



Local Implementation Plan 3

Strategic Environmental Assessment

Environmental Report

Royal Borough of Kingston upon Thames

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- Ensure a clear understanding of customer requirements;
- Ensure projects are completed to programme and within budget;
- Improve productivity by having consistent procedures;
- Increase flexibility of staff and systems through the adoption of a common approach to staff appraisal and training;
- Continually improve the standard of service we provide internally and externally;
- Achieve continuous and appropriate improvement in all aspects of the company;

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All employees are trained to understand and discharge their individual responsibilities to ensure the effective operation of the Quality Management System.



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1. NON-TECHNICAL SUMMARY

1.1 Introduction

- 1.1.1 Under the Strategic Environmental Assessment (SEA) Directive 2001/42/EC, the Royal Borough of Kingston upon Thames is required to undertake a 'Strategic Environmental Assessment' (SEA) of the Borough's Third Local Implementation Plan (LIP) to determine the likely significant environmental effects of the proposed objectives and initiatives set out therein and to demonstrate how environmental considerations have been integrated into the Local Implementation Plan proposed programmes.
- 1.1.2 The Environmental Report builds on the SEA Scoping Report produced by Project Centre for Kingston Council in March 2019.
- 1.1.3 The SEA Directive requires authorities to assess the likely significant effects of their plans and programmes on the environment, including on issues such as biodiversity, population, human health, flora and fauna, soil, water, air, climatic factors, material assets, cultural heritage including architectural heritage, landscape and townscape and the interrelationship between these factors.
- 1.1.4 The main requirements introduced by the SEA Regulations are that:
- the findings of the SEA are published in an Environmental Report, which sets out the significant effects of the draft plan, in this case LIP3;
 - consultation is undertaken on the plan and the Environmental Report;
 - the results of consultation are considered in decision-making relating to the adoption of the plan; and
 - information on how the results of the SEA have been considered is made available to the public. It is a systematic process that identifies and predicts the potential significant environmental effects of plans/programmes, informing the decision-making process by testing different alternatives or options against environmental sustainability objectives.

1.2 What is the Kingston Third Local Implementation Plan?

- 1.2.1 A Local Implementation Plan is a statutory document, which sets out how a London Borough proposes to implement the London Mayor's Transport Strategy (MTS) at a local level. The Kingston LIP provides details of the Borough's transport programme and funding requirements. It covers the same period as the third MTS and includes specific delivery proposals for the three-year period 2018/19-2022/23 and outlines the Council's framework for the

delivery of transport projects, which accord with the nine outcomes set in the third Mayor's Transport Strategy.

- 1.2.2 It additionally reflects the transport needs and aspirations of the people of Kingston.

1.3 What is a Strategic Environmental Assessment?

- 1.3.1 European Directive 2001/42/EC (known as the 'SEA Directive') on the assessment of the effects of certain plans and programmes on the environment was adopted into UK law in July 2004 through the SEA Regulations. SEA is a process which aims to integrate environmental and sustainability considerations into the preparation and adoption of plans and programmes to promote sustainable development.

- 1.3.2 SEA is a systematic way to examine the likely significant effects of implementing a plan or programme and its reasonable alternatives. It is an iterative process, informing each stage of the development of a plan and feeding back information on how the plan is likely to affect the environment. The stages of the SEA are outlined below:

- **Stage A** – Setting the context and objectives, establishing the baseline and deciding on the scope.
- **Stage B** – Developing and refining alternatives and assessing effects
- **Stage C** – Preparing the Environmental Report
- **Stage D** – Consulting on the draft plan and the Environmental Report
- **Stage E** – Monitoring the significant effects of implementing the plan or programme on the environment

- 1.3.3 A key stage of the SEA process is the preparation of the Environmental Report (this report) in which the likely significant environmental effects of the plan are described. The purpose of this report is to:

- Aide consultation on the LIP by providing consultees with information on the potential environmental effects.
- Assist Kingston Council with decision making on the LIP by highlighting the potential environmental effects of the plan.

1.4 Coverage of the Environmental Report

- 1.4.1 The following items have been examined during the assessment and are presented in the Environmental Report:
- Scope of the SEA and the SEA methodology

- Background information on Kingston's Third LIP and its main objectives;
- Relationship of the SEA and Third LIP;
- The environmental baseline
- The SEA Framework of objectives
- The compatibility of LIP objectives with SEA objectives
- Development of alternatives for the LIP
- Assessment of the environmental effect of the LIP and its alternatives
- Identification and analysis of environmental problems
- Proposed mitigation and enhancement measures
- Monitoring measures.
- Consultation on Draft LIP3 and SEA

1.5 Environmental Context and baseline

- 1.5.1 The LIP is influenced by other relevant plans, programmes and strategies at international, national, regional and local levels. At international level, international agreements and EU directives establish requirements and guidance on issues such as sustainable development, climate change, biodiversity, habitats, water and air quality. There are also specific national plans, guidance and strategies on aspects such as transport, planning, climate change, air quality, biodiversity, the historic environment and sustainable development. At the London-wide level, the London Plan and MTS are key policy documents which influence the direction of the LIP. At the local level, Kingston's Local Development Framework sets a framework for the future development of the Borough.
- 1.5.2 Key environmental objectives of these various plans and programmes have been considered in the assessment of the Kingston LIP. The SEA Regulations require that the current state of the environment and its likely evolution without the implementation of the LIP are described.

1.6 SEA Framework

- 1.6.1 A SEA framework of objectives has been devised from the review of plans and programmes, analysis of baseline data and consideration of environmental issues within the Borough. This framework, which includes a series of environmental objectives, is used to assess the environmental effects of the Third Kingston LIP.
- 1.6.2 The SEA Directive does not specifically require the use of objectives or indicators in the SEA, but objectives can usefully

demonstrate how environmental effects can be described, analysed and compared. The SEA objectives include:

- Reduce negative impact of the transport network on biodiversity, flora and fauna;
- Increase the number of trees on the highway;
- Create conditions to improve health and reduce health inequalities;
- Reduce CO₂ emissions emanating from ground-based transport;
- Minimise soil contamination through land-based transport;
- Minimise ground water contamination through land-based transport;
- Improve surface water drainage;
- Protect and enhance the natural and historic environment and quality and character of Kingston;
- Reduce noise and vibrations from ground-based transport;
- Ensure all residents have access to public transport;
- Ensure footpaths are maintained and easy to navigate by all users;
- Reduce levels of ground-based transport, mainly private cars, HGVs;
- Improve road safety to reduce casualties of all road users in Kingston.

1.7 Consideration of Alternatives for the LIP

- 1.7.1 A key element of the SEA process is the proactive consideration of alternative ways of delivering the plan so that an assessment can be made of the best environmental options to take forward. In considering alternatives for the LIP, it is important to remember its role in implementing the MTS at a local level and the extent to which this sets a limit on the range of options that can be considered. Alternatives help inform the initial thinking on those transport initiatives that are prioritised within the LIP Delivery Programme. The aim of the exercise is to assess the variety of options available for implementing the draft LIP objectives and the priorities of the MTS. It also assisted decision making on the preferred options to prioritise, taking account of the potential environmental effects of the whole LIP.

1.8 Mitigation

- 1.8.1 Where significant effects are predicted then the SEA makes recommendation on the measure to prevent, reduce or offset

these impacts. Measures may include changes to the Kingston LIP, requirements for further studies, or recommendation for specific measures to schemes. Measures to enhance beneficial effects can also be included.

1.9 Monitoring

- 1.9.1 Monitoring helps to keep track of the actual environmental effects of implementing the Kingston LIP. The Kingston LIP includes a programme to monitor delivery of the transport initiatives, including annual reports on the performance of the LIP against targets. SEA monitoring is also proposed within the Environmental Report based on the SEA framework. These measures are subject to on-going consultation and will be defined in more detail in the run up to publication of the SEA Statement following adoption of the final LIP which is anticipated in March 2019.

