SEA Environmental Report reports on the SEA assessment which has been undertaken in accordance with the above guidance and as set out below.

### 4.3 SEA Process

The SEA process is divided into five key stages. This is set out in the *Practical Guide to the Strategic Environmental Assessment Directive*<sup>11</sup> in **Table 6** and



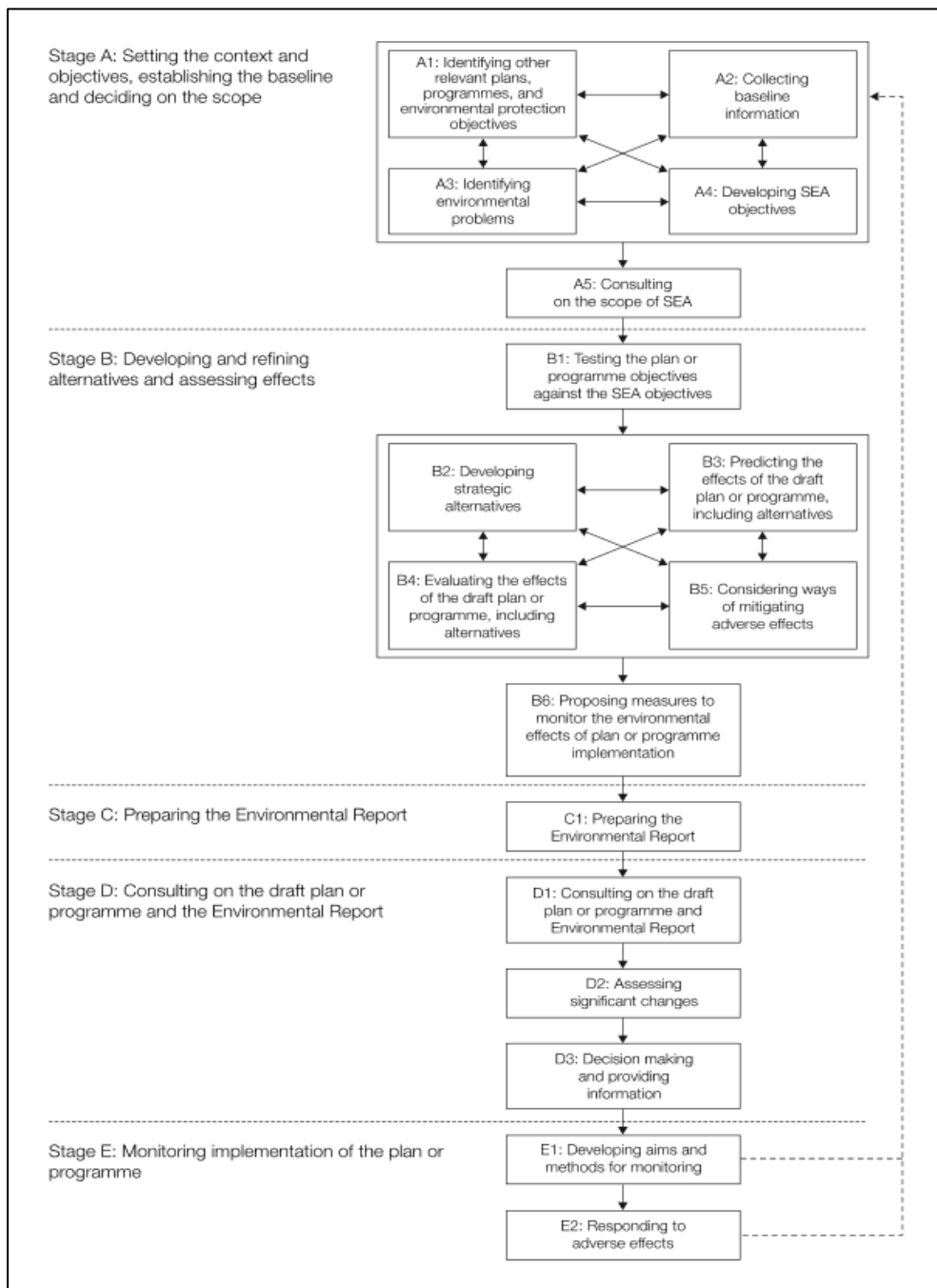
**Figure 1** which are replicated below.

Table 6 Stages in the SEA Process<sup>11</sup>

SEA Stages and Tasks	Purpose
<b>Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope</b>	
Identifying other relevant plans, programmes and environmental protection objectives.	To establish how the plan or programme is affected by outside factors, to suggest ideas for how any constraints can be addressed, and to help to identify SEA objectives.
Collecting baseline information	To provide an evidence base for environmental problems, prediction of effects, and monitoring; to help in the development of SEA objectives.
Identifying environmental problems	To help focus the SEA and streamline the subsequent stages, including baseline information analysis, setting of the SEA objectives, prediction of effects and monitoring.
Developing SEA objectives	To provide a means by which the environmental performance of the plan or programme and alternatives can be assessed.
Consulting on the scope of SEA	To ensure that the SEA covers the likely significant environmental effects of the plan or programme.
<b>Stage B: Developing and refining alternatives and assessing effects.</b>	
Testing the plan or programme objectives against the SEA objectives	To identify potential synergies or inconsistencies between the objective of the plan or programme and the SEA objectives and help in developing alternatives.
Developing strategic alternatives	To develop and refine strategic alternatives.
Predicting the effects of the plan or programme, including alternatives	To evaluate the predicted effects of the plan or programme and alternatives.
Evaluating the effects of the plan or programme, including alternatives	To evaluate that adverse effects are identified, and potential mitigation measures are considered.
Proposing measures to monitor the environmental effects of plan or programme implementation	To detail the means by which the environmental performance of the plan or programme can be assessed.
<b>Stage C: Preparing the Environmental Report</b>	
Preparing the Environmental Report	To present the predicted environmental effects of the plan or programme including alternatives, in a form suitable for public consultation and use by decision-makers.
<b>Stage D: Consulting on the draft plan or programme and the Environmental Report</b>	
Consulting the public and Consultation Bodies on the draft plan or programme and the Environmental Report.	To give the public and the Consultation Bodies an opportunity to express their opinions on the findings of the Environmental Report and to use it as a reference point in commenting on the plan or programme. To gather more information through the opinions and concerns of the public.
Assessing significant changes	To ensure that the environmental implications of any significant changes to the draft plan or programme at this stage are assessed and taken into account.
Making decisions and providing information	To provide information on how the Environmental Report and consultees' opinions were taken into account in deciding the final form

SEA Stages and Tasks	Purpose
of the plan or programme to be adopted.	
<b>Stage E: Monitoring the significant effects of implementing the plan or programme on the environment.</b>	
Developing aims and methods for monitoring	To track the environmental effects of the plan or programme to show whether they are as predicted, to help identify adverse effects.
Responding to adverse effects	To prepare for appropriate responses where adverse effects are identified.

Figure 1 Relationship between the SEA Tasks<sup>11</sup>



### 4.3.1 SEA Scoping

The tasks completed under Stage A: ‘*Setting the context and objectives, establishing the baseline and deciding on the scope*’ - the outcomes of which are detailed within the SEA Scoping Report (sent to the Consultation Bodies on 30 August 2018) are set out below:

#### Task A1: Identifying Other Relevant Plans, Programmes and Environmental Protection Objectives

This entailed the identification of other plans, programmes and sustainability objectives such as those set out in relevant policies from national to local level. The purpose of this desk-based exercise was to help identify objectives for the SEA.

#### Task A2: Collecting Baseline Information

This task provided an evidence base for identifying environmental issues, predicting effects, and monitoring; and also assisted in the subsequent development of SEA objectives. This task was desk-based, largely focusing on publicly accessible datasets together with data held by LBB. Consideration was given to the baseline data gathered during the scoping process for the second round LIP ('LIP2') as presented in the LIP2 Scoping Report, with relevant data updated where necessary.

#### Task A3: Identifying Environmental Problems

The purpose of this task was to help focus the SEA and streamline the subsequent assessment stages, including baseline information analysis, setting of the SEA objectives, prediction of effects and monitoring. As well as examining the baseline information identified during task A2, information was sourced via direct discussions with LBB.

#### Task A4: Developing SEA Objectives

Developing objectives for the SEA provides a means by which the environmental performance of the LIP (and alternatives) can be assessed. This task included a review of the objectives presented for the SEA of LIP2 to determine whether they are still valid in the context of LIP3, together with any necessary refinements and updates to reflect the outcomes of the above tasks A1 to A3. The objectives were tightly scoped to focus on the LIP, and to minimise the potential for the overlap of environmental issues between objectives. Each SEA objective has been clearly referenced to the individual 'topics' within the SEA Directive.

### 4.3.2 SEA Scoping Report and Consultation

#### Task A5: Consulting on the Scope of the SEA

The outputs of the above tasks A1 to A4 were reported in the SEA Scoping Report, the purpose of which was to set out for consultation what environmental issues should be addressed in the SEA. The Scoping Report also included the baseline data related to each geographic area concerned.

LBB has sought the views of Natural England, Historic England and the Environment Agency (known as the Consultation Bodies) on the scope and level of detail of the SEA Environmental Report. Following the statutory 5-week consultation period, the outcomes of the consultation process were reviewed, and any necessary adjustments were made to the assessment scope, prior to the next stage in the assessment process, namely Stage B: Developing and refining alternatives and assessing effects.

A summary of the consultation responses and how the responses have been addressed is set out in **Table 7** below.

Table 7 Summary of Consultation Responses

Consultee	Summary of Response	How response has been addressed
Natural England (Response received 25/09/18)	<i>"Natural England does not consider that this Scoping Report indicates or poses any likely risk or opportunity in relation to our statutory</i>	N/A

	<i>purpose, and so does not wish to comment on this consultation”.</i>	
Historic England (Response received 24/09/18)	Advice note on the subject of the historic environment in the context of SEA provided.	Advice taken into consideration in the assessment.
	List of further relevant plans and programmes which should be reviewed.	Noted.
	Baseline “ <i>could be expanded to include information about the current condition of heritage assets...</i> ”.	Baseline updated accordingly.
	Key issues bullet in baseline to be amended to “ <i>The Plan has the potential for impacts on the significance of cultural heritage assets as a result of traffic calming measures, bus priority and car parking facilities. This includes potential effects on the setting of heritage assets and on the significance of individual conservation areas</i> ”.	Key issue taken into account when undertaking assessment of effects.
	Rephrase SEA objective to be “ <i>Conservation [sic] and enhance the Borough’s natural, built and historic environment</i> ” to reflect para 20 of the NPPF.	SEA Objective amended accordingly.
	Develop decision-making criteria to inform the SEA framework and help ensure key environmental issues are incorporated.	Assessment criteria have been developed to assist with the assessment of the LIP Delivery Plan against the SEA Objectives.
Environment Agency (Response received 04/10/18)	Supportive of SEA objectives relating to the Borough’s built and natural environment; flooding and SuDS; and waste.	Noted.
	List of further relevant plans and programmes which should be reviewed.	Noted.
	Reference the Thames Estuary 2100 Plan.	Baseline updated accordingly
	Rephrase text to clarify flood risk, existing river defences and flood storage relating to the soil and water hydrogeology section.	Baseline updated accordingly
	Consider the requirements of the Water Frame Directive and opportunities to incorporate improvements to help deliver the objectives of the Water Framework Directive.	Noted.

### 4.3.3 SEA Assessment and Reporting

The tasks completed under Stage B: ‘*Developing and refining alternatives and assessing effects*’ and Stage C: ‘*Preparing the Environmental Report*’ showing in

**Figure 1** are set out below:

#### Task B1: Testing the LIP3 objectives against the SEA objectives

It is important to ensure that the objectives of the LIP are in accordance with the defined SEA objectives, which have themselves been informed by a review of relevant policy provisions, baseline environmental data and specific environmental issues experienced by LBB, as determined within the Stage A processes. The first task associated with Stage B has therefore been to test the compatibility of the LIP3 objectives with the SEA objectives via a matrix-based approach designed to identify potential synergies, along with potential conflicts should they occur.

#### Task B2: Developing the Strategic Alternatives

The SEA Directive requires that consideration should be given to “*reasonable alternatives taking into account the objectives and geographical scope of the plan or programme*”. The SEA Regulations require reasonable alternatives to the preferred option for achieving the LIP objectives to be assessed. They identify that the SEA Environmental Report must state “*the reasons for choosing the plan or programme as adopted; in light of the other reasonable alternatives dealt with....*” Article 16(4). If alternatives are then assessed, the effects of each can be taken into account so that the potential adverse effects of the plan can be avoided, and beneficial aspects identified and enhanced.

Despite the above, alternatives should be limited to those that are realistic and achievable. As the LIP3 will be brought forward in accordance with both national policy generally and more specifically in line with the strategic priorities identified within the MTS, there is limited scope for alternative options at a strategic level. A ‘Do Nothing’ alternative has not been considered as a realistic alternative as it will not result in the LIP achieving the key priorities of the MTS.

As a result of the above, the identification and appraisal of strategic alternatives (Task B2) has not been undertaken in this SEA.

#### Task B3: Predicting the effects of the draft LIP, including Alternatives

A systematic appraisal of the effects of the individual policy options within the LIP has been undertaken, using a matrix derived from the SEA objectives determined at Task A4, and using a set of consistent sub-criteria identified for each SEA objective to guide the assessment process, having regard to the baseline situation. This assessment is provided in **Chapter 6**.

A ‘Do Nothing’ alternative has not been considered as a realistic alternative as it will not result in the LIP achieving the key priorities of the MTS.

#### Task B4: Evaluating the effects of the draft LIP, including Alternatives

A scoring system has been implemented, enabling the identification of beneficial, adverse and neutral effects. A clear record has been kept of the assessment process, including commentary on the conclusions reached and any assessment limitations, for future reference.

A ‘Do Nothing’ alternative has not been considered as a realistic alternative as it will not result in the LIP achieving the key priorities of the MTS.

#### Task B5: Considering Ways of Mitigating Adverse Effects

Recommendations for either increasing the beneficial aspects of policies and proposals, or mitigating predicted adverse effects, have been made where necessary to improve the environmental robustness of

the LIP. Any appropriate mitigation measures identified during the assessment are provided in **Section 6.6**.

#### Task B6: Proposing Measures to Monitor the Environmental Effects of Implementing the draft LIP

A series of indicators have been identified that will enable the performance of the LIP to be monitored through its implementation period. These draw, in the first instance, upon those indicators identified in respect of LIP2, adjusted as necessary to reflect any refinements following their use for the preceding LIP. Monitoring measures have been clearly linked back to the respective SEA objectives to demonstrate the full assessment / implementation cycle.

#### Task C1: Preparing the Environmental Report

This SEA Environmental Report has been prepared which presents the findings of the above defined process. This incorporates an adapted summary of the Stage A tasks drawing upon the content of this SEA Scoping Report, together with a presentation of the summary findings of the assessment process and proposed monitoring measures. This draft SEA Environmental Report is being made available for consultation at the same time as the draft LIP3. The final SEA Environmental Report will accompany the final LIP3 (see tasks D1 and D2 below).

#### 4.3.4 SEA Consultation

The tasks to be completed under Stage D: *'Consultation and Decision Making'* shown in



**Figure 1** are set out below:

#### Task D1: Consulting on the Draft Plan or Programme and Environmental Report

This draft SEA Environmental Report is being made available for consultation at the same time as the draft LIP3. This task is being undertaken by LBB and the results will inform task D2.

#### Task D2: Assessing Significant Changes

If significant changes are made to the draft LIP3 in light of the consultation undertaken, the final SEA Environmental Report will be amended to reflect such changes. Comments made on the draft SEA Environmental Report will also be considered where appropriate and reflected in the final SEA Environmental Report.

#### Task D3: Decision Making and Providing Information

The final SEA Environmental Report will summarise how the findings of the SEA have been taken into account and how environmental considerations have been integrated into the final LIP3. Information will also be made available on how monitoring will be carried out during implementation. The draft Environmental Report will already have documented proposed monitoring measures, and they will be confirmed or modified in the light of consultation responses.

### 4.3.5 Monitoring Implementation

#### Task E1: Developing Aims and Methods for Monitoring

Monitoring is a legal component of the SEA process. Its purpose is to measure the performance of a plan against the environmental objectives or targets set out in the SEA Environmental Report. The SEA Directive's provisions on monitoring apply when the plan or programme is being put into effect, rather than during its preparation and adoption. However, it should be noted that preparations for monitoring have been considered during the preparation of the draft LIP3 and the draft SEA Environmental Report.

#### Task E2: Responding to Adverse Effects

While the SEA Directive itself does not create new obligations on environmental protection, other legislation or policies may require action on the part of either LBB or another body. Details of contingency arrangements are included in the mitigation measures set out in the SEA Environmental Report.

#### 4.4 Content of this Report

**Table 8** sets out where each of the tasks from Stages B - E of the SEA process are presented in this SEA Environmental Report.

Table 8 SEA Tasks and where they are presented in this SEA Environmental Report

SEA Task	Section of this Environmental Report
Task B1: Testing the LIP3 objectives against the SEA objective	Section 6
Task B3: Predicting the effects of the draft LIP	Section 6
Task B4: Evaluating the effects of the draft LIP	Section 6
Task B5: Considering Ways of Mitigating Adverse effects	Section 6.6
Task B6: Proposing Measures to Monitor the Environmental Effects of Implementing the draft LIP	Section 6.6
Task C1: Preparing the Environmental Report	Whole SEA Environmental Report
Task D1: Consulting on the Draft Plan or Programme and Environmental Report	To be undertaken
Task D2: Assessing Significant Changes	To be undertaken
Task D3: Decision Making and Providing Information	To be undertaken
Task E1: Developing Aims and Methods for Monitoring	Section 6.6
Task E2: Responding to Adverse Effects	Section 7.1
<b>Notes:</b> Reasoning behind the exclusion of Task B2 is explained in Section 4.3.3	

## 5. Baseline and Context

### 5.1 Baseline Information

The Practical Guide to SEA<sup>11</sup> states that “... *sufficient information needs to be collected to identify the environmental issues and trends that characterise the areas affected by the plan or programme and to provide the evidence base against which its potential effects can be measured and assessed ...*”.

Baseline information is collected for two main reasons:

- Providing the basis for quantitative prediction and monitoring of environmental or other sustainability effects; and
- Identifying problems and alternative ways of dealing with them.

Given the complexities of a Borough wide report it is prudent to gather sufficient information on baseline conditions at the scoping stage to identify strategic constraints and opportunities as well as providing a basis against which the effects of the LIP’s implementation can be assessed.

The SEA Directive<sup>12</sup> sets out that information to be provided in the Environmental Report includes: “*the likely significant effects on the environment, including on issues such biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors*”.

The collection of baseline data presented in the Scoping Report was drawn in part from information held or documents reviewed by LBB, as well as desk-based studies of the area. Consideration was also given to the baseline data collected as part of the scoping process for LIP2, updated where necessary. The collection of baseline information was presented in the Scoping Report in accordance with the SEA topics from the Practical Guide to the SEA Directive<sup>11</sup>. This baseline is replicated below, updated to consider comments received from Consultation Bodies.

#### 5.1.1 Introduction to the London Borough of Bexley

LBB is an outer London Borough situated at the heart of the Thames Gateway region in south east London and covers an area of about 60 square kilometres (km<sup>2</sup>). Its location in relation to other London Boroughs is shown in **Figure 2**. LBB’s position in south east London, close to the M25, makes it a gateway to the channel ports of Dover, Folkestone and Ramsgate and the Channel Tunnel via the A2 and A20. At the same time, LBB serves as a gateway to London from the Channel ports, as the majority of road-borne visitors from continental Europe travel through it. LBB also provides a relatively quick access to the Thames River Crossing at Dartford and to Stansted, Gatwick, Heathrow and City Airports. Ebbsfleet International train station, which provides services through the Channel Tunnel to Europe is located approximately 8.4km from LBB.



