Report

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In association with steer

Report for – London Borough of Haringey
Local Implementation Plan
Strategic Environmental Assessment – Environmental Report

Draft

Document version control

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1.0 Non-Technical Summary

1.1 Introduction

This report sets out the outcomes of the Strategic Environmental Assessment (SEA) of the proposals in the London Borough of Haringey's third Local Implementation Plan (LIP). The LIP is a statutory document, prepared under Section 145 of the Greater London Authority Act 1999. The LIP guides transport priorities and projects and details a three-year programme of investment (2019/20 to 2021/22) to implement the Mayor of London's Transport Strategy (MTS).

To deliver the Mayor's vision – "*to create a future London that is not only home to more people but is a better place for all those people to live in"* - 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. The Mayor is seeking to achieve his vision by achieving the following three MTS outcomes:

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

This LIP will replace the council's second LIP (2011). The third round of LIPs will become effective from April 2019.

1.2 Summary of the LIP

The policies and proposals set out in the LIP will cover six broad categories based on political appetite, local support, delivery mechanisms and the Haringey Transport Strategy as follows:

- **Local Safety Schemes:** These will comprise the final delivery phase of the Green Lanes study, and other schemes including new zebra crossings, minimising rat runs and speeding and associated traffic calming measures. The priority project locations include:
    - Bruce Grove/The Avenue/Mount Pleasant Road;
    - Ferme Park Study;
    - West Green Road/Spur Road;
    - Dowsett Road;
    - Elsden/Newly/Hartham/Pembury Roads;
    - Lordship lane (between Turnant road and Lordsmead Road); and
    - Weston Park.
- **Traffic calming and Community Streets:** These will comprise physical measures such as vehicle-activated signs (VAS) to support compliance of 20mph speed limit, speed bumps, upgraded beacons, improved road markings and street furniture reviews. Priority project locations include:
    - The Avenue;

- Wood Lane;
- Hampstead Lane;
- Perth Road;
- Cranley Gardens;
- Highgate Avenue;
- Borne Avenue/Mansfield Road; and
- West Green Road/The Avenue.

- **Walking and cycling:** New cycle infrastructure and routes, and maintenance of existing facilities including the extension of Cycle Superhighway 1 towards the Lee Valley. Work will commence on cycle routes to support sustainable regeneration. Permeability measures and bike hangars will also be provided. Walking projects could include school crossings and pedestrian facilities, and measures to increase modal shift away from the private car by challenging the barriers to walking.

- **Smarter travel:** Active travel initiatives including school and workplace travel planning, cycle training, personalised travel planning for schools, road safety education, training and publicity, complementary measures to support cycling infrastructure schemes and CPZ proposals. Cycle training for schools and adults will also be provided.

- **Liveable Neighbourhoods:** Pedestrian and cycling conditions in specific neighbourhoods will be improved to help encourage more active travel in the area, tackling congestion and improving air quality and residents' well-being. Initial proposals will focus on Crouch End town centre, which residents will be consulted on. This may involve creation of a new square incorporating the clock tower, currently surrounded by traffic on all sides. Segregated cycle routes will feed the town centre, pedestrian crossings will be improved, and traffic will be reduced on residential streets with new modal filters.

- **Public transport:** Reviewing Haringey’s bus network stimulated by changes to the local network with regards to frequency, start and termination points and rolling stock size and cleanliness to deliver a service fit for existing and future residents’ needs.

1.3 Approach to the SEA

The SEA has been undertaken using the TfL/GLA framework that was developed to satisfy SEA requirements for plans and strategies produced by the Mayor of London as the basis for the current assessment, augmented by issues highlighted in the SEA Scoping Report and consulted on with the statutory environmental bodies. The assessment of effects has been based on the professional judgements of our SEA team, evidenced by information from the LIP3 MTS Outcomes Borough data pack that was provided to the London Boroughs by TfL.

The environmental baseline information collated for the SEA, together with the outcomes of the Integrated Impact Assessment undertaken for MTS3 and other information on the specific proposals likely to come forward through the LIP were used to identify the existing relevant sustainability issues.

To meet the requirements of the SEA Regulations, it has been assumed that the only real reasonable alternative to the LIP proposals is the "do-nothing" scenario.

There are two European designated sites within 10km of Haringey which fall under the Habitat Regulations. This assessment has concluded that there would be no significant environmental effects arising from the implementation of the LIP on these designated areas that would affect the conservation objectives of those sites. On this basis no further assessment work has been undertaken.

1.4 Outcomes of the SEA

No significant adverse environmental effects will result from the implementation of the LIP in Haringey. As such, no specific recommendations for the mitigation of effects are required. All the effects identified are either considered to have no impact or will be positive. In some cases, the LIP may have positive or negative effects but the level of information available at a time of assessment does not allow a clear judgement to be made.

The main effects of the four objectives of the LIP are listed below.

Objective 1: A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.

The objectives and associated measures will directly support improvements to and better use of road, cycling and public transport networks including accessibility of the latter, and associated improvements in air quality. They will also contribute to the wider economic growth ambitions of the Borough.