2. INTRODUCTION

2.1 Background

- 2.1.1 The geographical area that this SEA covers is the Royal Borough of Kingston upon Thames.
- 2.1.2 Kingston, like all London local authorities, is required under the Greater London Authority Act 1999 to produce a Local Implementation Plan (LIP) showing how the authority intends to implement policies, strategies and programmes over the life of the plan to implement the Mayor's Third Transport Strategy (MTS3). The preparation of the LIP should also consider the objectives set out in other Mayoral Strategies. The LIP3 covers the same period as the MTS3 and includes specific delivery proposals for the first three-year period of 2019/20 – 2021/22.
- 2.1.3 Under the Strategic Environmental Assessment (SEA) Directive 2001/42/EC, the Royal Borough of Kingston upon Thames is required to undertake an assessment of the borough's Third Local Implementation Plan (LIP) to determine the likely significant environmental effects of the proposed objectives and initiatives set out therein.

2.2 The SEA and the regulations

- 2.2.1 Under European legislation the Strategic Environmental Assessment (SEA) Directive (2001/42/EC) requires that responsible authorities ensure that due regard for environmental and sustainability impacts are comprehensively integrated when drawing up any plans.
- 2.2.2 The objective of the SEA directive is:
 - 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development'.
- 2.2.3 Thus, a SEA ensures that environmental and sustainability implications of the LIP are adequately identified, addressed, mitigated, communicated to decision makers and monitored. The process also provides adequate opportunities to engage stakeholders, thus reducing the potential harm done to the environment.
- 2.2.4 Article B of the Directive 2001/42/EC requires the Environmental Report and the results of consultation to be considered during the decision-making process. To be effective, an SEA should be undertaken as an iterative process and should be fully integrated into the plan-making process.

2.3 Scope of the SEA

2.3.1 The SEA Directive provides an indicative list of issues/topics that should be considered when looking at the environmental impacts of the LIP. These include:

- Biodiversity, flora and fauna
- Population and human health
- Air quality
- Soils and contaminated land
- Climate change
- Water
- Preparation for flooding
- Cultural heritage, landscape and townscape
- Noise
- Accessibility
- Congestion
- Road safety

2.3.2 The SEA Directive requires that efforts are focussed on significant environmental impacts of the LIP. The Environmental Report is not intended to cover all impact or environmental issues. The Environmental Report is not meant as a replacement for any Council reports that publish data, targets or monitoring information. In addition, the Environmental Report is not designed to carry out an Environmental Impact Assessment of individual proposals, policies or programmes. It is a strategic assessment of potential significant impacts of the LIP.

2.3.3 The SEA Directive and Regulations stress the importance of a reasonable approach to the assessment and the need to conduct the assessment at the right level. A reasonable approach considers issues such as resources, time and information available.

2.3.4 The SEA is restricted to the geographical area of the LIP, being in this case, the Royal Borough of Kingston upon Thames. The SEA covers the same period as the LIP, which is from 2019/20 to 2021/22. Elements of the LIP such as targets and the Delivery Plan have a shorter timescale and will be updated during the life of the LIP.

2.4 Third Kingston LIP

2.4.1 The Third LIP sets out Kingston's long-term goals and transport objectives for the next 20 years, 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 the borough are seeking to achieve. A more detailed delivery plan is provided for the financial year 2019/20.

2.4.2 This LIP identifies how the Royal Borough of Kingston upon Thames will work towards achieving the MTS goals of:

- Healthy Streets and healthy people;
- A good public transport experience;
- New homes and jobs.

2.4.3 The Council notes that the overarching aim of the MTS is for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041, compared to 63% today. There are different targets set for all London boroughs. The MTS target for Kingston is 70% of all trips to be made on foot, by cycle or using public transport by 2041 in the Borough, compared to the 54% observed in 2016/17.

2.4.4 Kingston's transport objectives as set out in the third LIP are:

- Kingston's streets will become more healthy and encourage active travel.
- Vehicular trips will be reduced in support of Mayoral mode split targets ensuring that efficient use is made of our streets.
- The harmful effects of transport on the environment and our neighbourhoods will be reduced.
- The public transport offer will be enhanced to meet the future needs of the borough.
- Kingston's communities and transport network will become safer as the Council adopts the Mayor's Vision Zero approach.
- Delivery of homes and jobs will be supported through investment in new transport infrastructure.

2.4.5 Kingston's delivery plan for the period 2019/20 – 2021/22 is indicated in Table 1 below:

Royal Borough of Kingston upon Thames TFL BOROUGH FUNDING 2019/20 to 2021/22	Programme budget		
	Allocated 2019/20	Allocated 2020/21	Allocated 2021/22
	£k	£k	£k
Local transport initiatives	100	100	100
Corridor, Neighbourhoods & Supporting Measures	1209	1209	1209
Engineering Measures on key corridors – A2043, A307, A243. Deal with through traffic issues in Old Malden and Kings Road areas	879	879	879
Smarter Travel Programme	330	330	330
Sub-total	1,309	1,309	1,309
DISCRETIONARY FUNDING			
Liveable Neighbourhoods	0	550	750
Major Schemes	0	0	0
Principal road renewal	0	0	0
Bridge strengthening	0	0	0
Traffic signal modernisation	TBC	TBC	TBC
Sub-total	0	550	750
STRATEGIC FUNDING			
Bus Priority – key focus on the Worcester Park area, but with local schemes at Moor Lane roundabout and on Richmond Road	175	500	150
Borough cycling programme			
London cycle grid	0	0	0
Crossrail complementary works	0	0	0
Mayor's Air Quality Fund	0	0	0

Low Emission Neighbourhoods	0	0	
Sub-total	175	500	150
All TfL borough funding	1,484	2,359	2,209

Table 1: Kingston's delivery plan for the period 2019-20 – 2021/22

2.4.6 The targets and outcomes the borough is seeking to achieve are indicated in Table 2 below:

Outcomes	Observed	Year	Trajectory	Year	Trajectory	Year
Overall aim: 80% walking, cycling and public transport	54	2014/15 to 2016/17	56	2021	70	2041
Outcome 1a: Londoners to do at least the 20 minutes of active travel they need to stay healthy each day	33	2014/15 to 2016/17	40	2021	70	2041
Outcome 1b: Londoners have access to a safe and pleasant cycle network	0	2016	37	2021	71	2041
Outcome 2: Vision Zero – deaths and serious injuries from all road collisions to be eliminated from our streets	53	2016	36	2022	0	2041
Outcome 3a: Reduce the volume of traffic in London	913	2016	888	2021	800	2041 (-10%)
Outcome 3c: Reduce car ownership in London	70,562	2016	68,600	2021	68,300	2041
Outcome 4a: Reduced CO2 emissions	139,900	2013	142,800	2021	45,600	2041
Outcome 4b: Reduced	460	2013	240	2021	30	2041

NOx emissions

Outcome 4c: Reduced particulate emissions (PM10)	53	2013	46	2021	33	2041
Outcome 4d: Reduced particulate emissions (PM2.5)	30	2013	23	2021	16	2041
Outcome 5: Increase public transport use	89	2014/15 to 2016/17	98	2021	143	2041
Outcome 6: Everyone will be able to travel spontaneously and independently	Observed 2015 Average journey time using full network (minutes) 88	Observed 2015 Average journey time using step-free network (minutes) 97	Observed 2015 Time difference (minutes) 10	Trajectory 2041 Average journey time using full network (minutes) 77	Trajectory 2041 Average journey time using step-free network (minutes) 80	Trajectory 2041 Time difference (minutes) 4
Outcome 7: Bus journeys will be quick and reliable, an attractive alternative to the car (15% change)	11.1	2015	11.4	2021	12.7	2041

Table 2: Kingston's borough targets and outcomes

3. SEA METHODOLOGY

3.1 SEA Process

3.1.1 The SEA directive identifies five stages to the SEA process as summarised below:

Stage	Tasks	Output
Stage A	Set context & objectives, establish baseline & scope	Scoping Report
Stage B	Develop and refine alternatives and assess impacts	Environmental Report
Stage C	Prepare the environmental report	Environmental Report
Stage D	Consultation on draft plan and environmental report	Supplementary or revised Environmental Report
Stage E	Monitoring implementation of the plan	SEA post-adoption statement

Table 3: Stages of the SEA process

3.1.2 The scoping report (stage A) was issued in March 2019 to the following organisations for consultation:

- English Heritage/Historic England
- Environment Agency
- Natural England

3.1.3 A general response was received from the Environment Agency, a checklist of likely effects on the environment. No responses were received from Natural England or English Heritage. All responses are summarised in chapter 6, together with an indication of how they have been used in the development of this Environment Report.