Figure 2 London Borough of Bexley highlighted in blue<sup>13</sup>

Land use is predominantly residential, but LBB also has significant areas of open space and some large areas of industrial activity. LBB has a five-mile frontage on the River Thames in the north, which includes the Belvedere Employment Area, one of the largest concentrations of industrial activity in London. LBB is also one of the greenest Boroughs in London, with over 100 parks and open spaces covering in excess of 638 hectares.

LBB has four major district areas – Crayford, Erith, Sidcup and Welling - and one strategic town centre, Bexleyheath. A new District Centre at Belvedere and new local centres at Abbey Wood and Slade Green are also planned as part of major growth proposals focussed in the north of the borough as shown in **Figure 3**.



Figure 3 Key proposed and existing transport improvements and local centres

### 5.1.2 Population

#### General Characteristics

LBB covers an area of 60.56 square kilometres in south east London. The Borough consists of several different communities whose physical boundaries mostly disappeared during the 1930s with their rapid growth and consequent merging. The Borough accommodates a number of land uses ranging from the

activities of LBB's Metropolitan Open Land and Green Belt indicated in **Figure 3**, to the large areas of industry and business in both Belvedere and Erith.

LBB is predominantly residential. Over half the homes were built between the First and Second World Wars, mainly for people working in industry along the Thames, and in central London. Over many years, LBB has become closely linked socially and economically with adjoining Boroughs and Districts. A number of LBB's resident workforce are employed in trade (17.8%), administrative services (12.3%), education (11%) and construction (8.2%) professions within the Borough<sup>15</sup>.

LBB is becoming more ethnically diverse, with black and minority groups accounting for 18% of the population as of the 2011 Census<sup>23</sup>.

Despite being part of the east London sub-region, which represents the third largest-economy in the country, many of the residents' earnings in the Borough are lower on average than surrounding Boroughs<sup>15</sup>.

Two areas within the Borough are categorised as Opportunity and Intensification areas<sup>33</sup>: Bexley Riverside and the Thamesmead and Abbey Wood areas. In both Bexley Riverside and Thamesmead and Abbey Wood areas, there is a focus on improvements to public transport accessibility, notably the Crossrail extension to Abbey Wood (the Elizabeth line), which will provide scope for intensification, with a particular focus on housing delivery around Abbey Wood.

#### Deprivation

The 2015 Indices of Multiple Deprivation (IMD) deprivation<sup>14</sup> ranks every small area known as a Lower Layer Super Output Area (LSOA) in England from 1 (most deprived area) to 32,844 (least deprived area). LBB scores as 13,505 showing that LBB has a higher than average score (lower rank) when measuring deprivation across the country, when compared within Greater London, placing LBB 8<sup>th</sup> out of 32 London Boroughs for deprivation (with 1<sup>st</sup> being the least deprived). The Borough is prosperous, however there are areas of deprivation mainly, but not entirely, located in the north of LBB, particularly in Thamesmead, North End and Erith as shown in **Figure 4**.



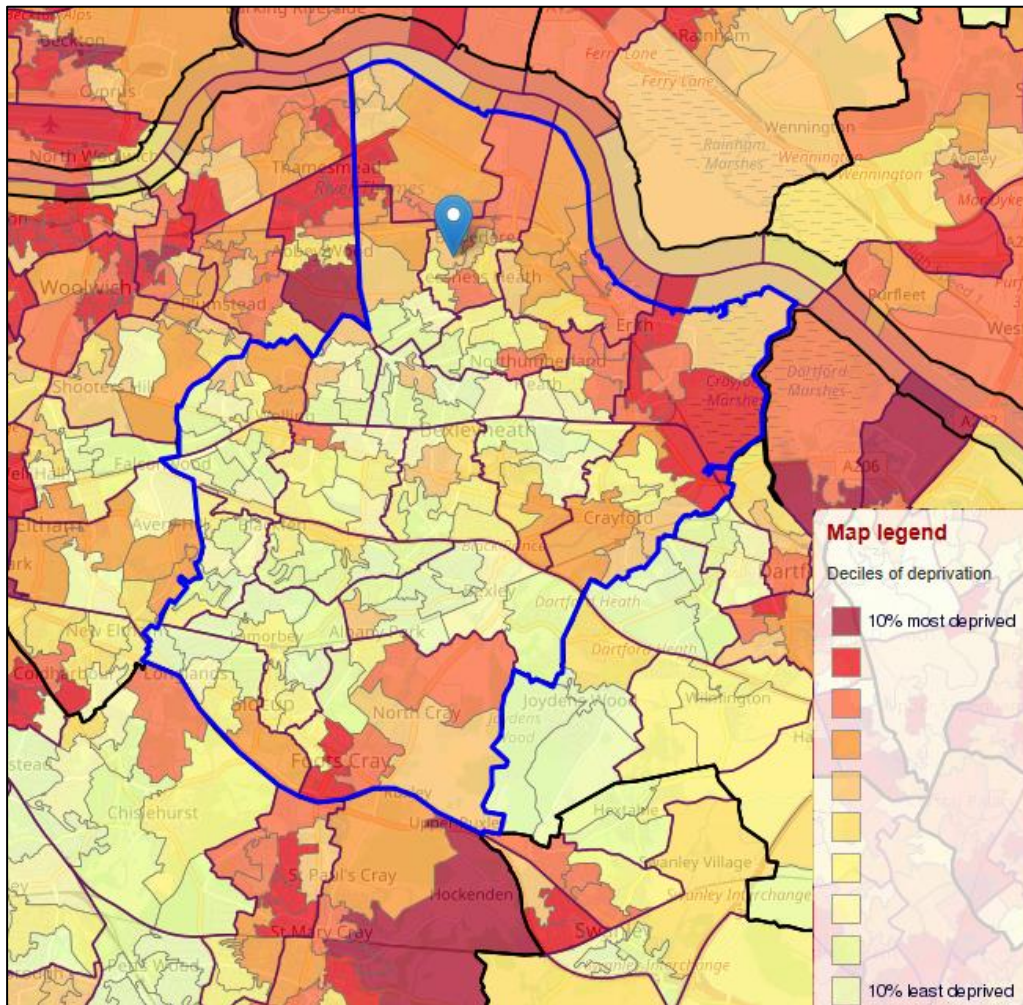


Figure 4 Index of Multiple Deprivation (IMD) 2015 Mapping<sup>14</sup>

### Employment

The latest figures from the Office of National Statistics (ONS) Annual Population 2017 Survey<sup>15</sup> estimate that the population of LBB is 246,100. The ONS Survey<sup>15</sup> indicates that LBB has an economically active population of 127,900 of which 122,600 are in employment. Of those in employment, just over 85% are employees and the remainder are self-employed.

The survey<sup>15</sup> has also shown that the Borough has slightly fewer people in managerial and professional occupations (43.5%) than the London average (55.5%) and higher numbers of people in wholesale, motor or retail trade (17.8% compared with 11.4% in London), or administrative and support service occupations (12.3% compared with 10.5% in London). Figures show that of those employed, LBB has higher numbers of people working part time compared to the London average (35.6% compared to 26.2%).

Unemployment for the Borough is generally low (4.5% compared to the London average of 5.3%) but there are small pockets in the north of the Borough including Thamesmead East (8.3%), Erith (6.1%) and North End (7.9%) where the numbers are significantly higher. Unemployment amongst young people (aged 16 to 24) is slightly lower (6.2%) in LBB than London (8%), and the Borough has fewer people who are economically inactive - 21.3% unemployed for over a year compared to 21.8% for London.

Unemployment and income support are therefore below the average for London, although there are some disadvantaged areas within the Borough, particularly in the north. The existing situation for accessibility to public transport is discussed within “**Transport Modes**”.

#### Key Issues

- LBB ranks eighth in London for deprivation (with first being the least deprived Borough);
- There is a clear strip of deprivation across the north of LBB (the highest deprivation in the Borough) including Thamesmead, North End and Erith, and a patch at the south of LBB in Foots Cray and North Cray;
- Areas in the north of the borough notably Erith, North end and Thamesmead and a patch at the south of LBB in Foots Cray and North Cray, have the highest unemployment in the Borough.

### 5.1.3 Human Health

#### Health trends

Health in LBB is generally positive; however there remain concentrations of poorer health in certain areas (North End, Erith and Thamesmead East) where life expectancy is lower and Coronary Heart Disease (CHD) mortality rates are higher<sup>19</sup>. Childhood obesity has also been identified as an issue within the borough - 26.7% of children in reception year and 39.4% of children in year 6 are classified as overweight / obese, this is above the average for England<sup>16</sup>. There has been a rise in child obesity over the last 5 years with overweight children often going on to become overweight and obese adults<sup>17</sup>.

The Health and Wellbeing Strategy<sup>18</sup> and Joint Strategic Needs Assessment<sup>19</sup> indicate the methods in which LBB plans to deliver better primary and secondary health care in the area. The Joint Strategic Needs Assessment<sup>19</sup> highlighted that given the increasing elderly population, CHD and strokes are growing major causes of death, whilst disadvantaged groups have benefitted less from improving health trends within LBB.

Levels of physical activity within LBB are low, with 61.5% of adults achieving 150+ moderate intensity equivalent minutes per week, compared to the national average of 66%<sup>20</sup>. There is also an under-utilisation of outdoor space for exercise / health reasons within 13.9% of LBB’s outdoor space utilised, significantly below the 17.9% national average<sup>21</sup>.

#### Transport Modes

The current proportion of all trips by transport mode within LBB is illustrated in **Table 9**. However, many public transport trips do themselves involve exercise getting to and from the train or bus and at interchanges. The low density of development and topography in areas such as Belvedere and Erith provide barriers to the extensive use of walking and cycling. A number of schools and communities are sited along vehicular routes including the A2, A20 and A2016. These major roads would act as a barrier to walking or cycling due to access and safety concerns.

#### Car Use and Parking

The Travel in London Report 10<sup>22</sup> indicates that residents of LBB have the lowest active, efficient and sustainable mode share of transport in Greater London compared to other London administrative areas. Car transport forms the main mode of transport for journeys by LBB residents at 57%. The car is the main mode of transport to work, with 40% using a car<sup>23</sup> compared to 30% London-wide and car ownership is above average for London with over 75% of households having access to a car. As much of the Borough is relatively uncongested (notwithstanding a perception that congestion is a major problem), for those with



the use of a car, accessibility within the Borough is relatively good. Uptake of cycling within the Borough is low (1%) compared to the Greater London average (3%).

**Table 9** below details the current mode share by LBB and London residents<sup>24</sup>.

**Table 9** Percentage usage of Transport Modes<sup>24</sup>

Mode	LBB %	Outer London %	Greater London %
Car / motorcycle	57	47	34
Walking	24	28	33
Cycling	1	2	3
Rail	5	4	5
Tube/DLR	0	5	9
Bus/tram	12	13	14
Taxi/other	1	1	2

The introduction of the Elizabeth line will connect the Borough with the London Underground network; however, it will bring increased numbers of private cars from outside the Borough to park near the station, which in turn, may lead to an increase in air pollution in the Abbey Wood region.

The extent of car parking is illustrated by the provision of council-owned off-street car parks indicated within **Table 10**. In addition to those listed in **Table 10**, 343 on-street disabled persons parking bays are located in the Borough.

**Table 10** Car parking across the London Borough of Bexley

Car Park	Public Parking Bays	Disabled Bay	Motorcycle bays
Gayton Road Car Park	86	4	0
Albany Park Station	60	3	0
Nuxley Road	45	2	1
Bexley High Street	108	4	1
Thanet Road	53	3	0
Avenue Road, Bexleyheath	193	8	1
Albion Road Multi Storey	322	4	0
Arnsberg Way	0	13	0
Bowling Centre, Bexleyheath	188	3	0
Cinema, Bexleyheath	220	13	0
Oaklands, Bexleyheath	119	6	1
Mill Road	90	5	1
Grassington Road Basement	121	8	1
Main Road, Sidcup	103	4	1
Old Farm Avenue	166	8	1
Sidcup Place	47	4	0
Nags Head Lane	73	4	0

Car Park	Public Parking Bays	Disabled Bay	Motorcycle bays
Westwood Lane	125	4	1
<b>Total*</b>	<b>2,119</b>	<b>100</b>	<b>9</b>

Note: \*Felixstowe Road Car Park and Grassington Road Surface carpark are not included as they both are currently closed as contractors are occupying the carparks.

On-street parking restrictions apply in all the Borough's main shopping centres. Parking and loading controls facilitate bus operation and Controlled Parking Zones (CPZ) are in force at the busiest train stations. LBB has 16 CPZs and throughout the Borough, 'all day' or 'at any time' waiting restrictions are in place on many major intersections, main routes and local shopping areas. Seven CPZs are located around rail stations at Abbey Wood, Sidcup, Welling, Crayford, Falconwood, Bexleyheath and New Eltham. Additional CPZs in LBB are due to be reconsidered following the opening of the Abbey Wood Crossrail station.

The changing approach within the MTS coupled with wider funding pressures presents a new set of challenges for the Borough. Overall, car ownership per capita is stable. However, the increased use and promotion of sustainable transport modes presents an encouraging trend that can capitalise on the renewed MTS focus upon public transport and the new emphasis upon healthy streets and people.

#### *Public Transport*

The average Public Transport Accessibility Level (PTAL) rating within the Borough is low, with pockets of high accessibility near stations and the GLA, LBB and TfL acknowledge that public transport within the Borough is in need of improvement<sup>48</sup>. Public transport is predominantly bus based, and certain areas have specific problems with accessibility by public transport. Bus links between the north and south of the Borough are poor, and rail stations are not well located in relation to commercial centres (including the strategic centre of Bexleyheath), which affects access to services by public transport. This maintains the predominant use of the car, which has knock on adverse effects on congestion, air quality and noise, all of which can impact human health.

PTAL ratings for the borough's district centres are listed below, ranging from a PTAL rating of 0 (worst) to 6b (best):

Bexleyheath	PTAL 5 - 6a
Crayford	PTAL 2 - 3
Erith	PTAL 3
Sidcup	PTAL 3 - 4
Welling	PTAL 3 - 4

LBB is not currently connected to the London Underground, which represents a limitation to its public transport access both to central London and locally, compared with many other parts of London. Rail links passing through LBB to central London are good, with high speed rail and the Dartford loop linking stations in LBB. To coincide with the opening of the Elizabeth line, a number of bus routes will commence in 2019, connecting Abbey Wood Station with adjacent Boroughs and Districts<sup>25</sup>.

The proportion of public transport trips in LBB is comparatively low, mainly due to the fact that the entire Borough is currently outside the London Underground network. Once the Elizabeth line opens in 2019, the new railway will connect the borough to central London through to Paddington, Heathrow and Reading in the west<sup>26</sup>.

Road and rail links within the Borough are poor, with particular limitations to travel between the north and south of LBB<sup>48</sup>. Poor access to bus and train stations connections has repercussions for access to public services. It should be noted that road access to the national road system (outside the Borough) is generally good.

### Accessibility

LBB has a 61km network of public rights of way. Whilst not extensive, this network provides useful links for pedestrians and cyclists in the more urban north of the borough. In addition, the public rights of way provide links to longer walking and cycle routes such as the London Loop, the Capital Ring, South East London Green Chain, the Cray Riverway, the Shuttle Riverway, the Thames Path and the Thames Cycle Path.

### Noise

One of the indicators of a healthy street is that streets are “not too noisy”<sup>27</sup>. Noise generation from road transport and rail are the dominant sources of ambient noise in LBB and road traffic noise is a consequence of private vehicle use being the dominant means of transport in the area. Strategic noise mapping was carried out in 2012 for 33 London Local Authorities, including LBB<sup>28</sup>. As a result of this mapping, Road and Rail Noise Action Planning Important Areas (IAs) were plotted on to the map, indicating areas which were considered to need the most action<sup>29</sup>. The Road and Rail Noise Action Planning IAs within the borough comprise the following:

- A2 East Rochester Way;
- A number of points along the A223;
- A2000 / A207; and
- A206.

Road transport can also be a significant source of vibration and noise. The following areas of LBB are located within the vicinity of the three rail corridors (**Figure 3**) that pass east-westward through the Borough:

- North Kent Line in the north of LBB runs through Slade Green and Belvedere;
- Bexleyheath Line runs centrally through LBB through Barnehurst and Welling; and
- South-eastern Dartford Loop / Sidcup Line runs in the south of LBB through Bexley and Foots Cray.

Where the rail corridors pass through mostly residential areas these areas will be affected by railway noise, although it should also be noted that the south-eastern Dartford Loop / Sidcup Line passes through rural areas. Once the Elizabeth line is operational, this will contribute additional noise to the ambient levels of the areas surrounding the rail lines in the north west of the Borough.

It should be noted that levels of ambient noise change between day and night, with varying volumes of vehicles, percentages of HGVs and the frequency of trains.

### Safety / Accidents

Road casualties in LBB are significantly below national levels and have generally reduced over the last five years. The 2017 road accidents data for LBB are not yet available, however, the number of people killed or seriously injured in LBB in 2016 was 51, with pedestrians making up 28% of those killed or seriously injured.

## Key Issues

- The majority of residents use cars as their primary source of transport, followed by walking. Car use is above average for both the outer London and Greater London regions;
- The average Public Transport Accessibility Level (PTAL) rating within the Borough is low, with pockets of high accessibility near stations and the GLA, LBB and TfL acknowledge that public transport within the borough is in need of improvement;
- LBB residents walk and cycle less than average when compared to the rest of the east London sub-region and Greater London;
- Increased non-LBB resident commuters driving to Abbey Wood Station for the Elizabeth line could lead to air quality and noise issues in the area;
- Areas which suffer from higher levels of deprivation are also affected by limited accessibility to public transport;
- Due to road traffic being the main source of noise, problem areas will therefore source from the major roads within LBB;
- LBB has implemented policy to reduce traffic noise by reduction of traffic congestion and encouraging the use of quieter vehicles; and
- There is a continued need to continue to improve road safety.

### 5.1.4 Biodiversity and Ecology

LBB has a wide range of nature conservation assets within its administrative area, associated with the extent of amenity green space within the Borough, as highlighted within LBB's Open Space Strategy<sup>30</sup> and Sites of Importance for Nature Conservation<sup>31</sup> documents. A number of these amenity spaces have been identified and designated as important for nature conservation:

- Four local nature reserves - Lesnes Abbey Woods, Danson Park Bog Garden, Foots Cray Meadows and Crossness;
- Eight Areas of Metropolitan Importance for Nature Conservation (AMINCs), covering an area of nearly 1,000 hectares;
- 17 Borough Grade I Sites of Nature Conservation Importance (SNCIs) and 23 Borough Grade II SNCIs; and
- 12 Sites of Local Importance for Nature Conservation (SLINC).

The River Cray is a Site of Metropolitan Importance for Nature Conservation (SMINC). Additionally, the River Cray is part of the Mayor of London's Blue Ribbon Network indicated within the Bexley Core Strategy<sup>32</sup> and London Plan<sup>33</sup>, where development is encouraged to increase the use of transport, sport and leisure activities particularly in areas of deficiency. The River Cray Valley is of County importance for nature conservation due to its size, relatively natural profile, wintering snipe and relatively good species diversity, especially its flora and invertebrates and is one of London's cleanest rivers.