Outcome 2: Active travel the default choice, with more people choosing to travel by walking or cycling.

The objective and associated measures will directly support an increase in active travel in the borough which will have multiple health and environmental benefits. The measures will support improvements to and use of the public realm and green spaces creating healthier neighbourhoods and broadly support emissions reduction and associated air quality improvements.

Outcome 3: An improved air quality and a reduction in carbon emissions from transport.

The objective and associated measures will support emissions reduction and associated with these improvements in air quality.

Outcome 4: A well maintained road network that is less congested and safer.

The objective and associated measures will directly support a less congested, safer, more secure transport network and associate neighbourhoods, supporting the liveability and character of streetscapes and townscapes.

Implementation of the short- term actions set out in the LIP would not have any significant environmental benefits, although this is typically because the three year time horizon of the short-term programme does not provide enough time for significant effects to be delivered. However, the programme will help in terms of air quality, the attractiveness of neighbourhoods, inclusivity, mental and physical wellbeing, mobility and regeneration.

The longer-term actions set out in the LIP, if funded and delivered, would significantly improve the attractiveness of neighbourhoods and mobility. They will also help in terms of climate change mitigation, energy efficiency, inclusivity, mental and physical wellbeing and regeneration.

1.5 Monitoring

The draft Strategy and LIP do not currently include specific proposals for environmental monitoring. However, it is recommended that key indicators from the set compiled by the London Sustainable Development Commission (LSDC) on Quality of Life issues be used by Haringey Council to monitor the environmental effects of the final Strategy and LIP.

1.6 Next Steps

The LIP was submitted to Transport for London in November 2018 for comment. Haringey Council is also presently conducting a public consultation exercise on the LIP proposals. Taking account of the comments received from TfL and the outcomes of the consultation, together with the analysis presented in this Environmental Report, Haringey Council will then make any revisions to the LIP and LTS that may be necessary, and a final version of the LIP will be approved in March 2019.

Following this, Haringey Council will publish a Post-Adoption Statement to summarise the way that consultation has influenced the assessment process, demonstrating how feedback has been considered, identifying changes that have been made and the reasons for choosing the preferred policies and options.

In line with the requirements of the SEA Regulations, the Borough Council will monitor the effects of the LIP. This will feed into any future LIP progress reporting.

2.0 Introduction

2.1 About the Environmental Report

This report sets out the outcomes of the Strategic Environmental Assessment (SEA) of the proposals in the London Borough of Haringey's third Local Implementation Plan (LIP).

To meet the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004, local authorities are required to carry out Strategic Environmental Assessment (SEA) for policies, plans and programmes across various areas, including transport[1]. Government guidance on transport plans stresses the importance of the SEA being an integral part of developing and delivering a transport strategy. The statutory environmental agencies (i.e. the Environment Agency, Natural England and Historic England) must be involved throughout the development and monitoring of a plan.

A Scoping Report for the SEA[2] was forwarded to the consultation bodies by the London Borough of Haringey earlier in autumn 2019. This report takes account of the comments received from these bodies on the Scoping Report and updates and extends the baseline environmental information on which the SEA is based.

2.2 Overview of the Local Implementation Plan (LIP)

The LIP is a statutory document, prepared under Section 145 of the Greater London Authority Act 1999. This Act requires each of London's 33 local authorities to prepare a LIP containing proposals for the implementation of the Mayor's Transport Strategy[3] in their area.

The LIP guides transport priorities and projects and details a three-year programme of investment (2019/20 to 2021/22).

The central aim of the MTS – the Mayor's vision – is to create a future London that is not only home to more people, but is a better place for all those people to live in. The overarching aim of the Strategy 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. The Mayor is seeking to achieve his vision by focusing the policies and proposals in his transport strategy on the achievement of the following three overarching MTS outcomes:

- **Healthy Streets and healthy people, including traffic reduction strategies:**
    - Active: London's streets will be healthy, and more Londoners will travel actively.
    - Safe: London's streets will be safe & secure.
    - Efficient: London's streets will be used more efficiently & have less traffic on them.

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1 The Environmental Assessment of Plans and Programmes Regulations 2004 (Statutory Instrument 2004/1633).

2 Temple and Steer (2108) - **Local Implementation Plan: Strategic Environmental Assessment Scoping Report** – London Borough of Haringey, October 2018.

3 Mayor of London (2018) – **Mayor's Transport Strategy** - Greater London Authority, March 2018

- Green: London's streets will be clean and green.

- **A good public transport experience:**
  - Connected: The public transport network will meet the needs of a growing London.
  - Accessible: Public transport will be safe, affordable and accessible to all.
  - Quality: Journeys by public transport will be pleasant, fast and reliable.

- **New homes and jobs:**
  - Good Growth: Active, efficient and sustainable travel will be the best option in new developments.
  - Unlocking: Transport investment will unlock the delivery of new homes and jobs.

The rationale and detail of each of these outcomes is set out in the third MTS. The LIP responds to the third MTS, the Sub Regional Transport Plan (north) and other relevant policies. This LIP will replace the council's second LIP (2011). The third round of LIPs will become effective from April 2019.