3.1.4 The Environmental Report is the main output of the SEA process. It builds on the content of the Scoping Report (see appendix A) and covers stages B to C. It therefore documents the process by which the objectives of the Local Implementation Plan for Kingston have been developed, ensuring the integration of SEA aspects likely to be affected by the plan.

3.1.5 The Environmental Report is part of the LIP. The public and Environmental Bodies will be given the opportunity to comment on

the draft LIP and Environmental Report (stage D). Following consultation and revision, the Council will be asked to adopt the LIP.

3.2 SEA and LIP relationship

- 3.2.1 The SEA Directive requires that ‘an Environmental Report shall be prepared in which the likely significant effects on the environment of the plan or programme, and reasonable alternatives considering the objectives and geographical scope of the plan or programme, are identified, described and evaluated.’
- 3.2.2 This environmental report explains the likely significant environmental impacts of the LIP3 proposals, the alternatives considered, and the mitigation measures proposed. It demonstrates compliance with the SEA regulations and will accompany the draft LIP3 through the consultation process to encourage active and transparent consultation on the draft LIP3.
- 3.2.3 Table 4 indicates the main work component stages for the preparation of the Kingston LIP3, the stages of the SEA process and the links between them.

LIP3 Stage	SEA Stage
Determining the scope of the LIP3; clarifying goals; specifying the problems or challenges	A: Setting the context & objectives, establishing baseline & scope (Scoping Report)
Generating options to resolve these challenges; appraising the options and predicting their effects	B: Developing, refining and appraising strategic options
Selecting preferred options for LIP3 and deciding priorities	B: Assessing the effects of the LIP3 preferred options and proposing mitigation measures
Production of the draft LIP3	C: Prepare Environmental Report
Consultation on draft LIP3	D: Consultation on the Environmental Report
Production of final LIP3	D: Prepare a supplementary or revised Environmental Report if necessary
Adoption of LIP3	E: SEA post-adoption statement

Table 4: LIP3 and SEA process stages and links

4. REVIEW OF RELEVANT POLICIES

4.1 Mayor's Transport Strategy

- 4.1.1 The new MTS (2018) sets out the plans to transform London's streets, improve public transport, improve health and create opportunities for new homes and jobs. To achieve this, the Mayor wants to encourage more people to walk, cycle and use public transport.
- 4.1.2 The city's population is forecast to rise from 9 million people today to 10.8 million in 2041, which generates significant transport challenges. As such, new ways need to be found to plan and manage this expected growth.
- 4.1.3 The Mayor, through TfL and the Boroughs, and working with stakeholders, will reduce Londoners' dependency on cars in favour of active, efficient and sustainable modes of travel.
- 4.1.4 The key aims of the MTS are listed below:
- 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041;
 - By 2041, for all Londoners to do at least the 20 minutes of active travel they need to stay healthy each day;
 - No one to be killed in or by a London bus by 2030, and for deaths and serious injuries from all road collisions to be eliminated from the streets by 2041;
 - To reduce freight traffic in the central London morning peak travel period by 10 per cent on current levels by 2026, and to reduce total London traffic by 10-15 per cent by 2041;
 - All taxis and PHVs would be zero emission capable by 2033 at the latest, all buses would be zero emission by 2037 and London's entire transport system would be zero emission by 2050;
 - To open Crossrail 2 by the early 2030s;
 - To create a London suburban metro;
 - To improve the overall accessibility of the transport system including, by 2041, halving the average additional time taken to make a public transport journey on the step-free network compared to the full network;
 - To ensure that regeneration and new development schemes incorporate the Mayor's principles of Good Growth.
- 4.1.5 The objectives of the MTS are:
- To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure;

- To ensure London adapts and becomes more resilient to the impacts of climate change and extreme weather events, such as flood, drought and heat risks;
- To reduce the threat of climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050; and
- To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.

4.1.6 To implement the strategy's proposals successfully there is a requirement to:

- Develop and deliver strategies and plans to achieve the Mayor's priorities;
- Prepare for new technology and unpredictable changes to the way we live;
- Find a more efficient and fair way of paying for transport projects in London; and
- Work with partners across London and beyond, including the Government, London Boroughs, other transport operators, business and other stakeholders.

4.1.7 By 2041, the MTS is expected to have delivered the following nine outcomes:

	MTS Outcomes
1	London's streets will be healthy, and more Londoners will travel actively;
2	London's streets will be safe and secure;
3	London's streets will be used more efficiently and have less traffic on them;
4	London's streets will be clean and green;
5	The public transport network will meet the needs of a growing London;
6	Public transport will be safe, affordable and accessible to all;
7	Journeys by public transport will be pleasant, fast and reliable;
8	Active, efficient and sustainable travel will be the best option in new developments; and
9	Transport investment will unlock the delivery of new homes and jobs.

Table 5: MTS outcomes

4.2 National, London and local policies

4.2.1 Both LIP3 and the SEA should be set in the context of international, national, regional and local objectives along with environmental, strategic planning, transport, health and social policies.

4.2.2 The following national documents have been considered in the preparation of the LIP3 and SEA.

- Air Transport White Paper (2010)
- Equality Act (2010)
- UK Post-2010 Biodiversity Framework (2012)
- National Planning Policy Framework (2012)
- The Climate Change Act (2008)
- Historic England Three Year Corporate Plan 2018 – 2021 (2018)
- UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations (2017)

4.2.3 The following Greater London documents have been reviewed:

- Better Health, Better Environment- a GLA Guide for London Borough's (2013)
- London Environment Strategy (2018)
- Mayor of London's Draft Economic Development Strategy for London (2017)
- Mayor of London's Water Strategy (2011)
- Mayor of London's Vision for Cycling in London (2013)
- Mayor of London's Vision Zero Action Plan (2018)
- Mayor of London's Health Inequalities Strategy (2017)
- Mayor of London's Climate Change Mitigation and Energy Strategy (2015)
- The London Plan (2016)
- The London Plan Habitat Targets (2017)

4.2.4 Kingston's policy and legislative context includes:

- Royal Borough of Kingston upon Thames Air Quality Action Plan (2016)
- Royal Borough of Kingston upon Thames Biodiversity and the Development Process
- Royal Borough of Kingston upon Thames Green Spaces Strategy 2015-2021
- Royal Borough of Kingston upon Thames; Kingston Town Centre Area Action Plan (2008)

- Royal Borough of Kingston upon Thames Local Flood Risk Management Strategy (2015)
- Royal Borough of Kingston upon Thames 2nd Local Implementation Plan
- Royal Borough of Kingston upon Thames Surface Water Management Plan (2011)
- Royal Borough of Kingston upon Thames Sustainable Community Strategy for 2008 - 2020
- Sustainability Appraisal for the Kingston Local Plan (2017)

4.2.5 The above policies and plans support each other in protecting and enhancing the environment.

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5. ENVIRONMENTAL BASELINE

5.1 Kingston local context

- 5.1.1 The geographical area that this SEA covers is the Royal Borough of Kingston upon Thames. The Borough extends from the southern boundary of Richmond Park in the North to the county of Surrey in the South.
- 5.1.2 The Royal Borough of Kingston upon Thames is divided into a total of sixteen wards covering 37.25km² in southwest London. Kingston upon Thames shares its borders with the London Boroughs of Richmond upon Thames, Wandsworth, Merton and Sutton to the north and east and with Surrey County to the south and west.
- 5.1.3 The Royal Borough is not as green as other London Boroughs. The amount of open land in the Borough varies between 13%-17%. Land designated as Public Open Space accounts and Sites of Nature Conservation Importance (SNCI) cover 7.5% and 10% of the Borough respectively.
- 5.1.4 Kingston is connected to the rest of London via road (A3 eastbound) and South Western Railway (SWR). The A243 (Hook Road, A240 (Kingston Road and A3 (Kingston By-pass) are major transport routes within the Borough.
- 5.1.5 There are nine railway stations in the Borough, all of which are served by South Western trains.
- 5.1.6 The Borough contains many attractions, such as Chessington World of Adventures, Richmond Park, Rose Theatre, Coronation Stone, Thames Riverside and a thriving town centre.
- 5.1.7 Kingston's population totalled 160,060 in 2011 and constituted 1.96% of London's population (8.2 million) at the time of the Census.