Barnes Cray Pastures comprises low-lying grassland that is wet in the winter, containing marsh and a series of interconnecting dykes. Water voles are present on the River Cray and Stanham River, which are a protected species under the Wildlife and Countryside Act 1981 (as amended). Other species of conservation interest include the thrush which is on the red list for bird conservation concern and further species that are on the amber list including the snipe and kingfisher<sup>34</sup>. Previous studies have recorded

several other species of interest on Barnes Cray Pastures and / or the River Cray, such as lapwing and snipe reed bunting, fringed water lily and notable species of water beetle and flies<sup>35</sup>.

Located at the north of the borough is Erith Marshes SMINC<sup>35</sup>. Erith Marshes forms part of an extensive area of marshland extending east along the Thames. The regenerative value of the marshland area has been recognised, integrating nationally significant wildlife habitats with various uses and flood management<sup>36</sup>. Within the marshes is Crossness Nature Reserve owned by Thames Water. Erith Marshes are bisected along an east - west axis by the A2016.

### Key Issues

- Policies related to new rail links such as that to the underground network, have the potential to have adverse impacts on nature conservation and biodiversity, especially if the proposals are in or adjacent to areas of public open space or nature conservation;
- There may be the potential for adverse impacts to local biodiversity and ecology resulting from any proposed roads or transport infrastructure to relieve congestion on main roads; and
- There may be an impact from NO<sub>x</sub> and PM<sub>10</sub> from vehicle emissions on designated nature conservation sites in LBB.

## 5.1.5 Soil and Water

### Hydrology and Hydrogeology

There are two main rivers in the Borough (excluding the River Thames): The River Cray, and River Darrent, which both flow into the River Thames and have a number of tributaries within LBB and neighbouring districts and Boroughs.

The Environment Agency's Thames Estuary 2100 Plan (TE2100)<sup>37</sup> sets out the Environment Agency's recommendations for flood risk management for London and the Thames estuary through to the end of the century and beyond.

The north of LBB and land adjacent to the River Cray is located within Flood Zone 3. Environment Agency records indicate both tidal and fluvial flooding in the riverside areas of the Borough and in general some parts of the Borough remain at risk from tidal flooding should the Thames Tidal Defences be breached. River defences exist along the River Cray and Thames, with a fluvial flood storage area located in Eighty Oak Wood and the Glade in Sidcup.

The Environment Agency routinely monitors the chemical and biological quality of the River Cray and River Darrent and their tributaries, classifying the ecological quality of the river to be poor to moderate and the chemical quality of the river to be good in 2016<sup>38</sup>.

The Local Flood Risk Management Strategy indicates that the Borough is located on Alluvium and Flood Plain Gravels, overlying the Upper Chalk. Secondary A / (undifferentiated) Aquifers have been identified in the superficial deposits, whilst Principal and Secondary A Aquifers are present in the bedrock. The Environment Agency designates Source Protection Zones (SPZs) for the protection of ground water designations. The Borough lies within both a Zone I (Inner), Zone II (Outer) and Zone III (Total) groundwater SPZ.

There are two geological Sites of Special Scientific Interest (SSSIs) one in Lesnes Abbey Woods in Belvedere and Wansunt Pit, in Crayford.

## Contaminated Land

Road and rail represent the predominant modes of transport within LBB, both modes have the potential to contaminate land and groundwater. Potential leakages, spillages of fuel oils, particulate emissions from vehicle engines and tyre dust generated may form a residue on road surfaces, which may be transferred to land and groundwater via surface run-off. In addition, potential spillage and leakage of diesel from passenger and freight trains, as well as brake dust generated, can also transfer to pollutants to land, watercourses and groundwater via surface run-off.

Historical uses suggest that extensive made ground is present. The source of the material is unknown and given the historical industrial land uses and proximity to landfill, there lies the potential for contamination within the underlying soils and / or groundwater beneath the area.

## Key Issues

- An increase in hard surfaces and paving could reduce surface water runoff to groundwater and increase runoff to watercourses. Water could become contaminated with pollutants from the increased hard surfaces therefore reducing the quality of the water entering the groundwater, surface water and other systems; and
- Potential land contamination may lead to the requirement for remediation of underlying soils and groundwater before redevelopment.

## 5.1.6 Air Quality and Climatic Factors

### Air Quality including Greenhouse Gases

As required by Part IV of the Environment Act<sup>39</sup> and the UK's Air Quality Strategy (AQS)<sup>40</sup>, LBB continually reviews the ambient air quality within its administrative boundary. The Environment Act 1995<sup>39</sup> places an obligation on local authorities to review and assess local air quality against objectives contained in the National Air Quality Strategy (NAQS)<sup>40</sup> and associated Air Quality Regulations.

In accordance with the GLA Act 2007<sup>41</sup>, the Mayor of London has also published guidance on technical and local issues; this is provided within the London Environment Strategy<sup>42</sup>. The GLA has powers of direction over local authorities in relation to local air quality management including powers to require an assessment to be made and to declare Air Quality Management Areas (AQMA's).

As part of LBB's review and assessment of local air quality, the entirety of LBB was declared an AQMA in 2007<sup>43</sup> for exceedances of the annual and daily particulate matter as (PM<sub>10</sub>) NAQS objective, and for exceedances of the annual nitrogen dioxide (NO<sub>2</sub>) NAQS objectives.

In addition, across London the GLA has declared Air Quality Focus Areas (AQFA) for locations where the EU annual mean limit value for NO<sub>2</sub> is exceeded and there is high human exposure. Within LBB, the GLA has declared an AQFA for the A206 Between Erith Queens Road Roundabout to Northend Roundabout.

LBB produces an annual status report<sup>44</sup>; the most recent (published in 2018) includes measures to be taken to address the identified areas of poor air quality, mainly linked to vehicle emissions from the major traffic routes in the Borough.

In 2017 LBB monitored local air quality using four automatic monitors. The latest air quality monitoring results published by LBB<sup>36</sup> show both the annual and daily concentrations of PM<sub>10</sub> met the respective NAQS objectives at all four monitoring locations. For NO<sub>2</sub>, the annual mean NAQS objective was also met

at all four of the monitoring locations in the borough. This reflected a small improvement at the air quality monitor located on the A2 at Falconwood where the annual mean air quality objective for nitrogen dioxide had previously been exceeded. The pollutants sulphur dioxide (SO<sub>2</sub>) and particulates (as PM<sub>2.5</sub>) met the respective NAQS objectives in 2017.

The vehicle CO<sub>2</sub> emissions (in kilotonnes kt\*) within the borough are broken down as follows: Domestic use 355kt\* of CO<sub>2</sub>, Industrial and Commercial use 210kt\* of CO<sub>2</sub> and Transport 205kt\* of CO<sub>2</sub>. There was a total annual emission of 700kt\* of CO<sub>2</sub> within Bexley in 2016 which is below the average for the rest of London, where CO<sub>2</sub> emissions total 935kt\* for all transport uses.<sup>45</sup>

#### Key Issues

- In 2007 the entire LBB was designated as an AQMA;
- The GLA has declared an AQFA for the A206 Between Erith Queens Road Roundabout to Northend Roundabout; and
- Monitoring of NO<sub>2</sub> has shown high pollutant concentrations around major transport arteries notably the A2 and A206.

### 5.1.7 Material Assets

#### Waste

LBB is a waste collection and disposal authority responsible for handling municipal waste in LBB. In addition, the Council is also a waste planning authority responsible for planning control over waste management.

All LBB's landfill waste moves by road to the Cory Riverside Energy (CRE), however, LBB has no rail or river transport connections to any of its facilities. The CRE Waste Facility in Belvedere has been in operation since 2012, collecting waste from across Greater London<sup>46</sup>. Waste is transferred from collection points in Wandsworth, Battersea, City of London, Tower Hamlets by tug along the River Thames to the CRE waste facility and the ash sent away via the same mode.

LBB's street services fleet (recycling and waste collection and street cleansing) will be replaced by 2020 to meet the Euro VI standard. Meeting the Euro VI standard would enable Serco (LBB's Waste contractors) to meet their ambition of a 40% reduction of waste<sup>44</sup>.

#### Key Issues

- LBB imports waste from London Boroughs into LBB via the Thames; and
- HGVs associated with waste transfer are likely to contribute to ambient vehicle noise and reduced air quality.

### 5.1.8 Cultural Heritage

#### Archaeology and Cultural Heritage

LBB contains many above ground heritage assets. There are seven Grade I listed, 12 Grade II\* listed, 143 Grade II listed buildings and around 400 locally listed buildings and structures of local architectural interest. Furthermore, 23 conservation areas are designated within LBB.

There are number of statutory designated sites including four scheduled ancient monuments:



- Faesten Dic, Joydens Wood, Bexley (27.07 Ha);
- Lesnes Abbey, Abbey Road, Abbey Wood (29.16 Ha);
- Hall Place, Bourne Road, Bexley (65 Ha); and
- Howbury Moated Side, Moat Lane, Slade Green.

The following assets are Heritage at Risk (HAR), at risk of being lost as a result of neglect, decay or inappropriate development.

- Parish Church of St Paulinus, Perry Street, Bexley;
- Crossness Pumping Station, Belvedere Road SE28; and
- Chapel House, 497, Blackfen Road, Sidcup

There are four Grade II listed historic parks and gardens: Lamborbey Park, Danson Park, Foots Cray Place and Hall Place which is a major historic complex and of historic significance, recently awarded investment from the Heritage Lottery Fund (HLF).

The LBB Areas of High Archaeological Potential Review Project<sup>47</sup> identified 18 areas of High Archaeological potential within LBB, amounting to 1,466 hectares. Archaeological desk-based studies have identified the potential for Palaeolithic remains in the area of the Perry Street roundabout.

#### Key Issues

- There is the potential for impacts on the significance of cultural heritage assets as a result of traffic calming measures, bus priority and car parking facilities. This includes potential effects on the setting of heritage assets and on the significance of individual conservation areas.

### 5.1.9 Landscape

#### Landscape and Visual Amenity

The topography of LBB is generally flat along the river front, the elevation of the land increases inland at Belvedere and Erith. A ridge exists between Bexleyheath and Bexley which runs south west to Foots Cray.

LBB is characterised by a number of designated, protected and enhanced landscape areas. The eastern part of LBB forms part of the Metropolitan Green Belt. The Metropolitan open land policies (Policy 7.17)<sup>33</sup> restrict development to heavily developed areas in LBB. As a result of these policies, there are increased pressures in the form of proposals for backland development, in-fill schemes and redevelopment at high densities.

The Green Belt within LBB is particularly important in maintaining the break between the outer edge of London's built up areas and the settlements of Joyce Green, Dartford, Joydens Wood and Swanley. LBB has a hierarchy for open spaces which are classified as; open spaces fulfilling the roles of local parks, local natural space and large and multi-activity open space.

The main growth of built development within LBB dates from the 19th century, prior to this it was primarily agricultural land. Development increased significantly during the 1920s and 1930s as a result of improved accessibility to London. Areas within LBB designated as conservation areas (23 in total) generally demonstrate the historic pattern of the old villages that have become engulfed by the expanding suburban



development. As a result of rapid development, areas of fragmented open spaces have developed in residential areas of LBB<sup>48</sup>.

### Open Spaces

There is a total of 507 individual open spaces in LBB, which are categorised into the following typology, from the adopted Open Space Strategy<sup>30</sup>. LBB is considered to have a generally high standard of environment and good open space provisions as presented in **Table 11**:

Table 11 Open space within the London Borough of Bexley

Typology	Number of Sites
Metropolitan Open Land	3
District Parks	3
Local Parks	35
Natural and Semi-natural open space	71
Small Local Parks	6
Amenity green space	33
Children's play areas	49
Young people's facilities	20
Outdoor sports facilities	203
Allotments	40
Cemeteries and churchyards	20
Civic spaces	0
Green corridors	24
<b>Total</b>	<b>507</b>

LBB forms part of the London Green Chain<sup>49</sup>. The London Green Chain is a walking route between Thamesmead and Nunhead Cemetery consisting of 11 routes which aim to provide recreational resources and visual amenity and is an important part of the urban environment around south east London.

LBB is currently undertaking a Green Infrastructure Study which will include an Open Space Assessment.

### Key Issues

- A number of areas in LBB are undergoing regeneration which may result in visual impacts to the townscape and landscape;
- Current patterns of growth in LBB has provided small isolated open spaces in difficult to access places; and
- There are areas of open space access deficiency predominantly located in the centre and south west of LBB, it should be noted; these areas are mostly residential or employment.

## 6. Assessment of draft LIP3 Programme of Investment

### 6.1 SEA Assessment Framework

The purpose of an SEA Assessment Framework is to provide a method for describing, analysing and comparing the environmental and sustainability effects of plans and policies. The SEA Assessment Framework is underpinned by a series of SEA objectives which state what is intended, specifying a desired direction of environmental change. The plan's performance against objectives is normally measured by using indicators.

#### 6.1.1 SEA Objectives

A series of SEA objectives have therefore been developed - informed by a review of relevant policy provisions (see **Appendix A**), baseline environmental data and specific environmental issues experienced by LBB - to provide a means by which the environmental performance of the draft LIP3 can be assessed. In preparing the SEA objectives presented in **Table 12** below, the objectives for the SEA of the LIP2 were reviewed to determine whether they are still valid in the context of the draft LIP3, and these were then refined and updated as necessary to reflect the outcomes of the review of other policies, plans and programmes and the collection and update of baseline information carried out at the SEA scoping stage. The Bexley Core Strategy 2012 Sustainability Appraisal Objectives<sup>32</sup> were also reviewed to assist with the refinement of the draft SEA objectives.

The draft SEA objectives were agreed with LBB Council Officers during a workshop in July 2018. Following consultation on the Scoping Report, these draft SEA objectives have been finalised and form the basis for the SEA framework within which the evaluation of the draft LIP3 has been carried out. The objectives were tightly scoped to focus on the LIP, and to minimise the potential for the overlap of environmental issues between objectives. Each SEA objective has been clearly referenced to the individual 'topics' within the SEA Directive.

Draft SEA objective "*Minimise localised community impacts*" has been removed as part of the refinement of the objective suite. This is because during the early stages of the assessment, it was felt that this objective was not adding value to the assessment process and that the key components of this objective were already being drawn out via the other SEA objectives. The draft SEA objective relating to water has been edited to include water quality as part of the objective.

A series of assessment criteria associated with each SEA objective were developed in parallel, to assist with the assessment of the draft LIP3. These are also presented in **Table 12**.

Table 12 SEA Objectives and Assessment Criteria

SEA Objective	SEA Topic	SEA Assessment Criteria (Will the draft LIP3 contribute to the following....?)
1. Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	Air Quality Human Health Population	<ul style="list-style-type: none"> <li>Reduction in emissions of air pollutants from motorised road vehicles.</li> <li>Increase in proportion of vehicles (including buses) which are ultra-low or zero emission.</li> <li>Increase in the proportion of electric vehicles in use.</li> </ul>
2. Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport	Human Health	<ul style="list-style-type: none"> <li>Reduction in levels of ambient noise associated with transport.</li> </ul>

SEA Objective	SEA Topic	SEA Assessment Criteria (Will the draft LIP3 contribute to the following....?)
noise impacts on sensitive locations.		<ul style="list-style-type: none"> <li>Reduction in people's exposure to transportation noise.</li> <li>Reduction in levels of public dissatisfaction regarding transportation noise.</li> </ul>
3. Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	Human Health	<ul style="list-style-type: none"> <li>Facilitate modal shift via the reduction in use of private car.</li> <li>Facilitate modal shift via an increase in cycling and walking.</li> <li>Facilitate connectivity between different non-car transport modes.</li> </ul>
4. Conserve and enhance the borough's natural, built and historic environment.	Biodiversity Fauna, Flora Soil Material Assets Cultural Heritage Landscape	<ul style="list-style-type: none"> <li>Conservation and enhancement of favourable condition of SSSIs.</li> <li>Conservation and enhancement of biodiversity including priority and protected habitats and species.</li> <li>Retention and enhancement of townscape and landscape character</li> <li>Conservation and enhancement of heritage assets.</li> </ul>
5. Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	Water	<ul style="list-style-type: none"> <li>Safeguarded or improved water quality in water bodies within the borough.</li> <li>Increased local resilience to flood risk.</li> <li>Safeguarded future flood risk management options.</li> </ul>
6. Promote sustainable transport of waste.	Material Assets	<ul style="list-style-type: none"> <li>Increased proportion of waste transported by rail and water.</li> <li>Reduction in vehicular movements involving the transportation of waste on the highway network.</li> </ul>
7. Contribute to healthy streets by reducing the need / desire to travel by car and enable residents to choose active modes of transport	Human Health	<ul style="list-style-type: none"> <li>Creation of a safer road network.</li> <li>Increase in the use of cycling and / or walking.</li> <li>Creation of a more pleasant public realm conducive to walking and cycling.</li> <li>Improvements in safety (and perception of safety) and security associated with cycling and walking (and bus use).</li> </ul>
8. Increase access to services, social and economic opportunities.	Population	<ul style="list-style-type: none"> <li>Improve journey time reliability.</li> <li>Increase in public transport reliability, frequency and coverage.</li> <li>Improved provision for walking and cycling.</li> </ul>
9. Promote social inclusion and equality.	Population	<ul style="list-style-type: none"> <li>Increase number and scale of transport initiatives focused on deprived areas and groups.</li> <li>Increase in provision of facilities for disadvantaged people.</li> </ul>
10. Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.	Population	<ul style="list-style-type: none"> <li>Reduction in unit cost for travel for residents, work/business travel and freight transport.</li> <li>Increase reliability, accessibility and convenience of public transport to major employment areas.</li> </ul>

SEA Objectives	1. Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.					
	2. Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	✓				
	3. Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	✓	✓			
	4. Conserve and enhance the borough's natural, built and historic environment.	✓	✓	✓		
	5. Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.				✓	
	6. Promote sustainable transport of waste.	✓	✓	✓	✓	
	7. Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	✓	✓	✓	✓	
	8. Increase access to services, social and economic opportunities.			✓	✓	
	9. Promote social inclusion and equality.				✓	
	10. Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.			✓	✓	
<b>Key</b> ✓ = Compatible ✗ = Incompatible [blank] = no links		1. Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	2. Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	3. Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	4. Conserve and enhance the borough's natural, built and historic environment.	5. Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.
<b>SEA Objectives</b>						

SEA Objective	SEA Topic	SEA Assessment Criteria (Will the draft LIP3 contribute to the following....?)
---------------	-----------	---

- Reduce journey times within and out of borough for residents' work / business travel and freight.
- Improvement to specific locally targeted problems (e.g. town centre congestion).

## 6.2 SEA Objectives Compatibility Assessment

The internal compatibility of the SEA Objectives has been tested to ensure that any tensions between the SEA Objectives are resolved.

It is also important to ensure that the objectives of the LIP3 are in accordance with the defined SEA objectives. Therefore, the compatibility of the LIP3 objectives with the SEA objectives has been tested via a further matrix-based approach designed to identify potential synergies, along with potential conflicts should they occur. This comprises Task B1 of the SEA Process.

These compatibility matrices are presented in Error! Reference source not found. and

Table 14 respectively. Both tables indicate that there is no incompatibility either within the SEA

Objectives themselves and between the SEA Objectives and the LIP3 objectives. There are therefore no tensions between the SEA Objectives, nor are there any conflicts with the SEA Objectives and the LIP3 objectives. There is also a high degree of compatibility between the SEA Objectives and the LIP3 objectives, largely due to the LIP3 borough objectives addressing similar topics to the SEA Objectives, namely sustainable transport and healthy streets.