The Transport Plan does not set out binding policies, rather it pulls together key objectives, policies, themes and priorities from other documents and looks at what can be achieved in the next five years given the availability of resources. It also acts as bridge between existing planning documents and any proposed changes to the Local Development Framework, which will set out strategic policies and priorities in relation to transport.

A summary of the key proposals of the LIP are provided in **Section** Error! Reference source not found..

2.3 Compliance with the SEA Regulations

Table 2.1 below sets out the requirements of the SEA Regulations and where this information can be found in this report.

Table 2.1: SEA Requirements[4] and where covered in the Environmental Report

Requirement	Where found
Outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes.	Sections 3.2 and 3.3
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Section 4.0
The environmental characteristics of areas likely to be significantly affected.	Section 4.0
Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated under Directive 79/409/EEC and the Habitats Directive.	Sections 4.0 and 5.3

[4] Based on SEA Regulations 2004 No. 1633, Schedule 2.

Requirement	Where found
The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.	Section 3.6
The likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects, on issues such as biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage (including architectural and archaeological heritage); landscape; and the inter-relationship between these.	Section 5.4
The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Section 5.4
An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	Section 5.2
A description of the measures envisaged concerning monitoring.	Section 5.5
A non-technical summary	Section 1.0

2.4 Report Structure

Following this introductory section, the structure of this report is as follows:

- The context of the LIP and its likely scope, including identification of other policies, plans, programmes and sustainability objectives (**Section 3**);
- Baseline environmental conditions, and how these might change in the absence of the LIP; (**Section 4**);
- The SEA objectives and framework providing the assessment the environmental effects of the LIP and alternatives, together with an overview of the proposed approach to undertaking the assessment. This section also identifies any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the LIP (**Section 5**); and
- The next steps in the SEA process (**Section 6**).

3.0 Context and Scope of the LIP

3.1 Introduction

In this section, the context and scope of the emerging LIP for the London Borough of Haringey is described based on work completed by the Council to date. This sets out:

- The background policies that will shape the proposals to be set out in the LIP, and other associated documents;
- The area to be covered by the LIP and therefore forming the assessment area for the SEA;
- The timescales of the LIP and the SEA.

3.2 Policy Context

3.2.1 The Mayor's Transport Strategy

The Mayor's Transport Strategy (MTS) is described in outline in **Section 2.2** above. As noted, the central aim of the MTS for London not only to be home to more people, but better place for all Londoners. This requires 80% of all trips in London to be made on foot, by cycle or using public transport by 2041, compared with 63% today. The specific Haringey target is 88%.

3.2.2 The Sub Regional Transport Plan (North)

This Plan[5] is part of an ongoing programme, enabling Transport for London (TfL) to work closely with the London Boroughs in north London to address strategic issues, progress medium-longer term priorities and respond to changing circumstances. The Plan translates the MTS goals, challenges and outcomes at a sub-regional level. While these needed to be considered across London, and addressed locally through LIPs, there are some matters which benefit from having a concerted effort at a sub-regional level. Challenges such as improving air quality, reducing CO_2 emissions and achieving targets for increased cycling and walking are better dealt with at sub-regional level across London.

Sub-regional challenges specifically identified for the north sub-region in London were to:

- Facilitate and respond to growth, especially in Brent Cross/Cricklewood and the Upper Lee Valley.
- Enhance connectivity and the attractiveness of orbital public transport.
- Relieve crowding on the public transport network.
- Improve access to key locations and jobs and services.
- Manage highway congestion and make more efficient use of the road network.

[5] Mayor of London (2016) – **North London: Sub-regional Transport Plan** – 2016 update, Transport for London.

Between 2010 and 2018, the north sub-region in London has experienced faster population growth than expected, placing greater demands on transport. The rate of housing delivery needs to increase to cope with this growing population, and effective transport links are critical to this. The ways that people travel also has changed. There is a growing demand for rail services and cycling in particular.

With the election of the current Mayor, a revised MTS was prepared and adopted in 2018 as noted above. The 2016 update of the Sub-regional Plan recognised the new funding settlement for TfL from the Government, as well as the Mayor's revised priorities about how to allocate this. As not all transport schemes previously considered fitted with the new Mayor's priorities, no map or list of specific projects or proposal was included.

3.2.3 Haringey Transport Strategy 2018

Haringey Council's Corporate Plan sets out a vision to support a healthier and better quality of life for residents and local businesses. Delivery of the Council's Transport Strategy, adopted in 2018, is seen as a key component of this. The Strategy aims to greatly improve how the transport system works in Haringey to support the Council's aspirations for new housing and jobs in the borough. It also aims to promote healthier forms of travel like walking and cycling, so reducing carbon emissions and improving air quality. Working more closely together with internal and external partners, especially the Mayor of London, is seen as a critical element to successful delivery of the strategy.

Working with key partners such as the Government, GLA, TfL, private sector developers, public transport operators, Network Rail and the voluntary sector, the Council's vision will be achieved through four objectives:

1. A public transport network that is better connected, has greater capacity and is more accessible, supporting the Council's growth ambitions.
2. Making active travel the easier choice, with more people choosing to travel by walking or cycling.
3. Improved air quality and a reduction in carbon emissions from transport.
4. A well-maintained road network that is less congested and safer.