5.2 Biodiversity, flora and fauna

- 5.2.1 The Borough is surrounded by green land and riverside habitats, with the River Thames sited to the west and Richmond Park National Nature Reserve (NNR) and Ham Common to the north. On the north-eastern boundary is the Beverley Brook and A3 which separates the Borough from Wimbledon Common Site of Special Scientific Interest (SSSI). At the southern extremity of the Borough is Horton Country Park and Epsom Common SSSI and Ashted Common NNR. The Borough is well known for, and served by, the surrounding large open spaces. In total the Borough contains thirty-nine SINC's and nine Nature Reserves.
 - 5.2.2 Some rare species are found in the Borough, such as the pyramidal orchids found on a fragment of old meadow in Nigel Fisher Way, Chessington, or the swaths of loosestrife and
-

meadowsweet found on the ancient Malden Meadow near the Hogsmill River in Surbiton, not recorded anywhere else in the Borough. Others are important examples of quality or relict habitats, such as a traditional field system and ancient species rich hedgerows of Tolworth Court Farm Fields Local Nature Reserve.

- 5.2.3 There are eighteen species of bat in Britain, ten of which have been recorded in the Borough. Many of these are UK Priority Species and all are protected under European Law.
- 5.2.4 Nine of the priority and important habitats and Nine of the priority and important species identified in the London Biodiversity Action Plan are located in the Borough.
- 5.2.5 The Hogsmill River, Beverley Brook, and Coombe Brook are located in the Borough, which borders with the River Thames in the northwest.
- 5.2.6 The Water Framework Directive (WFD) is a European directive that imposes legal requirements to protect and improve the water environment (including rivers, coasts, estuaries, lakes, ground waters and canals). Physical works can modify the size and shape of a watercourse, reduce or increase the flow of water, introduce artificial materials or remove sediment and/or vegetation.
- 5.2.7 The Environment Agency have reported that along the stretch of the Thames through Kingston upon Thames, the river is highly modified, and the overall ecological quality is poor. It also has a failing chemical quality in accordance with the WFD classifications. The poor ecological classification is due to poor biological quality for diatoms; however, conditions are more favourable for macrophytes, macroinvertebrates and fish.
- 5.2.8 It is not foreseen that the LIP in itself will have any significant impact on biodiversity, flora and fauna.

5.3 Population and human health

- 5.3.1 Population Census data obtained in 2011 identified that the total population within the Royal Borough of Kingston upon Thames was 160,060. Population projection figures produced by the Office for National Statistics (ONS) suggest that the estimated population in Kingston upon Thames in 2018 is 180,700, which is expected to rise to 190,900 by 2023.
- 5.3.2 Total population estimate comparisons across London as of 2018 determined that the Royal Borough of Kingston upon Thames had the third smallest population compared to other London Boroughs.
- 5.3.3 At the time of the 2011 Census, Canbury was the highest populated ward in the Borough.

- 5.3.4 Kingston upon Thames has a predominantly white population (74.48%), which is above the London average (59.8%).
- 5.3.5 The LIP provides Kingston upon Thames with the opportunity to encourage increased activity within the resident population and with those who visit or work in the Borough.
- 5.3.6 The LIP contains many proposals which are aimed at encouraging active travel, through improvements to the public realm, schemes that offer residents and visitors with opportunity to travel by means other than the car and providing healthier and cleaner streets. These proposals are in line with the aims of the MTS and will have a beneficial impact on human health and wellbeing.
- 5.3.7 The LIP includes proposals to improve personal safety and security, through reducing the fear of crime and antisocial behaviour. This in turn, will encourage residents to travel actively and have a beneficial impact on human health and wellbeing.
- 5.3.8 The LIP also contains proposals to improve accessibility for wheelchair users, older people and other user groups such as people with pushchairs, for example, improving bus stop accessibility for these user groups. Kingston upon Thames will ensure the needs of the less mobile are prioritised when delivering public realm improvements, allowing these user groups the freedom to choose how they travel in the Borough. These proposals are in line with the MTS and will have a positive impact on accessibility.

5.4 Air quality

- 5.4.1 Air pollution is associated with several adverse health impacts and is a contributing factor in the onset of heart disease and cancer.
- 5.4.2 Kingston has a statutory duty to comply with the London Local Air Quality Management (LLAWM) Regime under the Environment Act 1995.
- 5.4.3 With regard to the above, the whole of the Borough has been designated as an Air Quality Management Area (AQMA) within the Council's Air Quality Action Plan, which provides the most recent predictions of the NO₂ and PM¹⁰ objectives across the Borough based on the London Atmospheric Emissions Inventory (2013), produced for the Greater London Authority.
- 5.4.4 Nitric Oxide (Nitrogen Oxide or Nitrogen Monoxide) (NO) and Nitrogen Dioxide (NO₂) pollution arises primarily as emissions from combustion processes such as vehicle engines. PM¹⁰ and PM^{2.5} are also pollutant particulates of concern. These are microscopic sized soot particles or liquid droplets suspended in the air. The smaller

the particles, the deeper they can penetrate the respiratory system, making it more hazardous to breathe.

- 5.4.5 In the case of Nitrogen Dioxide (NO₂) and particulate matter (PM¹⁰), the Council undertook a Detailed Assessment, which showed that the annual mean objective of 40µg m⁻³ for NO₂ and daily mean objective of 50µg m⁻³ (not to be exceeded more than thirty-five days in one year) for PM¹⁰ were exceeded in parts of the Borough. Subsequent Updating and Screening Assessments have highlighted that this designation should be maintained.
- 5.4.6 The Borough's Air Quality Action Plan has thus identified road transport as the predominant source of pollutants in the Borough and has proposed several steps and initiatives that are targeted at reducing dependence on, and the impact of, road transport, taking into consideration limitations to the effect these can ultimately have given the levels of future proposed expansion within the Borough and the geographical location as a thoroughfare into Central London.
- 5.4.7 The focus areas are associated with the major road network that uses the Borough. From an air quality perspective, this provides a focus for LIP measures that will alleviate congestion and encourage the smooth flow of traffic and provide alternative modes of sustainable travel.

5.5 Climate change

- 5.5.1 Road and rail traffic emit carbon dioxide, a greenhouse gas that contributes towards climate change. Infrastructure, buildings, businesses, and community cohesion are all likely to feel the impacts of more regular severe flooding, heatwaves, extreme weather events and reduced access to important resources like water. It is a key area for councils to engage in resilience thinking.
- 5.5.2 The LIP is expected to generate positive environmental improvements, though the effects on climate change will be difficult to monitor and quantify. The important contribution of sustainable transport policies to the climate change agenda is recognised, though the LIP is unlikely to have a significant impact.

5.6 Soils and contaminated land

- 5.6.1 The solid geography underlying Kingston upon Thames is uniform across the Borough. The underlying bedrock is Thames Group – clay, silt, sand and gravel with the superficial deposits being River Terrace Deposits (undifferentiated) – sand and gravel.
- 5.6.2 It is not foreseen that the LIP will have any significant impact on soil quality.

5.7 Water

- 5.7.1 The WFD is a European directive that imposes legal requirements to protect and improve the water environment (including rivers, coasts, estuaries, lakes, ground waters and canals). Physical works can modify the size and shape of a watercourse, reduce or increase the flow of water, introduce artificial materials or remove sediment and/or vegetation.
- 5.7.2 The Royal Borough of Kingston upon Thames borders with the River Thames to the northwest, and contains Keswick Avenue Drain, Hogsmill River, Beverley Brook, Surbiton Stream and Bonesgate Stream.
- 5.7.3 The Hogsmill River is one of the tributaries of the River Thames. It rises in Ewell and flows into the Thames at Kingston upon Thames on the reach above Kingston Road bridge.
- 5.7.4 The Beverley Brook is a minor river that rises in Worcester Park and joins the River Thames to the north of Putney Embankment. It forms the historic South West London boundary, now the boundary between the London Borough of Merton and the Royal Borough of Kingston upon Thames for 7 km (4.3 mi).
- 5.7.5 The Environment Agency assesses UK rivers as part of their River Basin Management Plans (RBMP). The Egham to Teddington RBMP covers the River Thames where it flows through Kingston upon Thames. The Environment Agency have reported that along this stretch of the Thames the river is highly modified, and the overall ecological quality is poor. It also has a failing chemical quality in accordance with the Water Framework Directive (WFD) classifications. The poor ecological classification is due to poor biological quality for diatoms; however, conditions are more favourable for macrophytes, macroinvertebrates and fish.