SEA Objectives		SEA Objectives									
1. Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.											
2. Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	✓										
3. Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	✓	✓									
4. Conserve and enhance the borough's natural, built and historic environment.	✓	✓	✓								
5. Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.					✓						
6. Promote sustainable transport of waste.	✓	✓	✓	✓	✓						
7. Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	✓	✓	✓	✓	✓						
8. Increase access to services, social and economic opportunities.				✓	✓			✓			
9. Promote social inclusion and equality.					✓			✓	✓		
10. Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.				✓	✓				✓	✓	
1. Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.											
2. Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.											
3. Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.											
4. Conserve and enhance the borough's natural, built and historic environment.											
5. Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.											
6. Promote sustainable transport of waste.											
7. Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.											
8. Increase access to services, social and economic opportunities.											
9. Promote social inclusion and equality.											
10. Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.											

**Key**  
 ✓ = Compatible  
 ✗ = Incompatible  
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Table 13 SEA Objectives Compatibility Matrix

Table 14 SEA Objectives and Borough Transport Objectives Compatibility Matrix

		SEA Objectives									
		1. Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	2. Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	3. Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	4. Conserve and enhance the borough's natural, built and historic environment.	5. Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	6. Promote sustainable transport of waste.	7. Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	8. Increase access to services, social and economic opportunities.	9. Promote social inclusion and equality.	10. Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.
LIP3 Borough objectives	1. To encourage as much movement as possible to use sustainable modes of transport (public transport, walking and cycling)	✓	✓	✓	✓			✓		✓	✓
	2. To provide good networks for pedestrians and cyclists particularly in growth areas and linking them to the communities beyond	✓	✓	✓	✓			✓	✓	✓	✓
	3. To support more reliable and faster bus services through bus priority measures with segregation from other traffic as much as possible	✓	✓	✓	✓			✓	✓	✓	✓
	4. To create healthy streets and pleasant routes	✓	✓	✓	✓	✓	✓	✓	✓		✓
	5. To improve the accessibility of the transport network to assist access to jobs, local amenities and other destinations	✓	✓	✓	✓			✓	✓	✓	✓
	6. To promote safe travel on the road network and support delivery of measures to reduce road collisions and work towards Vision Zero			✓	✓		✓	✓			✓
	7. To support road danger reduction through physical road safety measures, travel planning and education, training and publicity programmes			✓	✓		✓	✓		✓	✓
	8. To seek improvements to air quality by supporting the use of zero emission capable (ZEC) vehicles	✓	✓		✓		✓				
	9. To protect significant green corridors	✓			✓				✓	✓	✓

**Key**

✓ = Compatible

✗ = Incompatible

[blank] = no links

**Key**

- ✓ = Compatible
- ✗ = Incompatible
- [blank] = no links

		SEA Objectives									
		1. Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	2. Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	3. Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	4. Conserve and enhance the borough's natural, built and historic environment.	5. Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	6. Promote sustainable transport of waste.	7. Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	8. Increase access to services, social and economic opportunities.	9. Promote social inclusion and equality.	10. Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.
10. To encourage sustainable drainage systems and greening measures through the planning process					✓	✓					✓
11. Encourage the use of the River Thames as a transport corridor especially for freight, including safeguarding wharves used for this purpose	✓	✓			✓		✓		✓		✓
12. Provision of excellent public transport links with rail stations, existing communities and other growth nodes	✓	✓	✓		✓			✓	✓	✓	✓
13. Support delivery of safe and secure public transport network	✓	✓	✓		✓			✓	✓	✓	✓
14. To work with TfL and the Mayor to deliver a Government-led extension of the Elizabeth line to Ebbsfleet	✓	✓	✓		✓			✓	✓	✓	✓
15. To secure the key transport infrastructure investment of an extension of the DLR from Gallions Reach through Thamesmead to Belvedere; the completion of a public transit corridor from North Greenwich to Slade Green and the completion of road-based river crossings connecting Belvedere with Rainham and Thamesmead with Gallions Reach	✓	✓	✓		✓			✓	✓	✓	✓



### 6.3 Assessment Methodology

The proposed Programmes and Projects outlined in the draft LIP3 have been assessed against the SEA Objectives, using the SEA assessment criteria outlined in **Table 12** in order to determine the likely environmental effects of the LIP3 Delivery Plan. This comprises Tasks B3 and B4 of the SEA Process.

The assessment was undertaken by a team of three people comprising two SEA assessors and one transport planner whom undertook a series of workshops during which the projects and programmes within the draft LIP3 were consistently assessed against the sustainability objectives and associated assessment criteria.

The following definitions have been used when undertaking the assessment.

Table 15 Magnitude of Environmental Effect of the draft LIP3

Magnitude of Environmental Effect of the draft LIP3	Assessment Symbol
Substantial Positive	+++
Moderate Positive	++
Minor Positive	+
No connection	
Minor Negative	-
Moderate Negative	--
Substantial Negative	---

Table 16 Geographical Extent of Effects of the draft LIP3

Geographical Extent of Effects	Description
Local	The programme / project extent and nearby environs
Borough	Local and / or notable effects dispersed throughout the Borough
Regional	Notable effects beyond the Borough

The following timescales have been used to describe the estimated length of time it would take for the predicted environmental effects of the draft LIP3 Programmes and Projects to approach or reach stability:

- Short term: less than 1 year
- Medium term: 1-5 years
- Long term: more than 5 years

The following terms have been used to describe the permanence or otherwise of the predicted environmental effects of the draft LIP3 Programmes and Projects:

- Permanent
- Temporary

The following levels of certainty have been used to describe the level of confidence held to which the Programmes and Projects would achieve the SEA Objective:

- High certainty

- Moderate certainty
- Low certainty

Summary assessment tables showing the results of the environmental assessment using the above assessment framework and methodology are presented in **Section 6.5** below.

## 6.4 Draft LIP3 Delivery Plan

A summary of the draft LIP3 Delivery Plan is presented below with a number of “Projects” under each “Programme”. Further details can be found in the draft LIP3 to which this SEA Environmental Report is appended.

The below Programmes are included under the draft LIP3’s three-year indicative Programme of Investment for period 2019/20 to 2021/22.

### Healthy Streets Programme

**Yarnton Way** has the third highest level of road user casualties in the Borough where the Council is the highway authority. The proposed works at Yarnton Way are for a landscaped corridor including social spaces, tree planting along the central reservation, a reallocation of road space away from general traffic, widened footways and provision of a cycle lane. The project is linked to the Council’s aspiration for a guided bus transit route.

**Active Travel Connections “Routes to Rail Stations”** involves improvements to cycle and pedestrian access to important local rail stations at Bexley, Sidcup and Belvedere. This will assist integration with rail services and encourage a switch from car.

**Bus Priority** measures to assist bus service speed and reliability are proposed to support the sustainable growth of communities.

**Cycle Route Network** improvements are proposed to improve the provision of high quality cycle route infrastructure. Local cycle routes will complement strategic cycle route Quietway 1 and form links to local town centres and growth areas.

**Cycle Parking** improvements are also proposed at local shopping centres, parades, parks and open spaces.

### Vision Zero Programme

**Local safety schemes** are proposed to meet the Vision Zero targets for killed and seriously injured casualties. The locations with the highest number of road casualties have been identified and this analysis will form the basis for developing projects to reduce casualties.

**Road danger reduction** – a key focus for the Mayor’s Vision Zero is for a reduction in vehicle speeds. LBB will seek to extend the number of streets within 20mph zones with physical measures to deter speeding.

**Education, training and publicity** programmes (such as Bikeability and Walkability for children) will continue with a particular focus on reducing pedestrian casualties.

**Motorcycle education and training** opportunities will continue, combined with promoting safety messages through the London Road Safety Council.

**Pedestrian safety to/from school** – this element of the programme delivers the school crossing patrols which can encourage more walking to schools as well as reducing road danger.

### Smarter Measures Programme

**School travel planning** will seek to reduce car journeys on the school run, with a corresponding increase in walking, cycling and scooter use.

**Cycle training for children and adults** to complement the development of the cycle route network in the borough.

**Travel awareness** – a continuation of a programme of campaigns and events to support the up-take of sustainable transport.

#### Town Centre Renewal Programme

**Erith** – this will include public realm and sustainable transport enhancements to complement the Erith Links project (see below).

**Crayford** – this will include public realm and sustainable transport enhancements within a Healthy Streets approach.

#### On-Street Parking Management (Controlled Parking Zones & Residential Parking Zones) Programme

**CPZ & RPZ** around rail stations will be reviewed and potentially extended to deter car commuting to local stations.

#### Accessibility Programme

**Bus stop accessibility** - almost all bus stops in Bexley offer step free access. However, opportunities will be taken to extend bus stop accessibility wherever possible.

**Station accessibility** measures such as dropped kerbs and tactile paving to assist access to rail stations would be carried out as well as measures to assist pedestrians and cyclists including provision of cycle parking. This programme would encourage more sustainable transport to access rail services and complement the CPZ programme around rail stations.

**Local area accessibility** - measures such as dropped kerbs and tactile paving can encourage more sustainable transport and the creation of Healthy Streets.

#### Liveable Neighbourhoods Programme

**Erith Links** – this project would seek to address transport and environmental issues and support the sustainable regeneration of the town centre; a key growth area within the Borough with plans for up to 6,000 new homes and up to 3,500 jobs, falling within the Bexley Riverside Opportunity Area. Plans include removing the one-way traffic system to enhance permeability, accessibility and bus speeds and reliability; a bus-only street and changes to bus routes; better pedestrian crossings within the town centre and on its approaches; improved cycle paths and facilities, measures to reduce congestion at the access points into the town centre, public realm improvements and better pedestrian waymarking between the station and the town centre. The objectives include enabling more walking, cycling and use of the bus for journeys into Erith; support sustainable residential development close to the town centre with minimal car parking provision; and support more footfall and regeneration.

#### Air Quality Programme

**Electric vehicle charging points** could include either a hub or cluster of rapid charging points and / or lamp column charging points for on-street parking.

**Anti-idling campaign** to challenge drivers idling vehicles parked in streets, particularly close to any schools. This would also form part of school travel planning and in addition, the Council will continue to promote AirTEXT (a free service for the public providing air quality alerts by SMS text message, email and voicemail and 3-day forecasts of air quality, pollen, UV and temperature across Greater London).

**Tree planting** opportunities will be taken as part of public realm schemes.

#### Footway Resurfacing Programme

**Footway Resurfacing Programme** includes the resurfacing of footways within the borough.

#### Street Lighting Programme

**Street lighting improvements** include the installation of LED lighting resulting in higher quality lighting and a halving of the lighting energy costs. The intention is to limit the current deterrent poor-quality street lighting has on people walking due to personal security and safety concerns.

#### Principal Road Renewal

**Principal Road Renewal** includes the assessment of road condition and dealing with high priority sites.

#### Bridge strengthening

**Bridge Strengthening** includes strengthening of bridges on Bridge Road and Church Road over the rail line near Bexleyheath Station.

#### Traffic Signal Modernisation

**Traffic Signal Modernisation** include identification of locations where signals are needed to be modernised to provide capacity for sustainable transport whilst also minimising congestion on the road network.

The below Programmes are included under the draft LIP3's long term interventions up to 2041.

- DLR extension from Gallions Reach through Thamesmead to Belvedere
- Extension of Elizabeth line east of Abbey Wood to Ebbsfleet
- Public transit corridor from North Greenwich to Slade Green - delivered in phases with initial work to deliver segregated bus-based transit on the corridor
- Road based river crossings – Belvedere to Rainham; Thamesmead to Gallions Reach
- Investment in road network - to address congestion on the South Thames development route including the Queens Road corridor
- River passenger services - extensions to the east

The below Strategic Transport Infrastructure Programmes are also included under the draft LIP3's long term interventions up to 2041.

- Public Transport
  - Extension of Elizabeth line from Abbey Wood to Ebbsfleet
  - Bus Priority Measures
  - North Bexley busway
- Highways Improvements: Junction Design Schemes
  - Harrow Manorway improvements Phase 1 - highway and public realm improvements and complements Abbey Wood station works
  - Harrow Manorway improvements Phases 2 and 3
  - Queens Road grade separation scheme - improvements to a roundabout and the construction of an additional rail bridge at Bexley Road
  - Yarnton Way/Eastern Way
  - Thames Road/Perry Street
  - Thames Road/Crayford Way
  - Bexley Road/Brook Street
  - Erith Links (see above)

## **6.5 Summary of Assessment of Draft LIP3 Delivery Plan**

The below tables provide a summary of the environmental assessment of the Programmes and Projects which form the draft LIP3 Delivery Plan.

Table 17 Healthy Streets Programme SEA Assessment table

Draft LIP3 Programme and Projects					
Healthy Streets Programme					
Yarnton Way – Bus, pedestrian and cycle improvements to Yarnton Way	Active Rail Connections “Routes to rail stations” – Improving routes to stations	Bus Priority – Improvements to reliability and speed	Cycle Route Network – Strategic and Local – Quiet ways and local cycle ways	Cycle Parking – Increased cycle parking provision at key locations	Commentary
1 Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.					
++ Local Medium Term Permanent High Certainty	+ Local Medium Term Permanent High Certainty	++ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	The Healthy Streets Programme will lead to a reduction in harmful air quality emissions within the Borough, as a result of physical measures encouraging modal shift. This will result in an overall minor to moderate positive, permanent, local to borough scale impact on air quality in the medium term.
2 Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.					
+ Local Medium Term Permanent High Certainty	+ Local Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	The Healthy Streets Programme will lead to a reduction in the level of transport noise within the Borough, as a result of physical measures encouraging modal shift.  The Yarnton Way project could reduce road noise at the Harrow Manorway and Yarnton Way junction. Improving routes to railway stations could reduce noise on roads leading to Bexley, Sidcup and Belvedere including the A2, A2016, A223, Dartford Road, Hurst Road, Station Road and Bronze Age Way.  The Programme will result in an overall minor to moderate positive, permanent, local to borough scale impact on noise in the medium term.
3 Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.					
++ Local Medium Term	+ Local Medium Term	+ Borough Medium Term	+ Borough Medium Term	+ Borough Medium Term	The Healthy Streets Programme will encourage a modal shift which will result in a reduction of congestion through reducing the need / desire to travel by car which will have an overall minor to

**Draft LIP3 Programme and Projects**  
**Healthy Streets Programme**

	Permanent High Certainty	Permanent High Certainty	Permanent High Certainty	Permanent High Certainty	Permanent High Certainty	moderate positive, permanent, local to borough scale impact on traffic congestion and travel choices in the medium term.
4	Conserve and enhance the Borough's natural, built and historic environment.					
	+ Local Long Term Permanent High Certainty	No connection	No connection	No connection	No connection	In the most part, the Healthy Streets Programme does not have a connection with conservation / enhancing the borough's natural, built and historic environment. However, the Yarnton Way project (which incorporates landscape improvements / tree planting) would have a minor positive, permanent, local impact on the built and natural environment in the long term due to the planned landscape improvements.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.					
	++ Local Short Term Permanent Low Certainty	- Local Short Term Permanent Low Certainty	No connection	- Local Short Term Permanent Low Certainty	- Local Short Term Permanent Low Certainty	In the most part, the Healthy Streets Programme does not have a connection with reducing flooding / promoting SuDS. However, the Yarnton Way project has the potential to include SuDS as part of landscaped corridor, resulting in a moderate positive, permanent, local impact on water quality and promotion of SuDS in the short term. Where projects may require land take there is the potential for an increase in impermeable areas, resulting in a minor negative, permanent, local impact on water quality and flooding in the short term.
6	Promote sustainable transport of waste					
	No connection	No connection	No connection	No connection	No connection	The Healthy Streets Programme does not have a connection with the promotion of the sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport					
	+++	+++	+	+++	+++	The Healthy Streets Programme will encourage a modal shift from private motor vehicles to walking

## Draft LIP3 Programme and Projects

### Healthy Streets Programme

Local	Local	Borough	Borough	Borough	and cycling. This will result in a substantial positive, permanent, local to borough scale impact in the short to medium term.
Medium Term	Short Term	Medium Term	Medium Term	Medium Term	
Permanent	Permanent	Permanent	Permanent	Permanent	
High Certainty	High Certainty	High Certainty	High Certainty	High Certainty	
8 Increase access to services, social and economic opportunities.					
++	+	+	+	+	The Healthy Streets Programme will lead to improved journey time reliability and reduced journey delay, whilst improving provision / access for walking and cycling. This will result in a minor to moderate positive, permanent, local to borough scale impact on access services, social and economic possibilities, in the short to medium term.
Local	Local	Borough	Borough	Borough	
Medium Term	Short Term	Medium Term	Medium Term	Medium Term	
Permanent	Permanent	Permanent	Permanent	Permanent	
High Certainty	High Certainty	High Certainty	High Certainty	High Certainty	
9 Promote social inclusion and equality.					
+	++	+	+	+	The Healthy Streets Programme will lead to an improved range of travel opportunities, accessibility, connectivity within the Borough. This will result in an overall minor to moderate positive, permanent, local to borough scale impact on social inclusion and equality in the short to medium term.
Local	Local	Borough	Borough	Borough	
Medium Term	Short Term	Medium Term	Medium Term	Medium Term	
Permanent	Permanent	Permanent	Permanent	Permanent	
High Certainty	High Certainty	Low Certainty	High Certainty	High Certainty	
10 Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.					
++	+	+	+	+	The Healthy Streets Programme will lead to an increase in journey time reliability, provision of walking, cycling and bus services and a potential reduction in traffic congestion. This will also increase the attractiveness of the Borough as a location in which to invest. This will result in an overall minor to moderate positive, permanent, local to borough scale impact on sustainable growth in the medium term.
Local	Local	Local	Borough	Borough	
Medium Term	Medium Term	Medium Term	Medium Term	Medium Term	
Permanent	Permanent	Permanent	Permanent	Permanent	
Medium Certainty	Medium Certainty	Medium Certainty	High Certainty	High Certainty	

Table 18 Vision Zero Programme SEA Assessment table



**Draft LIP3 Programme and Projects  
Vision Zero Programme**

SEA Objective	Local Safety Schemes – Enhancing pedestrian experience	Road Danger Reduction – Speed reduction measures	Education Training and Publicity – Pedestrian and cyclist training	Motor Vehicle – Education Training and publicity for motorists	Pedestrian Safety to/from school – School Crossing Patrols	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.					
	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent Low Certainty	+ Borough Medium Term Permanent High Certainty	No connection	+ Borough Short Term Permanent High Certainty	The Vision Zero Programme will lead to improvements in road safety (including driving style), encouraging a shift to non-motorised modes of travel. This will result in an overall minor positive, permanent, borough scale impact on air quality in the short to medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations					
	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent Medium Certainty	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent Medium Certainty	+ Borough Short Term Permanent High Certainty	The Vision Zero Programme will lead to improvements in road safety (including driving style), encouraging a shift to non-motorised modes of travel, resulting in a reduction in congestion through reducing the need to travel by car. This will result in an overall minor positive, permanent, borough scale impact on traffic congestion in the short to medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.					
	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	No connection	+ Borough Short Term Permanent High Certainty	The Vision Zero Programme will lead to improvements in road safety (including driving style), encouraging a shift to non-motorised modes of travel, resulting in a reduction in congestion through reducing the need to travel by car. This will result in an overall minor positive, permanent, borough scale impact on traffic congestion in the short to medium term.