3.3 Summary of the LIP

The LIP adopts the four objectives of the Haringey Transport Strategy referred to above which are also referred to as outcomes. The policies and proposals set out in the LIP cover six broad categories based on political appetite, local support, delivery mechanisms and the Haringey Transport Strategy as follows:

1. **Local Safety Schemes:** These will comprise the final delivery phase of the Green Lanes study, and other schemes including new zebra crossings, minimising rat runs and speeding and associated traffic calming measures. The priority project locations include:
    - Bruce Grove/The Avenue/Mount Pleasant Road;
    - Ferme Park Study;
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- Dowsett Road;
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2. **Traffic calming and Community Streets:** These will comprise physical measures such as vehicle-activated signs (VAS) to support compliance of 20mph speed limit, speed bumps, upgraded beacons, improved road markings and street furniture reviews. Priority project locations include:
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    - Wood Lane;
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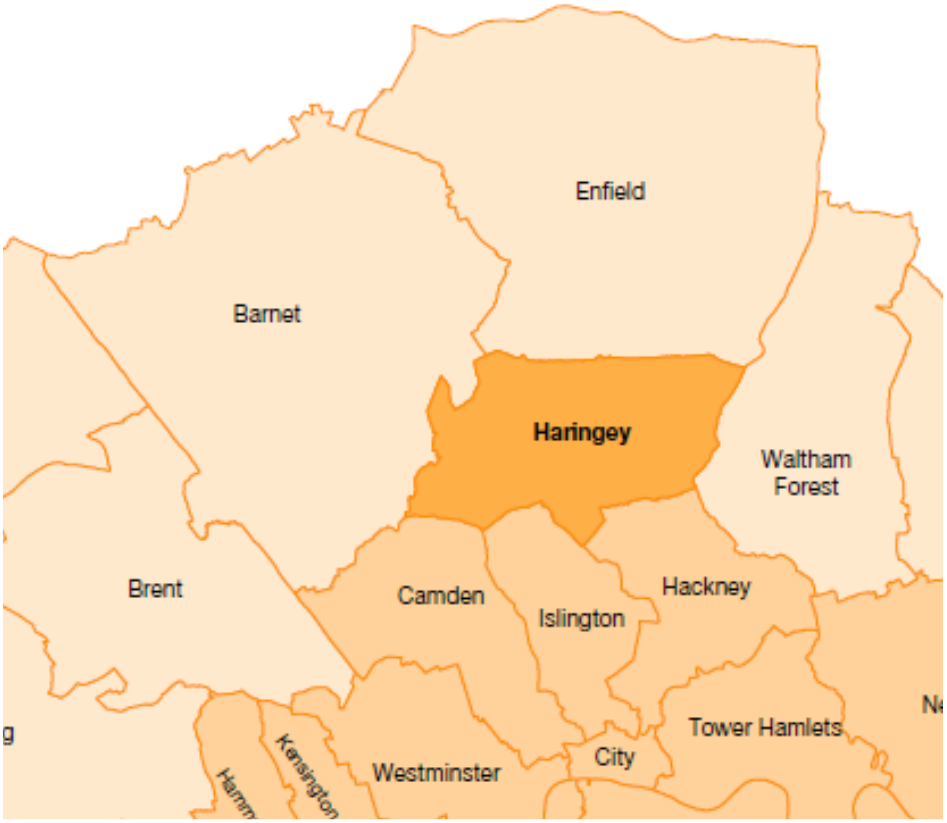
4. **Smarter travel:** Active travel initiatives including school and workplace travel planning, cycle training, personalised travel planning for schools, road safety education, training and publicity, complementary measures to support cycling infrastructure schemes and CPZ proposals. Cycle training for schools and adults will also be provided.
5. **Liveable Neighbourhoods:** Pedestrian and cycling conditions in specific neighbourhoods will be improved to help encourage more active travel in the area, tackling congestion and improving air quality and residents' well-being. Initial proposals will focus on Crouch End town centre, which residents will be consulted on. This may involve creation of a new square incorporating the clock tower, currently surrounded by traffic on all sides. Segregated cycle routes will feed the town centre, pedestrian crossings will be improved, and traffic will be reduced on residential streets with new modal filters.
6. **Public transport:** Reviewing Haringey’s bus network stimulated by changes to the local network with regards to frequency, start and termination points and rolling stock size and cleanliness to deliver a service fit for existing and future residents’ needs.

3.4 Defining the assessment area

The spatial scope for the SEA is the London Borough of Haringey area. The SEA also takes account of potential impacts on adjoining boroughs and districts as appropriate. **Figure 3.1** below shows a map of the London Borough of Haringey area.

Figure 3.1: London Borough of Haringey area and adjoining boroughs



Source: Haringey Local Plan

3.5 Timeframe for the Plan

The LIP programme covers the delivery period up to 2022 with policies, proposals and long-term interventions that cover the period up to 2041. This is therefore also the timeframe for the SEA.