5.8 Preparation for Flooding

- 5.8.1 Under the Flood Risk Regulations 2009, Kingston was required to carry out a Preliminary Flood Risk Assessment (PFRA) This is a high level screening exercise to identify areas of significant flood risk within a given study area. The flooding could be caused by surface water, groundwater, ordinary water courses or canals.
- 5.8.2 The Royal Borough of Kingston upon Thames is potentially vulnerable to flooding from multiple sources:
- Surface water flooding; the PFRA identifies parts of Kingston upon Thames to be particularly susceptible to surface water flooding, including Kingston town centre, New Malden and Hook. It is estimated that 18,400 residential properties and 2,500 non-residential properties in the Royal Borough of Kingston upon

Thames could be at risk of surface water of greater than 0.1m depth during a rainfall event with a 1 in 200 annual chance of occurring.

- Groundwater flooding; within Kingston upon Thames groundwater flooding is described as 'Increased Potential for Elevated Groundwater' and identifies areas where there is increased potential for groundwater levels to rise within 2m of ground surface following periods of higher than average recharge.
- Main rivers; there are three main Rivers in Kingston upon Thames all of which have a chance of flooding.
- Ordinary watercourses; large areas within the Drain London area are underlain by permeable substrate and thereby have the potential to store groundwater. Under some circumstances groundwater levels can rise and cause flooding problems in subsurface structures or at the ground surface.
- Tidal flooding; the Royal Borough of Kingston upon Thames is also potentially vulnerable to tidal flooding along the Thames.
- Sewer flooding, during heavy rainfall flooding from the system may occur.

5.8.3 Artificial sources; although the Borough has no formal reservoirs within the Borough, it could still be at risk from flooding from reservoirs located outside the Borough.

5.8.4 As required by the Flood and Water Management Act 2010, Kingston upon Thames has produced a Surface Water Management Plan (SWMP) as part of a strategy for managing flood risk. A SWMP is a plan which outlines the preferred surface water management strategy in each location. In this context, surface water flooding describes flooding from sewers, drains, groundwater, and runoff from land, small water courses and ditches that occurs because of heavy rainfall.

5.8.5 To provide guidance and information for residents, businesses and developers to help understand and better manage flood risk within the Borough, Kingston upon Thames has produced a Local Flood Risk Management Strategy (2017). The strategy sets out Kingston's four overarching objectives to effectively manage flood risk:

- Educate, encourage and empower local stakeholders to take action on reducing flood risk;
- Apply an intelligence-led risk-based approach to the management of flood risk in the Royal Borough of Kingston upon Thames;

- Establish and maintain collaborative partnerships with key organisations, including Thames Water, neighbouring Boroughs and the Environment Agency;
- Use planning powers to encourage sustainable solutions for the management of local flood risk which take account of the likely effects of climate change.

5.8.6 It is not foreseen that the LIP will have any significant impact on flooding in the Borough.

5.9 Cultural heritage, landscape and townscape

5.9.1 The Royal Borough of Kingston upon Thames has a rich and distinctive history dating back to the Saxon times. The Borough varies in character with areas of open rural character, green leafy suburbs, built up residential, retail, and office areas. There are five historic cores within the Borough: Kingston Town, Surbiton Town, Coombe, Old/New Malden, and Tolworth/Chessington.

5.9.2 The Borough includes twenty-six conservation areas covering 7.4% of the Borough (about 277 hectares).

5.9.3 The Royal Borough of Kingston upon Thames has identified eighteen Local Areas of Special Character (LASC), which are areas that have high quality townscape, architecture and landscape that add to the richness of the local built environment and local distinctiveness but may not be of conservation area quality.

5.9.4 154 listed buildings are located within the Royal Borough, three are Grade I, 11 are Grade II* and 140 are Grade II listed buildings. The preservation and protection of the listed buildings are of great importance.

5.9.5 The Borough also includes six Scheduled Ancient Monuments:

- Coombe Conduit at junction with Lord Chancellor Walk
- Gallows Conduit in grounds of Hampton Springs Castle Hill Earthwork
- Ivy Conduit in grounds of Coombe Ridge House/Holy Cross School
- Brick reservoir 300yds (270m) SW of Gallows Conduit, Coombe
- Clattern Bridge
- Castle Hill earthwork, Chessington

5.9.6 Historic England have identified a total of twenty-seven Archaeological Priority Areas for Kingston upon Thames.

5.9.7 Historic England publish an annual register of Heritage at Risk, a region by region list of all the Grade I and II* (and Grade II in

London) listed buildings, scheduled monuments and registered parks and gardens, battlefields and protected wreck sites in England, known to be 'at risk'. The 2018 register identified within Kingston upon Thames, four Grade II listed buildings; one Grade II listed Place of Worship; and three Conservation Areas (Coombe Wood; Fairfield / Knights Park, Kingston Town; and Grove Crescent, Kingston Town) as Heritage at Risk.

- 5.9.8 There are no Registered Parks and Gardens in the Borough, however, the Borough owns and maintains thirty-one local and district parks that are distributed across the Borough.
- 5.9.9 Implementation of the LIP should have a significant positive impact on the townscape in the Royal Borough of Kingston.

5.10 Noise

- 5.10.1 The main issues relating to noise are the current patterns of problems relating to road traffic on the primary road network across the Borough.
- 5.10.2 A strategic noise mapping exercise was undertaken by Defra in 2012 to meet the requirements of the Environmental Noise Directive (Directive 2002/49/EC) and the Environmental Noise (England) Regulations 2006 (as amended). Results for the $L_{Aeq,16h}$ indicator, which indicated the annual average noise level (in dB) for the 16-hour period between 0700-2300, showed values in of 75db and over on the primary road network and values of 55-65db on neighbouring local roads.
- 5.10.3 It is not foreseen that the LIP in itself will have any significant impact on noise in the Borough.

5.11 Accessibility

- 5.11.1 Transport for London's Greater London PTAL (Public Transport Access Levels) mapping for 2016 indicated access to public transport within Kingston is generally very low across the Borough (PTAL 1-3), though PTAL levels in the Borough are highest in Kingston Town (PTAL 6a).
- 5.11.2 PTALs quantify relative connectivity to the public transport network for any location in London, i.e. the proximity to public transport services and wait times, and not where the public transport services take people to or indeed how accessible they are to all members of the population. For instance, older and disabled people may find it difficult to undertake even short distances on foot or to use public transport, due to impaired ability and/or poorly maintained footways.
- 5.11.3 Local authorities are required to carry out accessibility planning to ensure older people have access to facilities such as hospitals and

GP's surgeries through good and accessible public and private transport facilities. It is important for Kingston to ensure all residents have public transport access to this important facility.

- 5.11.4 The LIP proposals will improve accessibility for wheelchair users, older people and other user groups such as people with pushchairs, for example, improving bus stop accessibility for these user groups. Implementation of the LIP should also have a significantly positive impact in areas where accessibility to employment opportunities are low, with a key objective to ensure sustainable access to Kingston's employment areas.

5.12 Congestion

- 5.12.1 Traffic congestion in west London places a high economic, environmental and social cost on the area. Information sourced from the Department for Transport showed that the number of vehicles recorded travelling on Kingston upon Thames roads had decreased from 2000, with a sharp increase in 2010, though there are no obvious reasons to which this could be attributed to. However, the overall decrease had continued until 2017.
- 5.12.2 Data produced by TfL in 2017 enables a comparison to be made with volumes of motor traffic recorded in Kingston against volumes of motor traffic recorded in Central, Inner, Outer and Greater London and Great Britain.
- 5.12.3 Kingston is an Outer London Borough. Based on information from TfL, Kingston experiences lower than average volumes of traffic on its roads than the average volume of motor vehicles recorded in Outer London and higher than the average volume of motor vehicles recorded in Inner London.
- 5.12.4 A travel modal shift from the private car to sustainable travel modes can reduce traffic congestion and air pollution in urban areas. The TfL publication *Travel in London: Report Ten* (2017) indicates trip-based active, efficient and sustainable mode share by Borough of residence.
- 5.12.5 Outer London residents have lower overall active, efficient and sustainable mode shares than Inner London residents. Kingston has an active, efficient and sustainable mode share of approximately 53%, which is amongst the lower half of all London Boroughs.
- 5.12.6 Implementation of the LIP should have a significant positive impact on congestion in the Royal Borough of Kingston.