4 Conserve and enhance the Borough's natural, built and historic environment.					
- Borough Short Term Permanent Low Certainty	- Borough Short Term Permanent Low Certainty	No connection	+ Borough Medium Term Permanent Medium Certainty	No connection	The Vision Zero Programme would encourage the slowing of vehicles leading to a reduction in vehicular intrusion. This would have a minor positive, permanent, borough scale impact on the natural, built and historic environment in the medium term. Local Safety Schemes and Speed Reduction Measures have the potential to affect sensitive townscapes / heritage assets, having a minor negative, permanent, borough scale impact in the short term.
5 Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.					
No connection	No connection	No connection	No connection	No connection	The Vision Zero Programme does not have a connection with promoting the sustainable transport of waste.
6 Promote sustainable transport of waste					
No connection	No connection	No connection	No connection	No connection	The Vision Zero Programme does not have a connection with promoting the sustainable transport of waste.
7 Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.					
++ Borough Medium Term Permanent High Certainty	++ Borough Medium Term Permanent High Certainty	++ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent Low Certainty	++ Borough Short Term Permanent High Certainty	The Vision Zero Programme will lead to improvements in road safety (including driving style), encouraging a shift to active modes of travel. This will result in a minor to moderate positive, permanent, borough scale impact on supporting a modal shift in the short to medium term.
8 Increase access to services, social and economic opportunities.					
+ Borough Medium Term	+ Borough Medium Term	+ Borough Medium Term	No connection	No connection	The Vision Zero Programme will lead to improved conditions (accessibility and safety) for walking and cycling, improving transport choice and relieving congestion. This will result in a minor positive, permanent, borough scale impact on access to services, social and economic possibilities, in the medium term.

**Draft LIP3 Programme and Projects  
Vision Zero Programme**

	Permanent	Permanent	Permanent		
	High	High	High		
	Certainty	Certainty	Certainty		
<hr/>					
9	Promote social inclusion and equality.				
	+	+	+	No connection	+
	Borough	Borough	Borough		Borough
	Medium	Medium	Medium		Short
	Term	Term	Term		Term
	Permanent	Permanent	Permanent		Permanent
	High	High	Low		Low
	Certainty	Certainty	Certainty		Certainty
	The Vision Zero Programme will lead to safety improvements borough-wide, including in deprived areas. This will result in an overall minor positive, permanent, borough scale impact on social inclusion and equality in the short to medium term.				
<hr/>					
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.				
	+	+	+	No connection	+
	Borough	Borough	Borough		Borough
	Medium	Medium	Medium		Short
	Term	Term	Term		Term
	Permanent	Permanent	Permanent		Permanent
	High	High	High		High
	Certainty	Certainty	Certainty		Certainty
	The Vision Zero Programme will lead to an increase in active transport participants' safe access to growth and regeneration areas within the Borough. This will also increase the attractiveness of the Borough as a location in which to invest. This will result in an overall minor positive, permanent, borough scale impact on sustainable growth in the short to medium term.				

Table 19 Smarter Measures Programme SEA Assessments table

Draft LIP3 Programme and Projects				
Smarter Measures Programme				
SEA Objective	School Travel Planning – Encouraging sustainable travel modes to school	Cycle Training – Encouraging safe cycling practices	Travel Awareness – Encouraging walking and cycling within the Borough	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.			
	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	The Smarter Measures Programme will lead to improved travel conditions, encourage safer cycling and encourage sustainable travel to school and work. This will result in a minor positive, permanent, borough wide impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.			
	+ Borough Medium Term Permanent Medium Certainty	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	The Smarter Measures Programme will lead to improved travel conditions, encourage safer cycling and encourage sustainable travel to school and work. This will encourage a modal shift from private motor vehicles to walking and cycling, reducing transportation noise. This would result in a minor positive, permanent, borough scale impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.			
	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	The Smarter Measures Programme will lead to a reduction in congestion through supporting a modal shift from private motor vehicles to sustainable travel modes. This will have a minor positive, permanent, borough scale impact on traffic congestion in the medium term.
4	Conserve and enhance the Borough's natural, built and historic environment.			
	+ Borough Medium Term Permanent	No connection	+ Borough Medium Term Permanent	The cycle training Smarter Measures Programme is unlikely to have a connection with conserving and enhancing the Borough's natural, built and historic environment. School travel planning and the travel awareness project may contribute to the retention and enhancement of townscape character through the encouragement of modal shift and the

**Draft LIP3 Programme and Projects**  
**Smarter Measures Programme**

	Medium Certainty		Medium Certainty	consequent reduction in vehicle intrusion. This will result in a minor positive, permanent, borough scale impact on the environment in the medium term.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.			
	No connection	No connection	No connection	The Smarter Measures Programme does not have a connection with the reduction of flooding, maintenance/ improvement of water quality or promotion of SuDS.
6	Promote sustainable transport of waste.			
	No connection	No connection	No connection	The Smarter Measures Programme widely does not have a connection with the sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.			
	++ Borough Medium Term Permanent High Certainty	++ Borough Medium Term Permanent High Certainty	+ Borough Medium Term Permanent High Certainty	The Smarter Measures Programme will encourage a modal shift to active travel as a result of improving the safety of walking and cycling. This will result in a minor to moderate positive, permanent, borough scale impact in the medium term.
8	Increase access to services, social and economic opportunities.			
	+ Borough Medium Term Permanent Medium Certainty	+ Borough Medium Term Permanent High Certainty	No connection	The Smarter Measures Programme will encourage sustainable travel throughout the Borough, thus contributing to improved access to services, social and economic opportunities. This will result in minor positive, permanent, borough scale impact on access to services, social and economic opportunities in the medium term.
9	Promote social inclusion and equality.			
	+ Borough Medium Term Permanent Low Certainty	+ Borough Medium Term Permanent Medium Certainty	+ Borough Medium Term Permanent Low Certainty	The Smarter Measures Programme may lead to an improved range of travel opportunities throughout the Borough. This will result in an overall minor positive, permanent, borough scale impact on social inclusion and equality in the medium term.
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.			
	No connection	+	+	The Smarter Measures Programme will encourage an increase in active transport participants' safe access to growth and regeneration areas

**Draft LIP3 Programme and Projects**  
**Smarter Measures Programme**

Borough	Borough	within the Borough. This will also increase the attractiveness of the Borough as a location in which to invest. This will result in an overall minor positive, permanent, borough scale impact on sustainable growth in the medium term.
Medium Term	Medium Term	
Permanent	Permanent	
High Certainty	High Certainty	

LIP 3 Project/Programme Town Centre Renewal Programme			
SEA Objective	Erith - public realm and sustainable transport enhancements to complement the Erith Links project	Crayford - public realm and sustainable transport enhancements within a Healthy Streets approach	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.		
	++ Local Medium Term Permanent High Certainty	++ Local Medium Term Permanent High Certainty	The Town Centre Renewal Programme will lead to improved public realm and encourage sustainable travel and in a shift from vehicular transport. The A206 in Erith is an AQFA and would benefit from improvements to air quality. This will result in an overall moderate positive, permanent, local impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.		
	+ Local Medium Term Permanent High Certainty	+ Local Medium Term Permanent High Certainty	The Town Centre Renewal Programme will encourage a modal shift from private motor vehicles to walking and cycling as a result of a more pleasant public realm and sustainable transport enhancements. A modal shift over time would reduce transportation noise in areas with elevated road noise which pass through Erith including A220 and A2016 (Bronze Age Way), and A206. In Crayford the Roman Way A207 and A2000 experience elevated road noise. This would result in a minor positive, permanent, local impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.		
	+ Local Medium Term Permanent High Certainty	+ Local Medium Term Permanent High Certainty	The Town Centre Renewal Programme will lead to reduction in congestion through supporting a modal shift from private motor vehicles to sustainable travel modes. This will have a minor positive, permanent, local impact on traffic congestion, in the medium term.
4	Conserve and enhance the Borough's natural, built and historic environment.		

**LIP 3 Project/Programme**  
**Town Centre Renewal Programme**

	+++ Local Long Term Permanent High Certainty	++ Local Long Term Permanent Medium Certainty	The Town Centre Renewal Programme would provide public realm enhancements which would contribute to conserving and enhancing the borough's natural, built and historic environment. This will result in a moderate to substantial positive, permanent, local impact on the environment in the long term.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.		
	+ Local Short Term Permanent Low Certainty	+ Local Short Term Permanent Low Certainty	The Town Centre Renewal Programme provides the potential to include SuDS as part of landscaped corridor as well as the potential for improvements to River Cray flood risk management through public realm works to Crayford Riverside. This will result in a minor positive, permanent, local impact on flooding, in the short term.
6	Promote sustainable transport of waste		
	No connection	No connection	The Town Centre Renewal Programme does not have a connection with the promotion of sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.		
	++ Local Medium Term Permanent High Certainty	++ Local Medium Term Permanent High Certainty	The Town Centre Renewal Programme would encourage a direct modal shift as a result of promoting sustainable transport and contributing to healthy and safer streets. This will result in a moderate positive, permanent, local impact on supporting a modal shift in the medium term.
8	Increase access to services, social and economic opportunities.		
	++ Local Medium Term Permanent High Certainty	++ Local Medium Term Permanent High Certainty	The Town Centre Renewal Programme will lead to improved access to services, social and economic opportunities through improved public transport access, walking and cycling. This will result in a moderate positive, permanent, local impact on access to services, social and economic opportunities in the medium term.
9	Promote social inclusion and equality.		
	++	++	The Town Centre Renewal Programme will lead to an improved public realm including better accessibility and connectivity within



LIP 3 Project/Programme

Town Centre Renewal Programme

	Local Medium Term Permanent High Certainty	Local Medium Term Permanent High Certainty	currently more deprived local areas. This will result in a moderate positive, permanent, local impact on social inclusion and equality in the medium term
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.		
	+++ Local Medium Term Permanent High Certainty	+++ Local Medium Term Permanent High Certainty	The Town Centre Renewal Programme would lead to an increase in active transport participants' safe access to growth and regeneration areas within the Borough. This will also increase the attractiveness of the Borough as a location in which to invest. This would result in an overall substantial positive, permanent, local impact on sustainable growth in the medium term.

Table 21 On-Street Parking Management [CPZs & RPZs] Programme SEA Assessment table

LIP 3 Project/Programme On-Street Parking Management [CPZs & RPZs] Programme		
SEA Objective	CPZ Rail Stations - CPZs around rail stations will be reviewed and potentially extended to deter car commuting to local stations.	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	
	+ Borough Medium Term Permanent Low Certainty	The CPZs & RPZs Programme could lead to reduced available parking in the Borough, as a result there could be a modal shift from private motor vehicles to sustainable travel modes. This could result in an overall minor positive, permanent, borough scale impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	
	+ Borough Medium Term Permanent Low Certainty	The CPZs & RPZs Programme could support a modal shift from private motor vehicles to walking, cycling and bus. This modal shift over time could reduce transportation noise. This could result in an overall minor positive, permanent, borough scale impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	
	+ Borough Short Term Permanent Medium Certainty	The CPZs & RPZs Programme will encourage a modal shift, encouraging active travel modes, which could result in reduced congestion near stations. This will have an overall minor positive, permanent, borough scale impact on traffic congestion, and improving travel choices in the short term.
4	Conserve and enhance the Borough's natural, built and historic environment.	
	+ Borough Short Term	The CPZs & RPZs Programme will encourage a modal shift, encouraging active travel modes, which could result in reduced congestion near stations. This will have an overall minor positive, permanent, borough scale impact on traffic congestion,

LIP 3 Project/Programme

On-Street Parking Management [CPZs & RPZs] Programme

	Permanent Medium Certainty	and improving travel choices in the short term.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	
	No connection	The CPZs & RPZs Programme does not have a connection with the reduction of flooding, maintenance / improvement of water quality or promotion of SuDS.
6	Promote sustainable transport of waste	
	No connection	The CPZs & RPZs Programme does not have a connection with promoting sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	
	+ Borough Short term Permanent Medium Certainty	The CPZs & RPZs Programme may reduce the desire to travel by car, encouraging the use of active modes of transport. This will result in a minor positive, permanent, borough scale impact in the short term.
8	Increase access to services, social and economic opportunities.	
	No connection	The CPZs & RPZs Programme does not have a connection with increasing access to services, social and economic opportunities.
9	Promote social inclusion and equality.	
	No connection	The CPZs & RPZs Programme does not have a connection with promoting social inclusion and equality.
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.	
	+ Borough Short Term Permanent High Certainty	The CPZs & RPZs Programme will lead to a reduced traffic congestion at stations by reducing cars parked in streets around stations and encouraging the sustainable growth of regeneration areas within the Borough. This will result in an overall minor positive, permanent, borough scale impact in the short term.

Table 22 Accessibility Programme SEA Assessment table

SEA Objective	Bus stop accessibility - extending bus stop accessibility	Station Accessibility - measures to assist pedestrians and cyclists	Local Area Accessibility - measures such as dropped kerbs and tactile paving	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.			
	+	+	+	The Accessibility Programme will lead to improved accessibility encouraging sustainable / active travel. This will result in an overall minor positive, permanent, local to borough scale impact on air quality in the medium term.
	Local	Local	Borough	
	Medium Term	Medium Term	Medium Term	
	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.			
	+	+	+	The Accessibility Programme will lead to improved accessibility encouraging sustainable / active travel. A modal shift over time would reduce transportation noise. This will result in a minor positive, permanent, local to borough scale impact on noise in the medium term.
	Local	Local	Borough	
	Medium Term	Medium Term	Medium Term	
	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.			
	+	+	+	The Accessibility Programme would support a modal shift from private motor vehicles to walking, cycling and bus use. This will have an overall minor positive, permanent, local to borough impact on traffic congestion in the medium term.
	Local	Local	Borough	
	Medium Term	Medium Term	Medium Term	
	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	
4	Conserve and enhance the Borough's natural, built and historic environment.			
	-	-	-	Projects within the Accessibility Programme have the potential to affect sensitive townscapes / heritage assets, having a minor negative, permanent, borough scale impact in
	Borough	Borough	Borough	

Draft LIP3 Programme and Projects

Accessibility Programme

	Short Term	Short Term	Short Term	the short term.
	Permanent	Permanent	Permanent	
	Low Certainty	Low Certainty	Low Certainty	
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.			
	-	-	-	Where projects within the Accessibility Programme may require land take there is the potential for an increase in impermeable areas, resulting in a minor negative, permanent, local impact on water quality and flooding in the short term.
	Local	Local	Local	
	Short Term	Short Term	Short Term	
	Permanent	Permanent	Permanent	
	Low Certainty	Low Certainty	Low Certainty	
6	Promote sustainable transport of waste			
	No connection	No connection	No connection	The Accessibility Programme does not have a connection with the promotion of sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.			
	+	+++	+++	The Accessibility Programme will encourage a direct modal shift as a result of improving the pedestrian and cycle access and bus stop access. This will result in a minor to substantial positive, permanent, local to borough scale impact on supporting a modal shift in the short term.
	Local	Local	Borough	
	Short Term	Short Term	Short Term	
	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	
8	Increase access to services, social and economic opportunities.			
	+	+	+	The Accessibility Programme will lead to improving pedestrian, cycle and bus access at key locations including stations in the Borough. This will result in a minor positive, permanent, local to borough scale impact on access services, social and economic opportunities, in the short term.
	Local	Local	Borough	
	Short Term	Short Term	Short Term	
	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	
9	Promote social inclusion and equality.			
	+	++	+	The Accessibility Programme will lead to improved accessibility and connectivity at numerous locations across
	Local	Local	Borough	

Draft LIP3 Programme and Projects

Accessibility Programme

	Short Term Permanent High Certainty	Short Term Permanent High Certainty	Short Term Permanent High Certainty	the Borough. This will result in an overall minor to moderate positive, permanent, local to borough scale impact on social inclusion and equality in the short term.
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.			
	+ Local Medium Term Permanent Medium Certainty	+ Local Medium Term Permanent Medium Certainty	+ Borough Medium Term Permanent Medium Certainty	The Accessibility Programme will lead to an increase in active transport participants' sustainable access to growth and regeneration areas within the Borough. This will result in a minor positive, permanent, local to borough scale impact on sustainable growth in the medium term.

Table 23 Liveable Neighbourhoods Programme SEA Assessment table

Draft LIP 3 Project/Programme Liveable Neighbourhoods Programme		
SEA Objective	Erith Links - addressing transport and environmental issues and supporting the sustainable regeneration of the town centre	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	
	++ Local Medium Term Permanent High Certainty	The Liveable Neighbourhoods Programme would support a modal shift from private motor vehicles to walking, cycling and bus. The A206 in Erith is an AQFA, and thus the project could benefit air quality at this hot spot. This will result in a moderate positive, permanent, local impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	
	+ Local Medium Term Permanent High Certainty	The Liveable Neighbourhoods Programme will encourage a modal shift from private motor vehicles to walking, cycling and bus. Over time, this would reduce transportation noise in areas with elevated road noise which pass through Erith including the A220, A2016 (Bronze Age Way), and A206. This will result in a minor positive, permanent, local impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	
	++ Local Medium Term Permanent High Certainty	The Liveable Neighbourhoods Programme will encourage a modal shift from private motor vehicles to walking, cycling and bus. Plans to remove the one-way system would also enhance permeability and reduce severance and measures to enhance the town centre access points would reduce congestion. This will have an overall moderate positive, permanent, local impact on traffic congestion and improving travel choices in the medium term.
4	Conserve and enhance the Borough's natural, built and historic environment.	
	++ Local Long Term	The Liveable Neighbourhoods Programme would provide public realm enhancements which would contribute to conserving and enhancing the Borough's natural, built and historic environment. This will result in a moderate positive, permanent, local impact on the environment in the long term.

Draft LIP 3 Project/Programme  
Liveable Neighbourhoods Programme

	Permanent Medium Certainty	
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	
	- Local Short Term Permanent Low Certainty	Where elements of the Erith Links project may require land take there is the potential for an increase in impermeable areas, resulting in a minor negative, permanent, local impact on water quality and flooding in the short term.
6	Promote sustainable transport of waste	
	No connection	The Liveable Neighbourhoods Programme does not have a connection with the sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	
	++ Local Medium term Permanent High Certainty	The Liveable Neighbourhoods Programme will encourage a modal shift as a result of improved public realm, additional cycle parking / paths and pedestrian crossing and waymarking. This will result in a moderate positive, permanent, local impact on supporting a modal shift in the medium term.
8	Increase access to services, social and economic opportunities.	
	++ Local Medium Term Permanent High Certainty	The Liveable Neighbourhoods Programme will lead to improved accessibility to bus stops, waymarking and cycle provisions. This will result in a moderate positive, permanent, local impact on access services, social and economic opportunities, in the medium term.
9	Promote social inclusion and equality.	
	++ Borough Medium Term Permanent High Certainty	The project is located within one of the more deprived areas of Bexley. The Liveable Neighbourhoods Programme will lead to improved range of travel opportunities in and connectivity to locations within and beyond the local area. This will result in an overall moderate positive, permanent, local impact on social inclusion and equality in the medium term.
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.	



Draft LIP 3 Project/Programme  
Liveable Neighbourhoods Programme

++  
Local  
Medium Term  
Permanent  
High Certainty

The Liveable Neighbourhoods Programme will improve town centre congestion and help to reduce severance within Erith. This will result in a moderate positive, permanent, local impact on sustainable growth in the medium term.