3.6 Other policies, Plans, Programmes and Sustainability Objectives

3.6.1 National and Regional Policies

The most relevant plans and programmes at a national and regional (i.e. London-wide) level used as the basis to inform the objectives included in the appraisal framework for the SEA (See **Section 5.0**) are set out in **Table 2.1** below.

Table 2.1: Relevant National and Regional Policies reflected in the SEA Objectives

Topic	Policy Document
All Topics	Upper Lee Valley: Opportunity Area Planning Framework (2013)
	A Green Future: Our 25 Year Plan to Improve the Environment (2018)
	The London Plan: The Spatial Development Strategy for London (2016)
	The New London Plan: Draft for Public Consultation (2017)
	Mayor of London's Environment Strategy (2017)
	National Planning Policy Framework (2018)
Air Quality	Air Quality Standards Regulations 2010
	Defra's Air Quality Plan (2016)
	Environment Act 1995
	EU Ambient Air Quality Directive (2008/50/EC)
	The Greater London Authority Act 1999
Climate Change Adaptation	Climate Change Risk Assessment (CCRA)
	EC White Paper: Adapting to Climate Change
	National Adaptation Programme (NAP)
	UK Low Carbon Transition Plan (2009)
Climate Change Mitigation	Climate Change Act 2008
	Promotion of the Use of Energy from Renewable Sources Directive (2009/28/EC)
	United Nations Framework on Climate Change COP21 (2015) – Paris Agreement-
Fairness and inclusivity	Equality Act (2010)
Flood Risk	UK Water Strategy (2008)
Geology and Soils	England Soil Strategy, Safeguarding our Soils (2009)
	EU Environmental Liability Directive (99/31/EC)
Historic Environment	Ancient Monuments and Archaeological Areas Act 1979
	Planning (Listed Buildings and Conservation Areas) Act 1990
Materials and Waste	EU Waste Framework Directive (2008/98/EC)
	National Planning Policy for Waste (2014)
	Waste (England and Wales) (Amendment) Regulations 2014
Natural Environment and Natural Capital	Conservation of Habitats and Species Regulations 2010
	Council Directive on the Conservation of Natural Habitats of Wild Fauna and Flora 92/43/EEC
	Directive on the Conservation of Wild Birds 09/147/EC
	Natural Environment and Rural Communities Act 2006
	The Natural Choice – securing the value of nature (2011)
	Wildlife and Countryside Act 1981
Noise and Vibration	Environmental Noise (England) Regulations 2006
	EU Noise Directive (2000/14/EC)
Water Resources and Quality	Final Water Resources Management Plan 14 (WRMP14), 2015-2040 (Thames Water, July 2014) and Annual review June 2016; Affinity Water 2014 Water Resources Management Plan
	Thames River Basin District River Basin Management Plan (Environment Agency, December 2015

3.6.2 London Borough of Haringey Policies

The following policy documents published by the London Borough of Haringey have also been used to inform the SEA objectives:

- Going Green: Haringey's Greenest Borough Strategy 2008 – 2018;
- Haringey Air Quality Action Plan 2010 – 2018;
- Haringey Joint Strategic Needs Assessment: Figures about Haringey 2013;
- Haringey Local Plan 2013;
- Haringey Local Plan: Sustainability Appraisal (SA) of the Strategic Policies Alterations 2015;
- Haringey Transport Strategy 2018;
- Haringey Transport Strategy Equality Impact Assessment 2018;
- Haringey Urban Character Study 2015; and
- Strategic Environmental Assessment and Sustainability Appraisal of Haringey Local Plan 2013.

4.0 Baseline Environmental Conditions

4.1 Air Quality

In common with other local authorities, air quality in Haringey is monitored at several specific locations and this information is also used to model the quality of air across the borough. The Council's latest air quality Annual Status Report[6] indicates Haringey continues to breach the UK Government's air quality objectives for nitrogen dioxide (NO_2) in parts of the borough. However, the standards particulate matter (PM_{10}) and all other air pollutants are being met.

The dominant source of NO_2 and PM_{10} emissions in Haringey is road transport with a variety of other sources contributing emissions. According to the latest London Atmospheric Emissions Inventory (LAEI) 2013, compiled by the GLA, 62% of oxides of nitrogen (NO_x) emissions, and 55% of particulates (PM_{10}) emissions in Haringey come from road transport, while 43% of NOx emissions and 4% of PM10 emissions come from domestic or commercial gas use.

The TfL MTS3 LIP Outcomes Borough Datapack indicates that in combination, changes in the vehicle fleet (e.g. more electric vehicles and the phasing out of diesel engines) and the policies of the MTS should result in significant reductions in air pollutant emissions from transport, as indicated in **Table 4.1** following

Table 4.1: Air pollutant emissions from road transport in Haringey (tonnes) by year

Pollutant	2013	2021	2041
Oxides of Nitrogen (NO_x)	520	170	20
Particulates (PM_{10})	48	38	19
Particulates ($PM_{2.5}$)	29	18	9

Although detailed modelling would be required to confirm this, it is likely that these reductions would allow the UK air quality objectives to be met across the borough. Also, without this modelling, it is not possible to disaggregate how much of these reductions are attributable to technological changes, and which due to MTS policies.