5.13 Road safety

5.13.1 The Borough is committed to reducing the number of people killed or seriously injury (KSI) as a result of road traffic collisions, with a focus on areas in the vicinity of schools and KSI 'hotspots'. The most recent collision statistics collated for the TfL publication *Collision Levels in Greater London 2011-2013* (2015), depicting collision rates per kilometre by Borough and road class show that Kingston upon Thames has the lowest collision figure for 'all roads' in London.

5.13.2 The Mayor of London has set out wide-ranging plans that will transform the capital's streets, public places and deliver future growth. Proposals in the strategy include delivering a 'Vision Zero' approach in London to make its streets safer for all, where Vision Zero aspires to a time where there will be no KSI's on London's roads.

5.13.3 Kingston upon Thames KSI figure has fallen over the last 12 years. Despite this statistic, no number of KSI's should be considered acceptable, no matter how low that number is.

5.14 SEA Objectives

5.14.1 The state of the environment can be influenced through the implementation of the LIP. However, not all environmental areas or SEA factors will be influenced to the same degree.

5.14.2 The significance of environmental impacts (positive or negative) because of the LIP on SEA environmental topics is detailed in Table 7 in Chapter 7.

5.14.3 SEA objectives for Kingston's transport strategy have been developed in tandem with the development of Kingston's transport objectives and the baseline for SEA topics.

5.14.4 Table 6 outlines SEA objectives against SEA topics and key relevant LIP policies. SEA objectives have been set for all SEA topics to ensure a thorough scoping exercise. The Council will take a reasonable approach towards monitoring and will prioritise those indicators/targets that are associated with those SEA topics that have been identified to have likely significant environmental effects due to the implementation of the LIP.

SEA Topic	SEA Objective	Key relevant LIP policies
Biodiversity, flora and fauna	Reduce negative impact of the transport network on biodiversity, flora and fauna	3
	Increase the number of trees on the highway	1, 3

Population and human health	Create conditions to improve health and reduce health inequalities	1, 3
Air Quality	Reduce emissions emanating from ground-based transport	2, 3, 4
Climate change	Reduce CO ₂ emissions emanating from ground-based transport	2, 3, 4
Soils and contaminated land	Minimise soil contamination through land-based transport	3
Water	Minimise ground water contamination through land-based transport	3
Preparation for flooding	Improve surface water drainage	3
Cultural heritage, landscape and townscape	Protect and enhance the historic environment especially heritage assets at risk. Protect and enhance the quality and character of Kingston	1, 6
Noise	Reduce noise and vibrations from ground-based transport	3
Accessibility	Ensure all residents have access to public transport Ensure footpaths are maintained and easy to navigate by all users	4 1
Congestion	Reduce levels of ground-based transport, mainly private cars, HGVs	2
Road safety	Improve road safety by reducing casualties of all road users in Kingston	5

Table 6: SEA objectives, topics and relevant LIP policies

6. CONSULTATION RESPONSE

6.1 Summary of comments from environmental bodies

6.1.1 Consultation is an integral part of both the LIP and SEA process. The SEA Directive and Regulations required the Responsible Authority to consult with Environmental Bodies on the scoping Report. Responses to the consultation have been used to refine the LIP and this Environmental Report. The Environmental Bodies consulted, and summaries of their responses are noted below:

6.1.2 **Natural England:** No comments.

6.1.3 **Environment Agency:** The environment agency sent a generic checklist regarding the Scoping report [to all London Borough LIP3 SEA scoping reports]. As part of the Strategic Environmental Assessment (SEA), the Environment Agency would like the SEA to consider the likely effects on the environment including on:

- Climatic factors e.g. climate change
- Air quality and human health
- Water and soil
- Biodiversity, flora and fauna
- Material assets e.g. sustainable use of resources and waste

6.1.4 **Historic England/English Heritage:** No comments

6.2 Response

6.2.1 Natural England – no response required

6.2.2 Environment Agency – Table 9 of this ER does consider the likely effects on the environmental factors [as set out in their list reproduced in 6.1.3]

6.2.3 Historic England – No response required

7. ENVIRONMENTAL EFFECTS ASSESSMENT

7.1 Identification and analysis of environmental problems

7.1.1 The SEA Directive requires that environmental problems are identified and analysed in the Environment Report. In this chapter, both environmental problems and opportunities have been identified, considering the baseline exercise and the draft LIP. The table also identifies where the LIP is deemed to have significant effects (positive or negative) on the SEA topics.

SEA Topic	Problems	Opportunities – LIP improving or mitigating problem	Likely effects
Biodiversity, flora and fauna	Loss of trees	The LIP provides safety and environmental schemes providing opportunities for tree planting	Insignificant – positive
	Loss/degradation of railway line ecosystems	The LIP strongly supports rail travel as a sustainable form of public transport and the environmentally sensitive management of railway land	Insignificant – neutral or positive
	Transport related impacts on biodiversity	The LIP prioritises walking, cycling and public transport over motorised road traffic, setting targets to reduce road traffic and reduction in CO2 and AQ emissions from land-based transport	Insignificant – positive
Population and human health	Road safety: road traffic casualties	The LIP sets targets to reduce road traffic casualties. The LIP includes safety and environmental schemes aimed at improving road safety, in particular for pedestrians and cyclists and those	Significant – positive

		with mobility impairments.	
	Accessibility: exclusion of people with mobility impairment or those living in deprived areas	The LIP includes personal mobility schemes and safety and environmental schemes in areas of high deprivation	
	Community severance: high road traffic volume, HGV volume, transport related infrastructure	The LIP includes targets for reducing traffic volumes and car ownership.	Significant – positive
	Security: crime and fear of crime	The LIP will include safety and environmental enhancement schemes creating a more secure transport network and reducing the opportunity for crime	Significant – positive
	Unemployment: people not being able to access employment because of lack of access to transport	The LIP included policies and proposals to make travel in Kingston fairer	Significant – positive
	Social exclusion: people or communities not being able to access services because of lack of access to transport	The LIP includes policies and proposals to make travel in Kingston fairer and to reduce barriers to exclusion	Significant – positive
	Deprivation – people or communities not being able to access work or services because of a lack of access to transport	The LIP includes policies and proposals to make travel in Kingston fairer and to reduce barriers to exclusion	Significant – positive
	Noise and vibration: increasing traffic volume, increase in heavy goods vehicles.	The LIP includes approaches to reduce the impact of heavy goods	Significant – positive

	Poor condition of material assets such as road	vehicles and safety and environmental schemes	
	Physical fitness, mental health and quality of life: significant increase in obesity rates	The LIP prioritises walking and cycling including school and work travel planning, cycle training and has targets for reducing traffic and car ownership	Significant positive
Air Quality	Reduced air quality: increasing road traffic volume congestion, CO ₂ , NO ₂ and particulates	The LIP prioritises sustainable modes of travel and has targets to reduce traffic and car ownership The LIP has targets to reduce CO ₂ and other pollutants	Significant – positive
Climate change	Extreme weather conditions: increasing risk of flooding, disruption to the transport network, deterioration of road network	The LIP promotes the use of sustainable and environmentally friendly materials and construction techniques. The LIP monitors and improves principal road condition	Significant – positive
Soils and contaminated land	Contamination through land- based transport	The LIP promotes the use of sustainable and environmentally friendly materials and construction techniques.	Significant – positive
Water	Ground water contamination through land- based transport	The LIP promotes the use of sustainable and environmentally friendly materials and construction techniques.	Insignificant – positive
Preparation for flooding	Surface water flooding: insufficient drainage capacity for runoff from hard surfacing.	The LIP supports sustainable urban drainage techniques and build these into schemes where	Insignificant – positive

feasible

Cultural heritage, landscape and townscape	Reduced air quality: pollution damage to buildings Visual pollution: impact of transport infrastructure	The LIP includes safety and environmental schemes. Increasing walking and cycling contributes to creating more attractive streets and town centres The LIP includes policies and targets aimed at improving the urban realm around key transport interchanges reducing their visual impact	Insignificant – positive
Noise	Noise and vibration: increase in traffic volume, increase in heavy goods vehicles. Poor condition of material assets such as road	The LIP has targets for reducing traffic and car ownership. The LIP monitors and improves principal road condition	Significant – positive
Accessibility	Access to public transport: lack of access to public transport leading to unemployment, social exclusion, deprivation Condition of material assets: poor condition of footways, bus stops impacting accessibility of mobility impaired groups, people with push chairs, etc.	The LIP includes personal mobility schemes and safety and environmental schemes in areas of high deprivation The LIP monitors and improves principal road condition	Significant – positive
Congestion	Air pollution Increase in noise and vibrations	The LIP has targets to reduce CO2 and other pollutants The LIP has targets for reducing traffic and car ownership.	Significant – positive