Table 24 Air Quality Programme SEA Assessments table

Draft LIP3 Programme and Projects				
Air Quality Programme				
SEA Objective	Electric Vehicle Charging Points – hubs and lamp columns	Anti-idling campaign – to form part of school travel planning	Tree Planting - as part of public realm schemes	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.			
	++ Regional Long Term Permanent High Certainty	+ Borough Short Term Permanent High Certainty	+++ Borough Medium Term Permanent Medium Certainty	The Air Quality Programme will support the uptake of, and ability to use, zero and low emission vehicles, better driving and public awareness. Additionally, appropriate tree planting and species selection will reduce air pollution. This will result in a minor to substantial positive, permanent, borough to regional scale impact on air quality in the short to long term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.			
	+ Local Long Term Permanent High Certainty Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	+ Borough Medium Term Permanent Medium Certainty	No connection	The Air Quality Programme would through the electrical vehicle charging points project support the uptake of, and ability to use, quieter zero and low emission vehicles and as a result would encourage a change in travel habits which would reduce transportation noise. This would result in a minor positive, permanent, local to borough scale impact on noise in the medium to long term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.			
	No connection	No connection	No connection	The Air Quality Programme does not have a connection with the reduction of road traffic and congestion.
4	Conserve and enhance the Borough's natural, built and historic environment.			
	+ Borough Long Term	+ Borough Medium Term	++ Borough Long Term	The Air Quality Programme would lead to a reduction in vehicle emissions within the Borough. As a result, traffic related emission deposition would reduce, which would enhance the quality and preservation of habitats,

## Draft LIP3 Programme and Projects

### Air Quality Programme

	Permanent High Certainty	Permanent Medium Certainty	Permanent High Certainty opportunity	buildings and built / natural landscape. Tree planting would also enhance townscape character and could offer biodiversity opportunities. This would result in a minor to moderate positive, permanent, borough scale impact in the medium to long term.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.			
	No connection	No connection	+ Local Short Term Permanent Low Certainty	The Air Quality Programme through the tree planting programme could provide for inclusion of SuDS as part of a landscaped corridor. This would result in a minor positive, permanent, local impact on reducing flooding, improving water quality and promotion of SuDS in the short term.
6	Promote sustainable transport of waste			
	No connection	No connection	No connection	The Air Quality Programme does not have a connection with the sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.			
	No connection	No connection	+ Borough Medium Term Permanent Medium Certainty	The Air Quality Programme could lead to a modal shift as a result of improving the active transport modes' appeal through the creation of a more pleasant public realm. This could result in a minor positive, permanent, borough scale impact on supporting a modal shift in the medium term.
8	Increase access to services, social and economic opportunities.			
	No connection	No connection	No connection	The Air Quality Programme does not have a connection with access to services, social and economic opportunities.
9	Promote social inclusion and equality.			
	No connection	No connection	No connection	The Air Quality Programme does not have a connection with promoting social inclusion and equality.
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.			
	+ Borough Long Term	+ Borough Long Term	No connection	The Air Quality Programme will support growth and regeneration areas within the borough through improving localised air quality conditions particularly in areas of poor air quality. This will result in a minor

Draft LIP3 Programme and Projects

Air Quality Programme

Permanent  
High Certainty

Permanent  
High Certainty

positive, permanent, borough scale impact on sustainable growth in the long term.

Table 25 Footway Resurfacing Programme SEA Assessment table

LIP 3 Project/Programme		
Footway Resurfacing		
SEA Objective	Footway Resurfacing	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	
	+ Borough Medium Term Permanent High Certainty	The Footway Resurfacing Programme will lead to improving conditions for pedestrians, encouraging a modal shift from private motor vehicles to walking. This will result in a minor positive, permanent, borough scale impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	
	+ Borough Medium Term Permanent High Certainty	The Footway Resurfacing Programme will encourage a modal shift from private motor vehicles to walking. A modal shift over time would reduce transportation noise. This will result in a minor positive, permanent, borough scale impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	
	+ Borough Medium Term Permanent High Certainty	The Footway Resurfacing Programme will encourage a modal shift from private motor vehicles to walking and cycling. This will have an overall minor positive, permanent, borough scale impact on traffic congestion in the medium term.

LIP 3 Project/Programme

Footway Resurfacing

4	Conserve and enhance the borough's natural, built and historic environment.	
	No connection	The Footway Resurfacing Programme does not have a connection with the conservation and enhancement of the borough's natural, built and historic environment.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	
	No connection	The Footway Resurfacing Programme does not have a connection with the reduction of flooding, maintenance / improvement of water quality or promotion of SuDS.
6	Promote sustainable transport of waste.	
	No connection	The Footway Resurfacing Programme does not have a connection with the promotion of the sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	
	+ Borough Short term Permanent High Certainty	The Footway Resurfacing Programme may encourage a modal shift as a result of improving the safety and desirability of walking. This will result in a minor positive, permanent, borough scale impact on supporting a modal shift to active travel in the short term.
8	Increase access to services, social and economic opportunities.	
	+ Borough Short Term Permanent High Certainty	The Footway Resurfacing Programme will lead to better access to services, social and economic opportunities through improving pedestrian access. This will result in a minor positive, permanent, borough scale impact on access services, social and economic opportunities, in the short term.
9	Promote social inclusion and equality.	
	+ Borough Short Term Permanent High Certainty	The Footway Resurfacing Programme will lead to an increase in active transport participants' safe access to growth and regeneration areas within the borough through improving provision for walking including to and from modes of public transport. This will result in an overall minor positive, permanent, borough scale impact on sustainable growth in the short to medium term.

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10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.
+	
Borough	The Footway Resurfacing Programme will lead to an increase in active transport participants' safe access to growth and regeneration areas within the borough through improving provision for walking including to and from modes of public transport. This will result in an overall minor positive, permanent, borough scale impact on sustainable growth in the short to medium term.
Medium Term	
Permanent	
Medium Certainty	

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Table 26 Street Lighting Programme SEA Assessment table

LIP 3 Project/Programme		
Street Lighting		
SEA Objective	Street Lighting	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	
	+ Borough Medium Term Permanent Low Certainty	The Street Lighting Programme could lead to improving conditions / and encouraging sustainable travel to school and work and encouraging safer cycling. This could result in an overall minor positive, permanent, borough scale impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	
	+ Borough Medium Term Permanent Low Certainty	The Street Lighting Programme could encourage a modal shift from private motor vehicles to active modes of travel. A modal shift over time would reduce transportation noise. This could result in an overall minor positive, permanent, borough scale impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	
	+ Borough Medium Term Permanent Low Certainty	The Street Lighting Programme could encourage a modal shift from private motor vehicles to sustainable travel modes which would result in a reduction of road traffic. This could have an overall minor positive, permanent, borough scale impact on traffic congestion in the medium term.
4	Conserve and enhance the Borough's natural, built and historic environment.	
	-	The Street Lighting Programme could affect townscape character by increasing light pollution at night and increasing street clutter with increased lighting stands. The artificial lighting could also have disturbing effect on bats. This could result in a minor negative,



LIP 3 Project/Programme

Street Lighting

	Borough Short Term Permanent Low Certainty	permanent, borough scale impact on the environment in the short term.
5		Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.
	No connection	The Street Lighting Programme does not have a connection with the reduction of flooding, maintenance / improvement of water quality or promotion of SuDS.
6		Promote sustainable transport of waste.
	No connection	The Street Lighting Programme does not have a connection with the promotion of the sustainable transport of waste.
7		Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.
	++ Borough Medium term Permanent High Certainty	The Street Lighting Programme will encourage a modal shift as a result of improving the safety of walking and cycling. This will result in a moderate positive, permanent, borough scale impact on supporting active travel in the medium term.
8		Increase access to services, social and economic opportunities.
	+ Borough Medium Term Permanent Medium Certainty	The Street Lighting Programme will lead to access to services, social and economic opportunities through improved conditions for walking and cycling and connecting to public transport. This will result in a minor positive, permanent, borough scale impact on access to services, social and economic opportunities, in the medium term.
9		Promote social inclusion and equality.
	+ Borough Medium Term Permanent Medium Certainty	The Street Lighting Programme could improve safety in deprived areas and for disadvantaged groups leading to improved range of travel opportunities, accessibility, connectivity within the Borough. This could result in an overall minor positive, permanent, borough scale impact on social inclusion and equality in the medium term.

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10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.
+	The Street Lighting Programme will lead to an improvement in active transport participants' safe access to growth and regeneration areas within the borough reduction. This could result in an overall minor positive, permanent, borough scale impact on sustainable growth in the medium term.
Borough	
Medium Term	
Permanent	
Medium Certainty	

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Table 27 Principal Road Renewal Programme SEA Assessment table

LIP 3 Project/Programme Principal Road Renewal		
SEA Objective	Principal Road Renewal - Proactive principal road renewal, assessing and investing in the boroughs roads.	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	
	+ / - Borough Medium Term Permanent Low Certainty	Principal Road Renewal would lead to improved road surfaces in the Borough focusing on key sites. Better traffic flows as a result of road renewal could lead to reduced congestion, thus potentially improving air quality. However, an improved road network may limit modal shift. This would result in a minor negative to minor positive (depending on the renewal type), permanent, borough scale impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	
	+ / - Borough Medium Term Permanent High Certainty	Principal Road Renewal could lead to isolated improvements to traffic flow within the borough. The improvements to road surfaces and driving conditions could reduce transportation noise. However, an improved road network may limit modal shift. This could result in a minor negative to minor positive (depending on the renewal type), permanent, borough scale impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	
	+ / - Borough Short Term Permanent Medium Certainty	Principal Road Renewal would lead to improvements to the quality of the roads, which would result in reduced congestion. An improved road network may limit modal shift. This will have an overall minor negative to minor positive, permanent, borough scale impact on traffic congestion and bus reliability in the short term.
4	Conserve and enhance the borough's natural, built and historic environment.	
	No connection	Principal Road Renewal does not have a connection with conserving and enhancing the natural, built and historic

		environment.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	
	No connection	Principal Road Renewal does not have a connection with the reduction of flooding, maintenance / improvement of water quality or promotion of SuDS.
6	Promote sustainable transport of waste.	
	No connection	Principal Road Renewal does not have a connection with the promotion of the sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	
	+ / - Borough Long Term Permanent Low Certainty	Principal Road Renewal would lead to improvements to the road network, which would make transport by car more desirable, potentially limiting modal shift. However, improvements to the road network could also lead to greater bus reliability and better conditions for active travel modes (cycle lanes). This could result in a minor negative to minor positive, permanent, borough scale impact in the short to long term.
8	Increase access to services, social and economic opportunities.	
	+ Borough Short Term Permanent High Certainty	Principal Road Renewal will lead to better access to services, social and economic opportunities through improving road quality. This will result in a minor positive, permanent, borough scale impact on access services, social and economic opportunities, in the short term.
9	Promote social inclusion and equality.	
	+ Borough Short Term Permanent High Certainty	Principal Road Renewal will lead to improvements in road quality in deprived areas and across the Borough. This will result in an overall minor positive, permanent, borough scale impact in the short term.
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.	
	+ Borough	Principal Road Renewal would support sustainable growth and regeneration within the Borough through improving the quality of roads. This would result in an overall minor positive, permanent, borough scale impact on sustainable growth

Medium Term

in the medium term.

Permanent

Medium Certainty

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Table 28 Bridge Strengthening Programme SEA Assessment table

LIP 3 Project/Programme		
Bridge Strengthening Programme		
SEA Objective	Bridge Strengthening - Strengthening of bridges on Bridge Road and Church Road over rail line.	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	
+ / -		Bridge Strengthening has the potential to reduce congestion (including elsewhere in the network) and delay and reduce travel distances, thus potentially improving air quality. However, increased traffic flow over bridges may increase adverse localised air quality impacts. The project would therefore result in a minor negative to minor positive, permanent, local scale impact on air quality in the medium term.
Local		
Medium Term		
Permanent		
Low Certainty		
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	
+ / -		Bridge Strengthening will lead to improvement to road capacity and have the potential to reduce congestion (including elsewhere in the network) and delay and reduce travel distances, thus potentially improving transportation noise impacts on parts of the network. However, increased traffic flow over bridges may increase adverse noise impacts within these areas. This will result in a minor negative to minor positive, permanent, borough scale impact on noise in the medium term.
Local		
Medium Term		
Permanent		
Low Certainty		
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	
+ / -		Bridge Strengthening could lead to an increase in traffic flows, reducing congestion on surrounding roads, by increasing the volume and maximum weight of vehicles which can cross. Traffic flow alternations could lead to increased congestion in surrounding roads. Bridge Strengthening would have an overall minor negative to minor positive, permanent, local scale impact on traffic congestion, and improving travel routes in the short term.
Local		
Short Term		
Permanent		
Low Certainty		

LIP 3 Project/Programme

Bridge Strengthening Programme

4	Conserve and enhance the borough's natural, built and historic environment.	
	No connection	Bridge Strengthening does not have the potential to affect the natural, built and historic environment.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	
	No connection	Bridge Strengthening does not have a connection with the reduction of flooding, maintenance / improvement of water quality or promotion of SuDS.
6	Promote sustainable transport of waste.	
	No connection	Bridge Strengthening does not have a connection with promoting sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	
	- Local Medium Term Permanent Low Certainty	Bridge Strengthening would increase the capability of the network to handle greater volumes / weights of vehicles, limiting encouragement of modal shift. This could result in a minor negative, permanent, local scale impact in the medium term.
8	Increase access to services, social and economic opportunities.	
	+ Local Medium Term Permanent High Certainty	Bridge Strengthening would increase traffic flows, with the potential to alleviate congestion on other routes because of existing weight restrictions on Church Road and Bridge Road, leading to improved access to services, social and economic opportunities. This will result in an overall minor positive, permanent, local scale impact in the medium term.
9	Promote social inclusion and equality.	
	No connection	Bridge Strengthening does not have a connection with the promotion of social inclusion and equality.
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.	
	No connection	Bridge Strengthening does not have a connection with the support of sustainable growth and regeneration within the Borough.

Table 29 Traffic Signal Modernisation Programme SEA Assessment table

LIP 3 Project/Programme		
Traffic Signal Modernisation Programme		
SEA Objective	Traffic Signal Modernisation	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.	
	+ Borough Medium Term Permanent Low Certainty	Traffic Signal Modernisation would lead to reduced congestion and provide capacity for sustainable transport in the Borough. Quicker journeys using sustainable routes would lead to a reduction in adverse air pollutant emissions. This could result in an overall minor positive, permanent, regional scale impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.	
	+ Borough Medium Term Permanent Low Certainty	Traffic Signal Modernisation would provide capacity for sustainable personal vehicles and reduce congestion on the road network. This modal and traffic flow shift over time could reduce transportation noise. This would result in an overall minor positive, permanent, borough scale impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.	
	+ Borough Short Term Permanent Medium Certainty	Traffic Signal Modernisation would encourage a modal and traffic flow shift, by enabling increased capacity for sustainable travel modes, whilst reducing congestion throughout the Borough. This would have an overall minor positive, permanent, borough scale impact on traffic congestion, and improving travel choices in the short term.



LIP 3 Project/Programme

Traffic Signal Modernisation Programme

4	Conserve and enhance the borough's natural, built and historic environment.	
	No connection	Traffic Signal Modernisation does not have a connection with the conservation and enhancement of the borough's natural built and historic environment.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.	
	No connection	Traffic Signal Modernisation does not have a connection with the reduction of flooding, maintenance / improvement of water quality or promotion of SuDS.
6	Promote sustainable transport of waste.	
	No connection	Traffic Signal Modernisation does not have a connection with the promotion of the sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.	
	+ Borough Short term Permanent Medium Certainty	Traffic Signal Modernisation would increase the capacity for sustainable transport, encouraging the use of active modes of transport decreasing the desire to travel by car. This will result in a minor positive, permanent, borough scale impact in the short term.
8	Increase access to services, social and economic opportunities.	
	+ Borough Short term Permanent Low Certainty	Traffic Signal Modernisation will lead to improved junction functionality, which would reduce congestion, and increase pedestrian accessibility, users of junction crossings and sustainable transport would benefit from a greater access to services, social and economic opportunities. This will result in a minor positive, permanent, borough impact on access to services, social and economic opportunities, in the short term.
9	Promote social inclusion and equality.	
	+ Borough Medium term Permanent Medium Certainty	Traffic Signal Modernisation will lead to improvements in deprived areas and across the Borough. This will result in an overall minor positive, permanent, borough scale impact in the medium term.

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10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.
+	Traffic Signal Modernisation will lead to reduced traffic congestion and encourage sustainable transport which will encourage growth of regeneration areas within the Borough. This will result in an overall minor positive, permanent, borough scale impact in the short term.
Borough	
Short Term	
Permanent	
High Certainty	

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Table 30 The Long-Term Interventions up to 2041 SEA Assessment table

Draft LIP3 Programme and Projects – Long Term							
Long-Term Interventions up to 2041							
SEA Objective	DLR extension from Gallions Reach through Thamesmead to Belvedere	Extension of Elizabeth line east of Abbey Wood to Ebbsfleet	Public transit corridor from North Greenwich to Slade Green	Road based river crossings– Belvedere to Rainham; Thamesmead to Gallions Reach	Investment in road network	River passenger services	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.						
	++	++	+	+ / -	+ / -	+	The Long-Term Interventions up to 2041 will lead to improvements in accessibility and in some cases facilitate a modal shift to public transport. Road based river crossings and investment in the road network have the potential to reduce congestion (including elsewhere in the network) and delay and reduce travel distances, thus potentially improving air quality. However, an improved road network may limit modal shift. These Long-Term Interventions up to 2041 would therefore result in an overall minor negative to moderate positive (depending on the intervention type), permanent, regional scale impact on air quality in the medium to long term.
	Regional	Regional	Regional	Regional	Regional	Regional	
	Long Term	Medium Term	Long Term	Medium Term	Long Term	Long Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	Low Certainty	High Certainty	High Certainty	Low Certainty	Low Certainty	Medium Certainty	
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive						

locations.							
+	+	+	+ / -	+ / -	+	<p>The Long-Term Interventions up to 2041 will lead to improvements in accessibility and in some cases facilitate a modal shift to public transport. This would result in a reduction in the level of transport noise, compared to increased demand with no projects. Road based river crossings and investment in the road network have the potential to reduce congestion (including elsewhere in the network) and delay and reduce travel distances, thus potentially improving transportation noise impacts. However, an improved road network may limit modal shift. This will result in a minor negative to minor positive (depending on the intervention type), permanent, regional scale impact on noise in the medium to long term.</p>	
Regional	Regional	Regional	Regional	Regional	Regional		
Medium Term	Medium Term	Medium Term	Medium Term	Long Term	Medium Term		
Permanent	Permanent	Permanent	Permanent	Permanent	Permanent		
Medium Certainty	Medium Certainty	Medium Certainty	Low Certainty	Low Certainty	Medium Certainty		
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.						<p>The Long-Term Interventions up to 2041 have the potential to encourage a modal shift as a result of improved travel choices and improvements to existing infrastructure may result in a reduction in congestion through both road improvements and reducing the need to travel by car. This will have a substantial</p>
+++	+++	+++	+	+	+++		
Regional	Regional	Regional	Regional	Regional	Regional		
Short Term	Short Term	Short Term	Short Term	Long Term	Medium Term		
Permanent	Permanent	Permanent	Permanent	Permanent	Permanent		
High Certainty	High Certainty	High Certainty	Low Certainty	Low Certainty	Low Certainty		

positive, permanent, regional scale impact on traffic congestion in the short term.

4	Conserve and enhance the Borough's natural, built and historic environment.						
	-	-	-	-	-	-	
	Regional	Regional	Regional	Regional	Regional	Regional	
	Medium Term	Medium Term	Medium Term	Medium Term	Medium Term	Medium Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	Medium Certainty	Medium Certainty	Medium Certainty	Medium Certainty	Medium Certainty	Medium Certainty	
							The Long-Term Interventions up to 2041 have the potential to affect the natural, built and historic environment. This could have at least a minor negative, permanent, borough impact on the built and natural environment in the medium term, unless mitigated as each project progresses. Dependant on the route or investment location of the projects there could be impacts to green belt and local nature reserves in the east of the borough.
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.						
	-	-	-	-	-	No connection	
	Local	Local	Local	Local	Local		
	Short Term	Short Term	Short Term	Short Term	Short Term		
	Permanent	Permanent	Permanent	Permanent	Permanent		
	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty		
							Where elements of the Long-Term Interventions up to 2041 may require land take there is the potential for an increase in impermeable areas, resulting in a minor negative, permanent, local impact on water quality and flooding in the short term.
6	Promote sustainable transport of waste						
	No connection	No connection	No connection	No connection	No connection	No connection	
							The Long-Term Interventions up to 2041 do not have a connection with the promotion of the sustainable transport of waste.