4.2 Attractive neighbourhoods

Haringey Council has identified distinct neighbourhoods[7] in the borough based on both physical characteristics and social identity. These are identified in **Figure 4.1**, and can be characterised as follows:

- **North Tottenham / Northumberland Park:** Centred on Tottenham High Road the area has a large hinterland and the Tottenham Hotspur Stadium development will make it a more significant centre of commerce. The area combines terraced housing with proximity to the Lea Valley Park. The High Road provides a strong spine to the area with great diversity of activities and uses reflecting the local communities. Park Lane has a local "village" character with some interesting shops. There is a rich mix of communities, evidenced by the look and function of buildings, shops and businesses. Houses prices are relatively

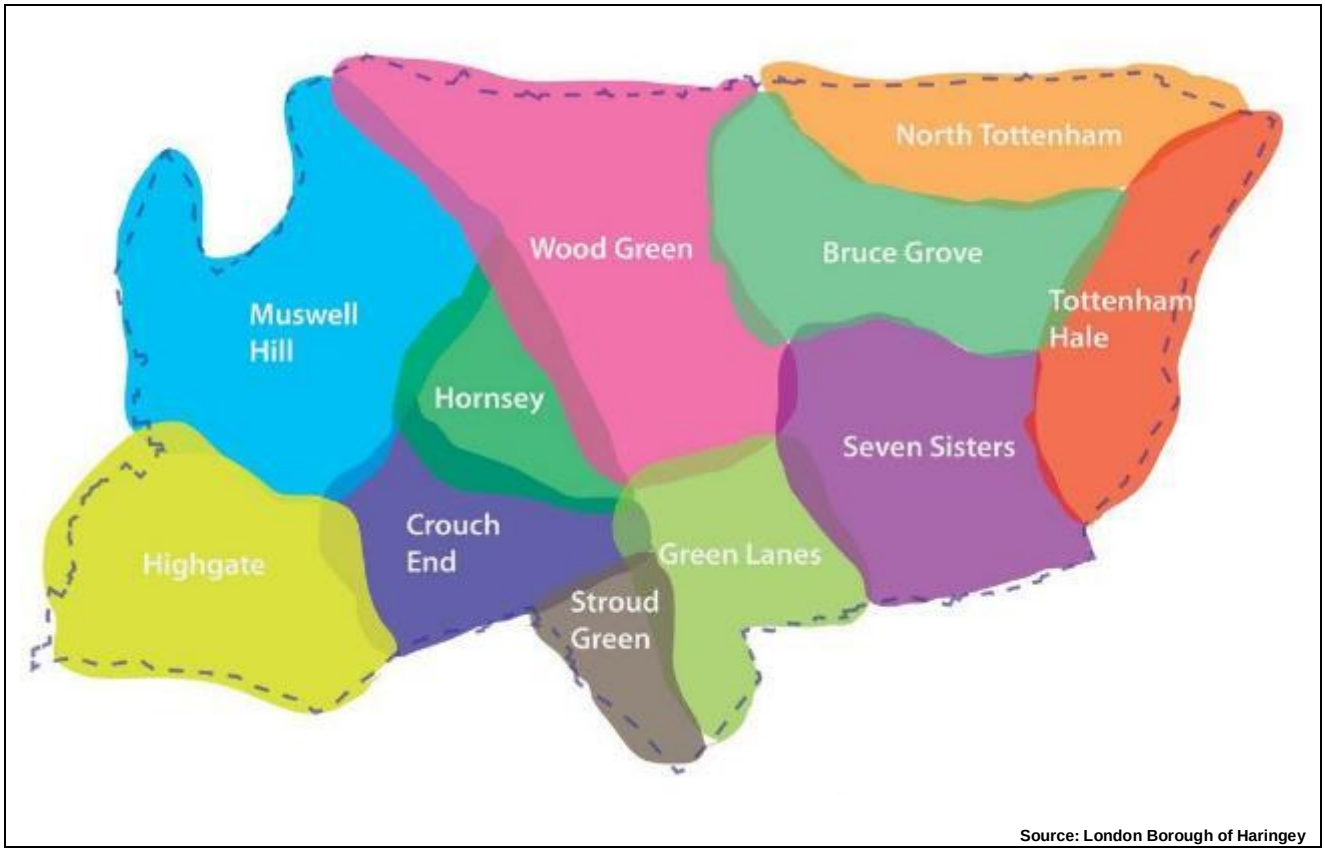
6 London Borough of Haringey (2017) - **Air Quality Annual Status Summary Report for 2017**.

7 London Borough of Haringey (2015) – **Urban Character Study** – February 2015.

more affordable compared to other areas of the borough, although much of the housing stock is poor quality/condition. The area around Great Cambridge Road is more dominated by cars and has poorer access to public transport. There are also some large monolithic blocks, particularly on the 1960's council estates, and there is poor local connectivity through some of these. In the east of the area, industrial estates, railway line and Meridian Way cut the Lea Valley Park off from the residential areas, and the big sheds of industrial businesses have little architectural or urban design quality.