Road safety	Road traffic casualties	The LIP sets targets to reduce road traffic casualties.	Significant – positive
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Table 7: Problems, opportunities and likely effects of the LIP

7.2 Risk and uncertainty

- 7.2.1 Some of the topics are influenced by problems and opportunities that originated from outside the borough. This brings uncertainty, risk and difficulty in quantifying the effects the LIP has on the SEA factor. This Environmental Report will consider these issues in more detail where appropriate.

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8. ASSESSMENT OF PROPOSED MEASURES

8.1 Assessment of environmental effects

- 8.1.1 The SEA Directive and Regulations require that the Council assesses the environmental effects of Kingston's Third LIP. This section first assesses the relationship between Kingston's LIP3 objectives and the SEA objectives. It then continues to assess Kingston's transport interventions for delivering the objectives. Alternatives and the 'do nothing' option are also assessed.
- 8.1.2 Table 8 assesses the relationship between Kingston's LIP3 objectives and the SEA objectives. 'X' indicates a positive relationship between SEA objective and LIP objective. A blank space indicates there is no clear relationship.

8.2 Identifying alternatives

- 8.2.1 A necessary part of the SEA scoping process is to look at alternative methods of achieving the objects of the LIP for Kingston.
- 8.2.2 Table 9 sets out the type of interventions that will be contained in the plan and suggested alternatives. These are then scored (p = positive impact, pp= very positive, 0 = neutral impact, n = negative impact and nn = very negative). Some of the interventions may change later when the plan is finalised.

LIP Transport Objectives						
	Healthy streets and active travel	Efficient use of streets	Reduce effects of transport	Enhance public transport	Safer communities and public transport	New transport infrastructure
Reduce negative impact of the transport network on biodiversity, flora and fauna	X		X			
Increase the number of trees on the highway	X					
Create conditions to improve health and reduce health inequalities	X		X	X	X	X
Reduce emissions emanating from ground-based transport	X		X	X	X	
Reduce CO ₂ emissions emanating from ground-based transport	X		X	x	x	
Minimise soil contamination through land-based transport	X		x			
Improve surface water drainage	x					
Protect and enhance the historic environment	X		X			

especially heritage assets at risk						
Protect and enhance the quality and character						
Reduce noise and vibrations from ground-based transport	X	X	X			X
Ensure all residents have access to public transport				x	x	X
Ensure footpaths are maintained and easy to navigate by all users						
Reduce levels of ground-based transport, mainly private cars, HGVs	X		X			X
Improve road safety by reducing casualties of all road users	x	x	x			

Table 8: Relationship between Kingston's LIP3 objectives and the SEA objectives

	Environmental Factors											
	Biodiversity, flora and fauna	Population and human health	Air quality	Climate change	Soils and contaminated land	Water	Preparation for flooding	Cultural heritage, landscape and townscape	Noise	Accessibility	Congestion	Road safety
MTS Outcome 1												
Deliver improvements to walking routes and the pedestrian environment	p	p	p	0	0	0	0	p	0	p	0	P
Complete the delivery of the Go Cycle project, to create a high-quality framework of routes across the borough	p	p	p	0	0	0	0	p	0	p	p	P
Continue to engage with residents with the Annual survey/report on Cycling for Kingston, and use the 9 objectives to support and guide the identification of opportunities within the borough	p	p	p	0	0	0	0	0	0	0	0	0
Deliver improvements to cycling routes, with current projects on Jubilee Way, Coombe Road, King Charles Road, South Lane area and Richmond Road corridor forming key elements	p	p	p	0	0	0	0	0	0	p	p	P
Deliver travel awareness and behaviour change programmes	0	p	p	0	0	0	0	0	0	0	p	P

Improve street environments to create a high-quality public realm and liveable neighbourhoods, with the Malden Manor area to form a bid for funding in 2020/21	p	p	p	o	o	o	o	p	o	p	p	P
Deliver 20mph schemes across the borough on residential roads, to create an environment that encourages a higher level of walking and cycling trips	0	p	p	0	0	0	0	0	p	0	p	Pp
Alternatives												
Traditional traffic calming only	0	0	0	0	0	0	0	0	n	n	n	N
Do nothing	0	0	0	0	0	0	0	0	0	0	0	0
MTS Outcome 2												
The borough will embrace the Safe Systems Approach, embedding the methodology set out in Vision to set Safe Speeds, design Safe Streets, ensure Safe Vehicles are on the roads, and encourage Safe Behaviours for those using our roads	0	p	0	0	0	0	0	0	0	0	p	P
The borough will ensure that as part of the scheme development process new transport schemes will comply with Secured by Design, and the process will include proper consultation with Designing out Crime Officers	0	p	0	0	0	0	0	p	0	0	0	p

The borough will deliver a programme of area-based traffic calming schemes, aimed at giving priority to sustainable modes of travel and environmental improvements	0	p	p	0	0	0	0	0	n	0	0	P
The borough will introduce 20mph restrictions in residential roads and around schools and shopping areas	0	p	p	0	0	0	0	0	0	0	p	P
The borough will continue to work with TfL to identify opportunities to reduce the 20% of collisions on the TLRN	0	p	p	0	0	0	0	0	0	0	p	Pp
Alternatives												
Do not embrace vision zero	0	0	0	0	0	0	0	0	n	n	n	n
Do nothing	0	0	0	0	0	0	0	0	0	0	0	0
MTS Outcome 3												
Consideration of the ideas put forward in the MTS to discourage unnecessary journeys by car and freight including road user charging schemes and workplace parking levies (on the basis of no significant detriment to local business/economy)	0	p	p	0	0	0	0	0	0	0	p	0
Introduce schemes that address through traffic issues, considering	0	p	0	0	0	0	0	p	p	n	n	P

measures such as local closures with filtered permeability												
Working in partnership with TfL and other bodies to take forward and implement other schemes as appropriate	0	p	p	0	0	0	0	0	0	0	p	P
Consider a strategic approach to on-street Parking Management and the introduction of CPZ's as well as introduction of emissions-based permits	0	0	p	p	0	0	0	0	p	p	0	0
Introduce EV/Car clubs bays on-street to provide opportunities to make use those facilities	0	0	p	p	0	0	0	0	p	p	0	0
Alternatives												
Increase road capacity	0	n	n	n	0	0	0	n	n	p	n	n
Do nothing	0	0	0	0	0	0	0	0	0	0	0	0
MTS Outcome 4												
Continue to deliver against the objectives in the Air Quality Action Plan	0	p	p	p	0	0	0	0	0	0	0	0
To continue to pursue Low Emission Neighbourhoods (LEN)	p	p	p	p	0	0	0	p	p	0	0	0
Make Eden Street a 'Clean Bus zone', with only green buses	0	p	p	p	0	0	0	0	p	0	0	0
To ensure developments and projects take into account SuDS	p	0	p	0	p	p	p	p	0	0	0	0