## Draft LIP3 Programme and Projects – Long Term

### Long-Term Interventions up to 2041

7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.						
	++	++	++	-	-	++	<p>Most of the Long-Term Interventions up to 2041 would reduce the need / desire to travel by car, thus encouraging active travel. This would result in a moderate positive, permanent, borough scale impact in the short to long term.</p> <p>The Long-Term Interventions up to 2041 which relate to road networks would result in a minor negative, permanent, borough scale impact in the short to long term.</p>
	Regional	Regional	Regional	Regional	Regional	Regional	
	Short Term	Short Term	Medium Term	Medium Term	Long Term	Medium Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	Low Certainty	High Certainty	High Certainty	Low Certainty	Low Certainty	High Certainty	
8	Increase access to services, social and economic opportunities.						
	++	+++	++	+++	+	+	<p>The Long-Term Interventions up to 2041 will lead to improved access to services, social and economic opportunities. This will result in a moderate to substantial positive, permanent, regional impact on access to services, social and economic opportunities, in the short to medium term.</p>
	Regional	Regional	Regional	Regional	Regional	Regional	
	Short Term	Short Term	Medium Term	Medium Term	Medium Term	Medium Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	Low Certainty	High Certainty	High Certainty	High Certainty	Medium Certainty	Low Certainty	
9	Promote social inclusion and equality.						
	++	++	+	++	+	+	<p>The Long-Term Interventions up to 2041 will lead to improvements in deprived areas and across the Borough. This will result in an overall minor to moderately positive, permanent, regional</p>
	Regional	Regional	Regional	Regional	Regional	Regional	
	Short Term	Short Term	Medium Term	Short Term	Medium Term	Medium Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	Low Certainty	High Certainty	High Certainty	High Certainty	Low Certainty	High Certainty	

scale impact in the short to medium term.

10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.						
	+++	+++	++	+++	+	+	The Long-Term Interventions up to 2041 would support sustainable growth and regeneration within the Borough. This would result in an overall minor to substantial positive, permanent, regional scale impact on sustainable growth in the short to medium term.
	Regional	Regional	Regional	Regional	Regional	Regional	
	Short Term	Short Term	Medium Term	Medium Term	Medium Term	Medium Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	High Certainty	High Certainty	Medium Certainty	

Table 31 Strategic Transport Infrastructure – Public Transport SEA Assessment table

Draft LIP3 Programme and Projects – Long Term				
Strategic Transport Infrastructure - Public Transport				
SEA Objective	Extension of Elizabeth line from Abbey Wood to Ebbsfleet	Bus priority measures	North Bexley busway	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.			
	++ Regional Medium Term Permanent High Certainty	++ Borough Medium Term Permanent High Certainty	++ Local Medium Term Permanent High Certainty	The Public Transport Strategic Transport Infrastructure projects would lead to a reduction in harmful transport related air quality emissions within the Borough, as a result of physical measures encouraging modal shift. This will result in an overall minor to moderate positive, permanent, local to borough impact on air quality in the medium term.
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations			
	+ Regional Medium Term Permanent Medium Certainty	+ Borough Medium Term Permanent High Certainty	+ Local Medium Term Permanent High Certainty	The Public Transport Strategic Transport Infrastructure projects would lead to a reduction in the level of transport noise within the Borough, as a result of physical measures encouraging modal shift. This will result in an overall minor positive, permanent, local- borough impact on noise in the medium term.
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.			
	+++ Regional Short Term Permanent High Certainty	+ Local Medium Term Permanent High Certainty	++ Local Medium Term Permanent High Certainty	The Public Transport Strategic Transport Infrastructure projects would encourage a modal shift which will result in a reduction of congestion through reducing the need / desire to travel by car which will have an overall minor to moderate positive, permanent, local to borough impact on



				traffic congestion, and improving travel choices in the medium term
4	Conserve and enhance the Borough's natural, built and historic environment.			
	-	-	-	The Public Transport Strategic Transport Infrastructure projects have the potential to affect the natural, built and historic environment. This could have at least a minor negative, permanent, borough impact on the built and natural environment in the medium term, unless mitigated as each project progresses.
	Regional	Regional	Local	
	Medium Term	Medium Term	Medium Term	
	Permanent	Permanent	Permanent	
	Medium Certainty	Medium Certainty	Medium Certainty	
5	Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.			
	-	-	-	Where elements of the Public Transport Strategic Transport Infrastructure projects may require land take there is the potential for an increase in impermeable areas, resulting in a minor negative, permanent, local impact on water quality and flooding in the short term.
	Local	Local	Local	
	Short Term	Short Term	Short Term	
	Permanent	Permanent	Permanent	
	Low Certainty	Low Certainty	Low Certainty	
6	Promote sustainable transport of waste			
	No connection	No connection	No connection	The Public Transport Strategic Transport Infrastructure projects do not have a connection with the promotion of the sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.			
	++	++	++	The Public Transport Strategic Transport Infrastructure projects would encourage a modal shift as a result of improvements to public transport routes within the Borough. This will reduce the need / desire to travel by car and contribute to active modes of transport (to and from public transport provision). This will result in a moderate positive, permanent, local to regional scale impact in the short to medium term.
	Regional	Local	Local	
	Short Term	Short Term	Medium Term	
	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	

**Draft LIP3 Programme and Projects – Long Term**  
**Strategic Transport Infrastructure - Public Transport**

8	Increase access to services, social and economic opportunities.			
+++	+	++		The Public Transport Strategic Transport Infrastructure projects would lead to improved journey time reliability and reduced journey delay. This will result in a minor to substantial positive, permanent, local to regional scale impact on access services, social and economic opportunities, in the short to medium term.
Regional	Local	Local		
Short Term	Short Term	Medium Term		
Permanent	Permanent	Permanent		
High Certainty	High Certainty	High Certainty		
9	Promote social inclusion and equality.			
++	++	+		The Public Transport Strategic Transport Infrastructure projects would lead to an improved range of travel opportunities, accessibility, connectivity within the Borough. This will result in an overall minor to moderate positive, permanent, local to regional impact on social inclusion and equality in the short to medium term.
Regional	Local	Local		
Short Term	Short Term	Medium Term		
Permanent	Permanent	Permanent		
High Certainty	High Certainty	High Certainty		
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.			
+++	+	++		The Public Transport Strategic Transport Infrastructure projects would lead to an increase in journey time reliability, provision of bus and rail infrastructure and a potential reduction in traffic congestion. This will result in an overall minor to substantial positive, permanent, local to regional impact on sustainable growth in the short to medium term.
Regional	Local	Local		
Short Term	Medium Term	Medium Term		
Permanent	Permanent	Permanent		
High Certainty	Medium Certainty	Medium Certainty		

Table 32 Strategic Transport Infrastructure Highways Improvements

Draft LIP3 Programme and Projects – Long Term (Erith Links assessed above and not covered here)

Strategic Transport Infrastructure - Highway Improvements: junction design schemes

SEA Objective	Harrow Manorway improvements Phase 1	Harrow Manorway improvements Phases 2 and 3	Queens Road grade separation scheme	Yarnton Way/Eastern Way	Thames Road/Perry Street	Thames Road/Crayford Way	Bexley Road/Brook Street	Commentary
1	Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality.							
	+	+	+	+	+	+	+	The Strategic Transport Infrastructure Highway Improvements projects would lead to improvements in road safety and traffic flow producing safer conditions particularly for walking and cycling. This is likely to encourage a modal shift which will result in an overall minor positive, permanent, local impact on air quality in the short term.
	Local	Local	Local	Local	Local	Local	Local	
	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	High Certainty	High Certainty	High Certainty	High Certainty	
2	Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations							
	+	+	+	+	+	+	+	The Strategic Transport Infrastructure Highway Improvements projects may lead to a reduction in inequalities in exposure and the level of transport noise within the Borough This could be achieved by improvements to traffic flows, reduced congestion and improvements to junctions identified as having elevated noise levels. This would result in an overall minor positive, permanent, local impact on noise in the short term.
	Local	Local	Local	Local	Local	Local	Local	
	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	
3	Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.							

Draft LIP3 Programme and Projects – Long Term (Erith Links assessed above and not covered here)

Strategic Transport Infrastructure - Highway Improvements: junction design schemes

++	++	++	++	++	++	++	++	The Strategic Transport Infrastructure Highway Improvements projects would reduce road traffic and congestion but would be unlikely to reduce the need / desire to travel by car. Overall this will have a moderate positive, permanent, local impact on traffic congestion in the short term.
Local	Local	Local	Local	Local	Local	Local	Local	
Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	
Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
High Certainty	High Certainty	High Certainty	High Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	
4 Conserve and enhance the Borough's natural, built and historic environment.								
-	-	-	-	-	-	-	-	The Strategic Transport Infrastructure Highway Improvements projects have the potential to affect the natural, built and historic environment. For example, Lesnes Abbey woods is located 100m south east of the Harrow Manorway works. These projects could have at least a minor negative, permanent, borough impact on the built and natural environment in the medium term, unless mitigated as each project progresses.
Local	Local	Local	Local	Local	Local	Local	Local	
Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	
Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
High Certainty	High Certainty	High Certainty	High Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	
5 Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.								
-	-	-	-	-	-	-	-	Where the Strategic Transport Infrastructure Highway Improvements projects may require land take there is the potential for an increase in impermeable areas, resulting in a minor negative, permanent, local impact on water quality and flooding in the short term.
Local	Local	Local	Local	Local	Local	Local	Local	
Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	
Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	
6 Promote sustainable transport of waste								

Draft LIP3 Programme and Projects – Long Term (Erith Links assessed above and not covered here)

Strategic Transport Infrastructure - Highway Improvements: junction design schemes

	No connection	No connection	No connection	No connection	No connection	No connection	No connection	No connection	The Strategic Transport Infrastructure Highway Improvements projects do not have a connection with the promotion of sustainable transport of waste.
7	Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport.								
	No connection	No connection	No connection	No connection	No connection	No connection	No connection	No connection	The Strategic Transport Infrastructure Highway Improvements projects do not have a connection with the promotion of healthy streets. [specifics to be added once more is known about projects]
8	Increase access to services, social and economic opportunities.								
	+	+	+	+	+	+	+	+	The Strategic Transport Infrastructure Highway Improvements projects would lead to improved conditions for drivers, cyclists and pedestrians. This will result in a minor positive, permanent, local scale impact on access to services, social and economic opportunities, in the short term.
	Local	Local	Local	Local	Local	Local	Local	Local	
	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	
9	Promote social inclusion and equality.								
	++	++	+	+	+	+	+	+	The Strategic Transport Infrastructure Highway Improvements projects may reduce poor existing junction functionality and these projects may increase accessibility to areas within the borough and therefore promote social inclusion and equality. For example, the Harrow Manorway Improvements aim to reduce
	Local	Local	Local	Local	Local	Local	Local	Local	
	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	
	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
	High Certainty	High Certainty	High Certainty	Medium Certainty	Medium Certainty	Medium Certainty	Medium Certainty	Medium Certainty	

Draft LIP3 Programme and Projects – Long Term (Erith Links assessed above and not covered here)  
 Strategic Transport Infrastructure - Highway Improvements: junction design schemes

								segregation within with the Borough as well as improving the existing road network.
10	Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.							
++	++	++	+	+	+	+	+	The Strategic Transport Infrastructure Highway Improvements projects will lead to a reduction in congestion and road traffic within the borough, increasing permeability to regeneration zones promoting sustainable growth. This would result in an overall minor to moderate positive, permanent, local impact on sustainable growth in the short term.
Local	Local	Local	Local	Local	Local	Local	Local	
Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	Short Term	
Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	
High Certainty	High Certainty	High Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	Low Certainty	

The assessment has identified that the implementation of the draft LIP3 will result in largely positive effects in respect of the SEA Objectives, in relation to the following which summarises how the draft LIP3's three-year indicative Programme of Investment for period 2019/20 to 2021/22 meets the SEA Objectives:

- *Objective 1: Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve – especially in areas of poorest air quality:*

The proposed suite of Programmes and Projects will collectively work to increase modal shift in favour of public transport, walking and cycling via a package of physical intervention measures together with measures which promote behavioural change. Furthermore, the air quality programme includes a package of measures specifically designed to reduce vehicular emissions and air pollution. The majority of measures are either minor or moderate positive when considered against this SEA Objective.

- *Objective 2: Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations:*

The package of measures designed to introduce modal shift coupled with those aimed at behavioural change will collectively serve to reduce vehicular movements associated with trips within the private car, which should in turn reduce transportation noise. The proposed Projects are generally considered to be minor positive in respect of this SEA Objective, with a limited number of instances where moderate positive impacts are recorded.

- *Objective 3: Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices:*

Implementation of the proposed measures designed to address modal shift will have consequential implications for traffic volumes and congestion. The majority of measures scored as minor positive against this SEA Objective, with a small number scoring as moderate positive including those urban realm improvements specifically aimed at providing liveable neighbourhoods and traffic-free routeways.

- *Objective 7: Contribute to healthy streets by reducing the need / desire to travel by car and enable residents to choose active modes of transport:*

The proposed suite of LIP3 Programmes and Projects score positively against this SEA Objective, ranging from minor to substantial positive. Unsurprisingly the Healthy Streets Programme itself is considered likely to result in substantial positive outcomes in the majority of cases, where measures are proposed which will facilitate active transportation modes - i.e. walking and cycling. The Vision Zero, Smarter Measures and Accessibility Programmes also score well against this SEA Objective by virtue of the implementation of measures directly aimed at creating safer environments for non-car users and facilitating modal shift. The majority of other Projects are also recognised as contributing positively to the achievement of this SEA Objective.

- *Objective 8: Increase access to services, social and economic opportunities:*

This SEA Objective scored positively in relation to a large number of Projects, with the remainder having no connection. Scores range from minor to moderate positive, associated with improved transport choices, journey times and reliability, all resulting in improved access to services and jobs and other social infrastructure.

- *Objective 9: Promote social inclusion and equality:*

A large number of the proposed Projects also score positively in relation to this SEA Objective for similar reasons to those set out for SEA Objective 8 above - namely improved transport choice, accessibility and connectivity between modes, with measures designed for implementation across the Borough including in deprived areas. While not all the Projects exhibited a connection with this SEA Objective, those that did were assessed as resulting in a minor or moderate positive effect.

- *Objective 10: Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough:*

Improved transport choices, safer environments for all transport users, in particular pedestrians and cyclists, reduced journey times and congestion, better connectivity and increased accessibility are also assessed positively in relation to SEA Objective 10, with these all being factors likely to support economic growth, competitiveness and regeneration and increase the attractiveness of the Borough as a place to invest. A large proportion of the proposed Projects again scored positively against this SEA Objective, with these scores ranging from minor to moderate positive.

For SEA Objectives 4 and 5, namely *Conserve and enhance the Borough's natural, built and historic environment* and *Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS*, a combination of potential positive and negative effects was identified. Positive effects are generally identified where specific aspects of a physical intervention were assessed as likely to deliver some environmental betterment or enhancement, for example public realm and greenway improvements resulting in landscaping, tree planting and the incorporation of SuDS. However, in other cases, there could be adverse environmental effects associated with the implementation of particular Projects, depending on their specific design and location, and in the absence of mitigation. Such effects could include visual intrusion especially upon sensitive features, disturbance to habitats / loss of biodiversity, and increase in surface water run-off / flooding. Further consideration is given to those specific mitigation measures that could help ameliorate such effects at detailed design stage in **Section 6.6** below.

The remaining SEA Objective is *Objective 6: Promoting the Sustainable Transport of Waste*. Very few aspects of the proposed LIP3 programme and projects displayed a connection with this Objective, and further consideration may need to be given to ways in which the LIP3 can facilitate the achievement of this goal.

## **6.6 Mitigation**

As indicated in **Section 6.5** above, the assessment of proposed individual Projects demonstrates that for the most part the implementation of the draft LIP3 is likely to have positive effects in relation to the SEA Objectives. In a limited number of cases, however, the SEA has identified the potential for negative effects to occur, particularly in relation to Objective 4 'Conserve and enhance the Borough's natural, built and historic environment' and Objective 5 'Reduce flooding using at source management of surface water run-off, maintain and improve water quality and promote SuDS'.

In accordance with Task B5 of the SEA Process, consideration has therefore been given below to a number of mitigation measures that should be employed when implementing the specific Projects proposed within the draft LIP3 to minimise any negative effects that could otherwise occur. These comprise the following:

- Ensure that any Projects that include physical works, in particular land-take that increases the impermeable area, include appropriate measures to minimise the risk of flooding, including SuDS where possible / practical;



- Seek to minimise the loss or displacement of habitats as a result of physical interventions and where this is unavoidable ensure appropriate compensatory provision;
- Propose opportunities for the creation and enhancement of habitats wherever possible and appropriate;
- Consider carefully the design of any physical works which have the potential to directly or indirectly affect heritage assets, including their settings, to minimise the potential for adverse impacts to occur;
- Seek to limit 'street clutter' which could arise from the implementation of a number of Projects (e.g. lighting columns, signage, electricity charging points) and which could cumulatively result in an adverse effect upon character of the townscape, including heritage assets in some circumstances, considering co-location of required equipment where possible; and
- Ensure the implementation of new and replacement street lighting which minimises unnecessary light spill and which is designed to be sensitive to bats.

In relation to the long-term interventions up to 2041, in particular the four specific Projects proposed (namely the DLR and Elizabeth Line extensions, the public transit corridor and the road-based river crossings) due to their scale and nature will all be subject to more detailed impact assessment at the project stage. Mitigation measures are likely to comprise both inherent mitigation (designed in to the scheme) together with additional measures to be secured alongside their implementation and will be identified as the design of each project progresses.

## 7. Monitoring

The SEA Directive requires that processes are in place to be able to monitor the significant effects of the implementation of plans and programmes, in order to determine whether the effects of the plan or programme are as anticipated, and thereby determine the success or otherwise of the initiatives contained within it, which will in turn inform future revisions of the plan. This comprises Task B6 of the SEA process.

To this end, a series of measures have been devised, designed to enable the performance of LIP3 to be monitored throughout its implementation period. These monitoring measures have been clearly linked back to the respective SEA objectives to demonstrate the full assessment / implementation cycle.

Each monitoring measure comprises an indicator of relevance to the SEA objective in question, together with a target where it is possible to identify one that is both meaningful and measurable. Where a specific target is not proposed, a directional aspiration is indicated in its place (increase / decrease).

For consistency and compatibility, the indicators and targets encapsulate those that are proposed for monitoring the performance of LIP3 within the LIP document itself. Other monitoring measures include: national indicators and targets of relevance to the LIP (e.g. for air quality); monitoring already undertaken by TfL and LBB in relation to the LIP process; other environmental monitoring measures extracted and adapted from LBB's Annual Monitoring Report; and other relevant measures devised where data is available and able to be manipulated to determine the performance of the LIP against the SEA Objectives.

The relevant indicators and targets are detailed in **Table 33**. These have been discussed and agreed in advance with relevant officers at LBB, who will be responsible for overseeing the monitoring.

LBB will report progress against the SEA targets annually. As indicated above, many of the targets are the same as those included in the draft LIP3, which will also be reported annually.

LBB will monitor the environmental outcomes of the draft LIP3 for any unforeseen environmental effects and, if necessary, LBB will take remedial action if any negative outcomes are identified.