- **Bruce Grove:** This area has a historic environment and much good quality housing, in the form of robust and desirable family housing in Victorian terraces. It also includes the Broadwater Farm Estate, with buildings varying between six and ten storeys with two 19-storey point blocks at 19 storeys. The community core of the area is formed around Tottenham High Road, Bruce Grove, the area around Bruce Castle and parts of Lordship Lane. This comprises predominantly 3 and 4 storey buildings. The commercial uses and the council estates in the

Figure 4.1: Neighbourhoods in London Borough of Haringey



Source: London Borough of Haringey

area contribute to perceptions of a poor visual quality, and there are also local concerns about anti-social behaviour and crime.

- **Tottenham Hale:** The area comprises 19th century terraced houses and streets in the north-west and south-west of the area, in proximity to industrial areas in mixed sized buildings accommodating a variety of small businesses, manufacturers and artists. The area is also characterised by its proximity to the Lea Valley and its water-based landscape, meandering rivers, brooks, canals and large reservoirs. There is a well-connected local

street network of residential streets with a fair to good quality public realm. The area is well served by public transport, and there has been a significant amount of recent residential and commercial development around Tottenham Hale underground station, which has provided a new hub for activities, but the car-based environment around station and adjacent retail park means the area is affected by lots of traffic, fumes and noise.

- **Seven Sisters:** This area chiefly comprises well-established residential terrace streets laid out during the19th century, providing compact, yet well sized family houses with back gardens. It also contains several large post-war housing estates of contrasting forms, styles and layouts. Tottenham High Road acts as both a spine and heart to the area and a line of severance, due to it being heavily trafficked and difficult to cross in parts. The area is centred on where several important streets meet at the junction of Seven Sisters Road, Tottenham High Road, Brook Road, and West Green Road. This convergence of primary routes generates a lot of pedestrian and vehicular activity, but much of the space is designed primarily for traffic with a generally poor quality pedestrian environment, Tottenham Green and western side of the High Road being an exception to this. The River Lea defines the area's eastern edge and its wider character. Good east-west routes exist but north-south routes are poorer (except for the High Road). Post-war redevelopment removed much of the legible Victorian street pattern, making north-south movement from St Ann's Road to West Green Road difficult and confusing.

- **Green Lanes:** Green Lanes is a busy through route and an important and distinctive local centre with Victorian terraces to either side. To the west, the 'Harringay Ladders' form a strong grid of tightly grained terraces. The terraces follow the topography creating a gentle undulating and rhythmic roof form. Parked cars dominate the area, but street trees soften the otherwise dense built form. The East Coast mail line railway forms a strong edge and a barrier to the west. To the east, the street pattern is not as strong and creates a more irregular layout of terraces with dead ends and cul-de-sacs. To the north there are some newer estates and apartments, with impermeable circulation patterns. St Ann's Hospital defines the eastern end of the area along with Chestnuts Park. At the corner of Black Boy Lane and St Ann's Road, the Chestnuts Primary School is a landmark building in Victorian Gothic style. Finsbury Park runs along the southern edge of the area along with the New River Channel. Woodberry Downs Estate forms a landmark defining this edge. Green Lanes is dominated by traffic and related signs. Shop fronts often are in poor condition, and facades are heavily cluttered with signs, advertisements, satellite dishes and other additions.

- **Wood Green:** This is the strategic centre of the borough, located on the busy High Road, (A105) lined, largely by 3 storey mixed use buildings, of a variety of periods but principally Victorian/Edwardian. Turnpike Lane lies at the southern end and Wood Green proper at the northern end. The High Road comprises ground floor shops, local businesses, cinemas, nightclubs, bars, cafes, and restaurants. The large and imposing Wood Green shopping complex lies to the north. At either end of this section of the High Road are two historic Commons that provide important 'green lungs' off the busy High Road. To the north lies Wood Green Common, a lozenge shaped green space with a belt of mature trees on its northern edge. To the south lies Duckett Common, a somewhat larger green space. Another important and distinctive green space is Stuart Crescent, enclosed by civic and residential buildings and overlooked by two landmark buildings; the Civic Centre and St Michael's Church. There is an active arts, creative, and small business community west of the High Road and south of Wood Green Common, including the Chocolate Factory, Parma

House, Karamel cafe, and Mountview Academy of Theatre Arts. Noel Park Estate forms a distinctive part of Wood Green, lying immediately to the east of the High Road, including Victorian terraces and villas.

- **Hornsey:** Hornsey is characterised by terraces of two and three storey buildings with retail frontages along the High Street and Tottenham Lane. To the north of Hornsey High Street, and immediately to its south are housing estates built during 1970s and 80s, surrounded by the late Victorian terraces. To the south west of the High Street is Priory Park, a pleasant urban green space opened in 1926. There is more recent development to the south of the Water Works at New River Village comprising five storey blocks of homes and offices.