systems, such as filter strips, rain gardens or permeable paving as part of the design process												
To ensure that where crossovers are being provided it happens in a sustainable way, and in line with the Council Policy	0	0	0	0	p	p	p	0	0	0	0	0
Alternatives												
Do not integrate sustainable design into highways projects	n	0	n	n	n	n	n	n	0	0	0	0
Do nothing	0	0	0	0	0	0	0	0	0	0	0	0
MTS Outcome 5												
Kingston supports the proposed Crossrail 2 project linking north-east and south-west London, favouring the regional option with branches through Kingston	0	p	0	0	0	0	0	0	n	p	p	0
Work with Rail and Bus colleagues to seek to improve integration of journeys	0	p	p	0	0	0	0	0	0	p	p	0
Continue to facilitate the Public Transport Liaison Meeting, allowing engagement between operators and stakeholders	0	p	0	0	0	0	0	0	0	0	0	0
Lobby TfL to provide improvements to bus services in the South of the Borough, other areas of low public transport accessibility, and areas that are further than 400m from a	0	p	p	0	0	0	0	0	p	pp	0	0

bus stop												
Alternatives												
Do not link public transport investment of patterns of growth in the borough	0	n	n	n	o	o	o	o	o	n	n	0
Do nothing	0	0	0	0	0	0	0	0	0	0	0	0
MTS Outcome 6												
Lobby TfL to provide improved accessibility to bus services	0	p	0	0	0	0	0	0	p	pp	p	0
Lobby South Western Railways to improve accessibility and infrastructure provision at all railway stations in the borough	0	p	0	0	0	0	0	0	0	pp	0	0
Continue to facilitate Public Transport liaison Meetings	0	p	0	0	0	0	0	0	0	0	0	0
Ensure that LIP schemes near railway stations fully assess the access requirements	0	p	0	0	0	0	0	0	0	pp	0	0
Alternatives												
Reduce investment in borough public transport projects	n	n	n	n	n	n	n	n	n	n	n	n
Do nothing	0	0	0	0	0	0	0	0	0	0	0	0
MTS Outcome 7												

Lobby partners to improve existing train services including increased capacities, frequencies and late-night services, improved station capacity/facilities and fairer pricing including the rezoning of Surbiton and Kingston stations	0	p	0	0	0	0	0	0	n	p	p	0
Deliver associated improvements to surrounding streets (utilising the healthy streets approach) to provide an attractive journey experience	p	p	p	0	0	0	0	0	0	p	p	P
Support the devolution of suburban rail services to TfL control	0	0	0	0	0	0	0	0	0	0	0	0
Work with TfL to identify bus priority measures on the worst performing bus routes	0	p	0	0	0	0	0	0	0	p	p	P0
Alternatives												
Do not work with service providers, TOCs and strategic transport authorities	n	n	n	n	n	n	n	n	n	n	n	n
Do nothing	0	0	0	0	0	0	0	0	0	0	0	0
MTS Outcome 8												
Require all major developments to submit an appropriate Transport Assessment with a focus on embedding the Healthy Streets Approach within, and in the vicinity of, new development	p	p	p	0	0	0	0	p	0	p	p	p

Require development proposals to deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling	0	p	p	0	0	0	0	0	0	0	p	P
Allow higher development densities and reduced car parking in areas of higher public transport accessibility	0	p	p	0	0	0	0	0	0	p	p	0
Apply restraint-based parking standards (as identified in the London Plan) to ensure appropriate levels of parking are provided in new developments	0	p	p	0	0	0	0	0	0	0	p	0
Use Community Infrastructure Levy money collected from new development to fund transport infrastructure	p	p	p	0	0	0	0	0	0	p	p	P
Ensure that sites with poor levels of accessibility by sustainable modes will not usually be considered suitable for development that could generate high numbers of trips	0	p	0	0	0	0	0	0	0	0	0	0
Alternatives												
Allow unplanned growth	n	n	n	n	n	n	n	n	n	n	n	n

Do nothing	0	0	0	0	0	0	0	0	0	0	0	0
MTS Outcome 9												
Work with key partners, including TfL, Network Rail, other boroughs and the public transport operators to further investigate the transport impacts of potential future major developments, and the mitigation measures necessary to deal with the resulting issues	p	p	p	p	p	p	p	p	p	p	p	P
Progress an appropriate package of transport mitigation measures necessary to deal with these impacts including an understanding of how demand management measures could assist	p	p	p	p	p	p	p	p	p	p	p	P
Support the stance adopted by TfL on airport expansion, opposing new runway capacity at Heathrow (and Gatwick) unless it can be demonstrated that surface access networks will be invested in to accommodate the resultant additional demand	0	p	0	0	0	0	0	p	p	p	p	p
Alternatives												
Support the current Heathrow expansion plan	n	n	n	n	n	n	n	n	n	n	n	n

Do nothing

0

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Table 9: Consideration of LIP3 transport policies and alternatives

9. MONITORING

9.1 The Purpose of Monitoring

- 9.1.1 Under the SEA Directive, there is a statutory requirement to monitor the environmental impacts of the implementation of the Plan. The LIP must therefore be monitored and reported to comply with the Directive as well as to continue to identify problems and issues that need resolving.
- 9.1.2 Monitoring is the systematic measurement of a parameter in terms of magnitude, time and space. Monitoring is not limited to quantitative or technological measurements and may include qualitative issues such as human health or landscape quality.
- 9.1.3 Monitoring can be used to answer questions such as:
- Is the plan contributing to the desired environmental objectives and targets?
 - Is the plan performing as well as expected?
 - Are (mitigating) measures performing as well as expected?
 - Are there any undesirable environmental effects? Are these within acceptable limits, or is remedial action required?
- 9.1.4 This process is beneficial to the Local Implementation Plan because it allows any significant environmental effects of the plan's implementation to be identified and dealt with early in the planning process. It allows the actual effects of the plan to be tested against those predicted in the SEA and can provide baseline information for future plans.

9.2 Monitoring for the SEA

- 9.2.1 To develop a monitoring strategy, the guidance suggests addressing the following questions:
- Determine what needs to be monitored;
 - Identify what sort of information is required;
 - Identify existing sources of monitoring information;
 - Identify and fill any gaps in existing information;
 - Determine when remedial action would be required, and which actions could be taken; and
 - Develop a management plan outlining responsibilities, timeframes and presentation.
- 9.2.2 Monitoring should focus on any significant environmental impacts that give rise to irreversible impacts upon environmental attributes in the area. This SEA found very little evidence of significant environmental impacts because of measures within Kingston's

Third Local Implementation Plan. Where adverse impacts have been found, mitigation measures were presented to minimise these impacts, therefore no change to the plan was advised in the Environmental Report. Thus, given the lack of significant impact on the environment that the plan entails, no monitoring for the SEA is necessarily required.

- 9.2.3 When monitoring reveals that remedial action is required, the appropriate measures are enacted. Criteria or thresholds will therefore need to be established as part of the strategy, which can trigger action if they are exceeded. As and when gaps appear in data sets, new data will be collected. However, it should be noted that no primary data collection is necessarily appropriate for this level of monitoring and is not required for compliance with the Directive.

9.3 LIP Monitoring

- 9.3.1 The Boroughs annual reporting is an effective and efficient way to demonstrate the scale of delivery of key outputs through the LIP investment process. This section of the LIP sets out the indicators and targets to be used to assess progress against delivery of LIP objectives and MTS outcomes; it is this that will determine the success or otherwise of the LIP.

10. NEXT STEPS

10.1 Consultation on Draft LIP3 and SEA

10.1.1 The SEA Regulations set specific requirements for consultation with the statutory consultees, the public and other interested parties and require that the ER is made available for consultation alongside the Consultation Draft LIP.

10.1.2 This ER will be made available for wider public consultation in May 2019 **alongside the Kingston LIP**. The ER [and LIP] will be available on the Council's website (www.kingston.gov.uk).

10.1.3 If you would like any further information or if you have any comments on the SEA of the LIP3 we would be grateful to receive them. Comments should be made via e-mail.

10.1.4 Please send any feedback, comments or queries to

Email: **xxx**

10.2 SEA Statement

10.2.1 When the LIP3 is adopted it will be accompanied by an SEA post adoption statement. In line with the SEA Regulations, the SEA Statement will provide the following information:

- How environmental considerations have been integrated into the plan;
- How the ER has been considered in the LIP3's development;
- How opinions expressed in relation to the consultations on the LIP and ER have been considered;
- The reasons for choosing the LIP3 as adopted, in the light of the other reasonable alternatives dealt with; and
- The measures to be taken to monitor any possible significant environmental effects of the implementation of the LIP3.

Award Winning



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