Table 33 Monitoring Programme

Monitoring Programme			
SEA Objective	Proposed Indicator	Target (if applicable) or direction of movement	Data Source / Monitoring Party / Period
1. <b>Reduce air pollution (including greenhouse gases) and ensure air quality continues to improve, particularly in areas of poorest quality</b>	NO <sub>2</sub> concentrations at LBB continuous monitoring stations. Reported as 3yr moving average.	Year on year decrease in concentrations. Target to meet relevant objectives for protection of health including the Air Quality Strategy Objectives and EU Limit Values.	London Borough of Bexley / Continuous Monitoring
	Number of days when NO <sub>2</sub> objectives are exceeded in LBB. Reported as 3yr moving average.	Year on year decrease in concentrations. Target to meet relevant objectives for protection of health including the Air Quality Strategy Objectives and EU Limit Values.	London Borough of Bexley / Continuous Monitoring
	PM <sub>10</sub> concentrations at LBB continuous monitoring stations. Reported as 3yr moving average.	Year on year decrease in concentrations. Target to meet relevant objectives for protection of health including the Air Quality Strategy Objectives and EU Limit Values.	London Borough of Bexley / Continuous Monitoring
	Number of days when PM <sub>10</sub> objectives are exceeded in LBB. Reported as 3yr moving average.	Year on year decrease in concentrations. Target to meet relevant objectives for protection of health including the Air Quality Strategy Objectives and EU Limit Values.	London Borough of Bexley / Continuous Monitoring
	PM <sub>10</sub> and PM <sub>2.5</sub> emissions (in tonnes) from road transport in LBB.	55PM <sub>10</sub> and 27PM <sub>2.5</sub> by 2021 (base year 2013).	London Atmospheric Emission Inventory (GLA / TfL)
	CO <sub>2</sub> emissions (in tonnes) from road transport in LBB.	169,000 tonnes by 2021 (base year 2013).	London Atmospheric Emission Inventory (GLA / TfL)

Monitoring Programme			
SEA Objective	Proposed Indicator	Target (if applicable) or direction of movement	Data Source / Monitoring Party / Period
	NO <sub>x</sub> emissions (in tonnes) from road transport in LBB.	270 tonnes by 2021 (base year 2013).	London Atmospheric Emission Inventory (GLA / TfL)
	Number of electric charging points installed within LBB.	Year on year increase in number of electric charging points installed: - On-street; - Off-street; - Workplace.	London Borough of Bexley / Annual
2.	<b>Reduce transportation noise generated by vehicle use including inequalities in exposure and control the level of transport noise impacts on sensitive locations.</b>	Change in traffic data (volume 18h-AAWT, speed, %HGVs) for key routes within LBB.	Year on year reduction in overall flows; Year on year reduction in % HGVs.
			London Borough of Bexley / Annual Data from DfT: <a href="https://www.dft.gov.uk/traffic-counts/cp.php?la=Bexley#countpointstable">https://www.dft.gov.uk/traffic-counts/cp.php?la=Bexley#countpointstable</a>
3.	<b>Reduce road traffic and congestion through reducing the need / desire to travel by car and improving travel choices.</b>	Amount of new or upgraded on-carriageway segregated cycle routes within LBB (km).	Increase.
	Length of new Greenways and Quietways created within LBB (km).	Increase.	Transport for London / Annual
	Length of pedestrian footway improved within LBB (km).	Increase.	Transport for London / Annual
	Length of bus lane created within LBB (km).	Increase.	Transport for London / Annual
	Number of car club bays implemented or secured by LBB.	Increase.	London Borough of Bexley / Annual

**Monitoring Programme**

SEA Objective	Proposed Indicator	Target (if applicable) or direction of movement	Data Source / Monitoring Party / Period
	Walking, cycling and public transport mode share (by borough resident) in LBB based on average daily trips.	Increase - Target of 46% by 2021, 63% by 2041	Transport for London / Annual
	Vehicle kilometres in given year in LBB.	Reduce overall traffic levels by 10-15 % from base year of 2015. Target of 917 million vehicle kms by 2021.	Transport for London / Annual
	Trips by public transport per day by trip origin in LBB. Reported as 3yr moving average.	25% increase on base year average (2013/14 - 2015/16). 124,000 by 2021.	Transport for London / Annual
	Annualised average bus speeds in LBB. Base year 2015.	Increase by 1% from base year (2015). 12.5mph by 2021.	Transport for London / Annual
	Total cars owned and car ownership per household for borough residents in LBB.	Reduce - Target of 112,000 by 2021.	Transport for London / Annual
4.	<b>Conserve and enhance the borough's natural, built and historic environment</b>		
	Loss of listed buildings or landmark buildings in conservation areas.	No loss.	London Borough of Bexley / Annual
	Net change in area of biodiversity importance and / or protected by nature conservation designation.	No net loss of designated land (SSSI, Sites of Metropolitan, Borough or Local Importance for Nature Conservation; and Local Nature Reserves). Increase in biodiversity importance of existing habitats / creation of new habitats.	London Borough of Bexley / Annual

Monitoring Programme				
SEA Objective	Proposed Indicator	Target (if applicable) or direction of movement	Data Source / Monitoring Party / Period	
	Number of items of 'street clutter' removed.	Increase	London Borough of Bexley / Annual	
	Number of new street trees planted in LBB; Number of replacement street trees planted in LBB; Number of street trees felled for safety reasons in LBB; Number of street trees felled for other reasons in LBB.	Increase	London Borough of Bexley / Annual	
5.	<b>Reduce flooding using at source management of surface water runoff, maintain and improve water quality and promote SuDS.</b>	The extent of public highway at risk of flooding.	Reduce.	London Borough of Bexley / Annual
		Number of highway improvement schemes incorporating SuDS.	Increase.	London Borough of Bexley / Annual
6.	<b>Promote sustainable transport of waste.</b>	Proportion of waste being transported by river or rail.	Increase	
		Percentage of Euro VI standard waste vehicles.	All vehicles at least Euro VI	SERCO London Borough of Bexley by 2020.
7.	<b>Contribute to healthy streets by reducing the need/desire to travel by car and enable residents to choose active modes of transport</b>	Proportion of LBB residents doing at least 2x10 minutes of active travel a day (or a single block of 20 minutes or more).	Increase in 6% from the baseline 32% by 2021	Transport for London / Annual
		Proportion of LBB residents living within 400m of the London-wide strategic cycle network.	7% by 2021	Transport for London / Annual

## Monitoring Programme

SEA Objective	Proposed Indicator	Target (if applicable) or direction of movement	Data Source / Monitoring Party / Period
	Deaths and serious injuries (KSIs) from road collisions in LBB.	32 by 2022 (base year 2005/09)	Transport for London and Metropolitan Police / Annual
	Deaths and serious injuries (KSIs) from road collisions in LBB.	14 by 2030 (base year 2010/14)	Transport for London and Metropolitan Police / Annual
	Number of on-street and off-street cycle parking facilities installed in LBB.	Increase	London Borough of Bexley / Annual
	Number of junctions treated to improve cycling in LBB.	Increase	London Borough of Bexley / Annual
	Number of protected crossing facilities provided to facilitate pedestrian movement and safety in LBB.	Increase	London Borough of Bexley / Annual
	New roads where 20mph zones / limits have been introduced (km) in LBB.	Increase	London Borough of Bexley / Annual
	Incidences of crime at bus stops and rail stations in LBB.	Decrease	Metropolitan Police / British Transport Police / Annual
	Number of School Travel Plans (STPs) in LBB schools and proportion of STPs at Silver and Gold level.	Increase	London Borough of Bexley / Annual
	Number of adults and children who are 'bikeability' trained in LBB.	Bikeability Level 1 - Increase Bikeability Level 2 - Increase Bikeability Level 3 - Increase	London Borough of Bexley / Annual

Monitoring Programme			
SEA Objective	Proposed Indicator	Target (if applicable) or direction of movement	Data Source / Monitoring Party / Period
	Rate of excess weight in children in Year 6 in LBB.	Reduce by a minimum of 2% over 5 years (by 2024) with a stretch target of 5%. <i>Draft target from Bexley's draft Obesity Prevention Strategy.</i>	Clinical Commissioning Group and London Borough of Bexley  / Annual
	Percentage of physically active adults in LBB.	Increase by 10% over 5 years (by 2024) - from 61.5% to 71.5%. <i>Draft target from Bexley's draft Obesity Prevention Strategy.</i>	Clinical Commissioning Group and London Borough of Bexley  / Annual
	Rate of excess weight in adults in LBB	Reduce the level of excess weight in adults by 10% from 64.6% to 54.6%. <i>Draft target from Bexley's draft Obesity Prevention Strategy.</i>	Clinical Commissioning Group and London Borough of Bexley  / Annual
8.	<b>Increase access to services, social and economic opportunities.</b>	Number of people living in areas which are PTAL 4 or above.	Increase  Transport for London / Annual
9.	<b>Promote social inclusion and equality.</b>	Reduce the difference between total public transport network journey time and total step-free public transport network journey time.	Base year 2015 Reduce the difference by 49% (by 2041)  Transport for London / Annual
	Number of crossing upgrades (e.g. pedestrian crossings where facilities have been provided for disabled people).	Increase	London Borough of Bexley  / Annual



Monitoring Programme			
SEA Objective	Proposed Indicator	Target (if applicable) or direction of movement	Data Source / Monitoring Party / Period
10. <b>Promote sustainable growth by supporting employment, economic competitiveness and regeneration in the Borough.</b>	Number of people living, and jobs created in OAPF areas with PTAL 4 or above.	Increase	London Borough of Bexley / Annual

## 7.1 Next Steps

This draft SEA Environmental Report, which presents the outcome of the SEA process contained within Tasks A to C (refer to **Figure 1** and **Section 4.3.1**), will next be subject to a process of consultation (SEA Task D1).

The draft SEA Environmental Report will form an appendix to the draft LIP3, and will be made available for consultation alongside it. LBB will submit their consultation draft LIP3 to TfL and other relevant consultees on **2 November 2018** and TfL will provide their consultation response by **7 December 2018**.

Following the outcome of the LIP3 consultation process, any changes made to the draft LIP3 as a result of consultee comments will be subject to a process of re-assessment, and these re-assessment outcomes will be reported in the final SEA Environmental Report (Task D2).

The final SEA Environmental Report will summarise how the findings of the SEA have been taken into account and how environmental considerations have been integrated into the final LIP3 (Task D3). The monitoring measures contained within the draft SEA Environmental Report will also be confirmed or amended following consultation comments and an updated suite of measures presented in the final SEA Environmental Report.

The final SEA Environmental Report will accompany the final LIP3 which will be submitted to TfL on **16 February 2019**.



## APPENDICES

## A. Relevant Policies, Plans and Programmes

Policies, Plans and Programmes (PPP)	PPP Author	Date	Type of PPP
<b>European</b>			
Conservation of natural habitats and of wild fauna and flora - Council Directive 92/43/EEC	European Union	1992	EU Directive
Water Framework Directive - Directive 2000/60/EC	European Union	2000	EU Directive
Strategic Environmental Assessment Directive - Directive 2001/42/EC	European Union	2001	EU Directive
Environmental Noise Directive - Directive 2002/49/EC	European Union	2002	EU Directive
Waste Framework Directive - Directive 2008/98/EC	European Union	2008	EU Directive
Conservation of wild birds - Directive 2009/147/EC	European Union	2009	EU Directive
Good Practice Guide on Noise exposure and potential health effects	European Union	2010	Technical Guidance
Roadmap to a single European transport area: Towards a competitive and resource-efficient transport system	European Union	2011	EU Strategy
Groundwater Directive - Directive 2006/118/EC as amended (2014/80/EU)	European Union	2014	EU Directive
Environmental Air Quality Directive - Directive 2015/1480/EC	European Union	2015	EU Directive
<b>National</b>			
Road Traffic Act 1984	HM Government	1984	Legislative Compliance
Road Vehicles (Construction & Use) Regulations 1986	HM Government	1986	Legislative Compliance
Road Traffic Act 1988	HM Government	1988	Legislative Compliance
Road Traffic Act 1991	HM Government	1991	Legislative Compliance
Road Traffic Reduction Act 1997, HM Government	HM Government	1997	Legislative Compliance
Greater London Authority Act 1999	HM Government	1999	Legislative Compliance
Transport Act 2000	HM Government	2000	Legislative Compliance
Strategic Environmental Assessment Guidance for Transport Plans and Programmes' TAG Unit 2.11	Department for Transport	2004	Transport Policy Guidance
The Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/1633 as amended)	HM Government	2004	Legislative Compliance
Traffic Management Act 2004	HM Government	2004	Legislative Compliance
A Practical Guide to the SEA Directive	Office of the Deputy Prime Minister	2005	SEA Guidance
Road Safety Act 2006	HM Government	2006	Legislative Compliance
Greater London Authority Act 2007	HM Government	2007	Legislative Compliance

<b>Policies, Plans and Programmes (PPP)</b>	<b>PPP Author</b>	<b>Date</b>	<b>Type of PPP</b>
Local Transport Act 2008	HM Government	2008	Legislative Compliance
Equality Act 2010	HM Government	2010	Legislative Compliance
Strategic Framework for Road Safety	Department for Transport	2011	Transport Policy Guidance
Department for Transport monitoring and evaluation strategy	Department for Transport	2013	National Strategy
Accessible rail transport	Department for Transport and Disabled Persons Transport Advisory Committee	2015	Transport Policy Guidance
Road investment strategy for the 2015 to 2020 road period	Department for Transport	2015	National Strategy
Preparing the second roads investment strategy	Department for Transport	2016	National Strategy
Traffic Signs Regulations and General Directions 2016	HM Government	2016	Legislative Compliance
A strategic vision for rail	Department for Transport	2017	National Strategy
Cycling and walking investment strategy	Department for Transport	2017	National Strategy
The Clean Growth Strategy - Leading the way to a low carbon future (2017)	HM Government	2017	National Strategy
Transport Investment Strategy - Moving Britain Ahead (2017)	Department for Transport	2017	National Strategy
Draft Clean Air Strategy (2018)	Defra	2018	National Strategy
National Planning Policy Framework (2018)	HM Government	2018	Planning Policy Guidance
Technical support to plan cycling and walking networks	Department for Transport	2018	Transport Policy Guidance
Transport appraisal and modelling strategy: informing future investment decisions	Department for Transport	2018	National Strategy
<b>London</b>			
Supplementary Planning Guidance - Planning for Equality and Diversity in London	Mayor of London	2007	Planning Policy Guidance
Supplementary Planning Guidance - All London Green Grid	Mayor of London	2012	Planning Policy Guidance
Supplementary Planning Guidance - Land for Industry and Transport	Mayor of London	2012	Planning Policy Guidance
Thames Estuary 2100 Plan	Environment Agency	2012	Strategy
Supplementary Planning Guidance - Creating a London Accessible to all	Mayor of London	2014	Planning Policy Guidance
Supplementary Planning Guidance - Social Infrastructure	Mayor of London	2015	Planning Policy Guidance
London Environment Strategy	Mayor of London	2016	Mayor's Strategy

## Appendices

<b>Policies, Plans and Programmes (PPP)</b>	<b>PPP Author</b>	<b>Date</b>	<b>Type of PPP</b>
Sub-regional Transport Plan 2010 (East London) including interim updates	Mayor of London/Transport for London	2016	Mayor's Policy Aspirations
The London Plan (including alterations from 2011 onwards)	Mayor of London	2016	Mayor's Policy Aspirations
Draft Culture Strategy (final due summer 2018)	Mayor of London	2017	Mayor's Strategy
Draft Economic Development Strategy (final due Spring / summer 2018)	Mayor of London	2017	Mayor's Strategy
Draft Health Inequalities Strategy - Better Health for All Londoners (final Health Inequalities Strategy in to be published in 2018)	Mayor of London	2017	Mayor's Strategy
Draft Health Inequalities Strategy (final due summer 2018)	Mayor of London	2017	Mayor's Strategy
Draft Housing Strategy (final due summer 2018)	Mayor of London	2017	Mayor's Strategy
Draft London Plan (final due late 2019)	Mayor of London	2017	Draft Planning Policy
Draft New London Plan a Spatial Development Strategy (SDS) (final due late 2018)	Mayor of London	2017	Mayor's Strategy
Draft Mayor's Economic Development Strategy for London, final due May 2018	Mayor of London	2017	Mayor's Strategy
Healthy Streets for London	Mayor of London/Transport for London	2017	Mayor's Policy Aspirations
Mayors' Vision Zero	Mayor of London	2017	Mayor's Policy Aspirations
Strategic Cycle Analysis	Transport for London	2017	Transport Policy Guidance
Guidance for Borough Officers on Developing the Third Local Implementation Plan	Mayor of London/Transport for London	2018	Mayor's Policy Guidance
London Environment Strategy (final due summer 2018)	Mayor of London	2018	Mayor's Strategy
Mayor's Transport Strategy 2018	Mayor of London	2018	Mayor's Strategy
Streets for All	Historic England	2018	Guidance
<b>Local (LBB)</b>			
Open Space Strategy*	LBB	2008	Local Authority Strategy
Sustainability Appraisal Report, Bexley Core Strategy Proposed Submission Document*	LBB	2010	Adopted Planning Policy – Supporting Document
Environmental Sustainability Strategy (2011)	LBB	2011	Local Authority Strategy

Policies, Plans and Programmes (PPP)	PPP Author	Date	Type of PPP
Bexley Local Plan (including Bexley Core Strategy and saved Unitary Development Plan Policies) - Note: Bexley is currently developing its strategic policies for the next Local Plan (2020-2040), which will replace the current Local Plan (including Core Strategy and saved Unitary Development Plan Policies), being consulted through the Preferred Approach for Strategic and Detailed Policies (in Aug 2018). *	LBB	2012	Adopted Planning Policy
Bexley Parking Strategy and Action Plan (2014) *	LBB	2014	Local Authority Strategy
Bexley Road Safety Plan 2016 to 2019	LBB	2016	Local Authority Strategy
Bexley Sites of Importance for Nature Conservation (Site by Site Review)	LBB	2016	Emerging Planning Policy – Evidence Base
Joint Strategic Needs Assessment	LBB	2016	Emerging Planning Policy – Evidence Base
Bexley Air Quality Annual Status Report for 2016	LBB	2017	Local Authority Documentation
Bexley Corporate Plan for 2017-2025	LBB	2017	Local Authority Strategy
Growth Strategy (2017)	LBB	2017	Local Authority Strategy
Local Flood Risk Management Strategy	LBB	2017	Local Authority Strategy
Annual report and annual accounts 2017/18	LBB and NHS CCG	2018	Local Authority Annual Review Report
Draft Bexley Air Quality Annual Status Report for 2017	LBB	2018	Local Authority Documentation

**Notes:**

\* A number of policy documents can be considered superseded, information within these will not necessarily apply. LBB has been consulted to confirm where this is the case.

## References

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- <sup>1</sup> London Borough of Bexley (2017) Bexley Growth Strategy
- <sup>2</sup> HMSO (1999) Greater London Authority (GLA) Act 1999
- <sup>3</sup> Mayor of London (2018) Mayors Transport Strategy 2018
- <sup>4</sup> Mayor of London (2018) Borough Bulletin Note 3 - Transport for London
- <sup>5</sup> London Borough of Bexley Third Local Implementation Plan SEA Scoping Report, Waterman Infrastructure & Environment, August 2018
- <sup>6</sup> 3b relates to freight into central London, which is irrelevant for Bexley.
- <sup>7</sup> HSO (2004) Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/1633 as amended)
- <sup>8</sup> Mayor of London (2018) Guidance for Borough Officers on Developing the Third Local Implementation Plan
- <sup>9</sup> HSO (2010) Public Sector Equality Duty
- <sup>10</sup> Department of Transport (2004) Transport Analysis Guidance (TAG)
- <sup>11</sup> Department of the Environment (2005): A Practical Guide to the Strategic Environmental Assessment Directive
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