- **Crouch End:** Crouch End has an 'urban village' feel with human-scaled buildings centred around the junction of Park Hill Road, Crouch End Hill and Crouch End. The Broadway is an Edwardian shopping parade with several landmarks like the Queens Pub, Hornsey Town Hall, Hornsey Library and the Kings Head Pub. The steepness of streets leading to neighbouring places is a defining and important aspect of its character. Hornsey Town Hall is set back from the Broadway fronting a civic square that functions as a gathering spot and public space as well as hosting events and markets. The rest of the area comprises Victorian/Edwardian houses lining elegant avenues and is a popular place for families due to good quality family housing and excellent local schools. Crouch Hill Playing Fields and Queens Wood to the northwest provide important greenspace.

- **Stroud Green:** Stroud Green Road is the principal thoroughfare and spine of this area, with many independent retailers including ethnic and international grocery stores, cafes and restaurants. The residential streets in this area are largely late Victorian and Edwardian domestic townscape, comprising a mixture of townhouses, villas and smaller worker cottages forming terraces. Several important local landmarks contribute to the areas historic interest and sense of place such as Stroud Green Primary School, Stapleton Hall, The Old Diary, Faltering Fallback Public House, and Stroud Green Library. Finsbury Park, a major green space, lies on the eastern edge of the area, accessible by several railway crossings.

- **Highgate:** Highgate Village, centred on the High Street, has an organic early 19th Century layout that contrasts with later suburban-style development. The village crowns one of twin hills to the north of London, characterised by its 17th to 19th century small-scale terraced houses and traditional shop frontages, with Pond Square (in neighbouring Camden) at the heart of the village. Archway Road runs to the east of the area, fronted by late Victorian and Edwardian retail parades and has high quality residential areas of Victorian, Edwardian and early 20th century terraced housing on either side. There are also large detached houses to the west of the area, some of which back onto Highgate Golf Club, and good examples of 20th century buildings such as High Point 1 and 2. The area also provides long distance views to Central London, the Olympic Park and Alexandra Palace.

- **Muswell Hill:** Public transport connections to Muswell Hill are relatively poor, with no tube or mainline station. It is also located on high ground, so connections with other parts of the borough, particularly to the south, are very steep. The area derives its character in part from these factors, which gives it an 'urban village' feel. Muswell Hill is centred on the distinctive Edwardian curves of the Broadway shopping parade. Other buildings such as the art-deco Odeon Cinema (Grade II listed) add to the quality of the area. Many bars, cafes, restaurants, specialist food stores and other shops, together with a weekly farmers market gives the area a strong independent character. Alexandra Palace stands at the highest

point of the area, providing panoramic views of London and surrounded by expanses of parkland. Elsewhere, Muswell Hill is a largely Edwardian suburban residential area set on interconnected, undulating streets with distinctive red brick terraced or semi-detached houses. To the north-west, there are more varied residential developments from the inter-war and post-war periods comprising low-rise, suburban cul-de-sacs and crescents".

4.3 Climate change mitigation and adaptation

The most recent figures available, for 2016[8], indicate that after reaching a peak of 1,061 kilotonnes per annum (kpa) in 2006, CO_2 emissions for the borough had fallen back to 711 kpa. This comprised 49% from dwellings, 26.5% from non-domestic buildings and 24% from transport.

The TfL LIP3 MTS Borough data pack indicates that as a result of a combination of changes to the vehicle fleet and MTS policies, CO_2 emissions from road transport in Haringey will reduce from 132.9 kta in 2013 to 116.1 kta in 2021 and to 25.9 kta in 2041. However, detailed modelling would be required to determine what proportion of this reduction is due to technology and what to the MTS policies.

4.4 Energy use and supply

In 2015 (the latest figures available), Government statistics[9] indicated that 261,000 tonnes of oil equivalent (ktoe) energy was consumed in the London Borough of Haringey. This is lower than the average for boroughs across Inner London. Of this, gas consumption accounted for just over 50%, while 26.5% was electricity consumption and just over 20% was of petroleum products. Nearly 25% of energy consumed was by industry, and 53.6% was consumed in people's homes. 20.4% of energy used was for transport.

4.5 Fairness and inclusivity

The London Borough of Haringey is exceptionally diverse and fast-changing. The population was just under 255,000 at the 2011 Census. This is estimated to have risen to under 284,300 by mid-2018, an increase of nearly 11.5%. Almost two-thirds of people living in the borough, and over 70% of young people, are from ethnic minority backgrounds, and over 100 languages are spoken in the borough. This makes Haringey one of the most ethnically diverse places in the country. The breakdown of Haringey's population by ethnicity is indicated in **Table 4.1** below:

Table 4.2: Ethnic makeup of London Borough of Haringey 2018

Ethnicity	Number	%
White - British	95,579	33.6
White - Irish	7,985	2.8
Other White	73,592	25.9
White and Black Caribbean	4,929	1.7
White and Black African	2,896	1

[8] Department of Energy and Climate Change (2018) - **2005 to 2016 UK local and regional CO_2 emissions: Statistical Release**.

[9] Department for Business, Energy and Industrial Strategy (2017) - **Sub-national total final energy consumption in the United Kingdom (2005 - 2015)** – 28th September 2017.

Ethnicity	Number	%
White and Asian	4,204	1.5
Other Mixed	6,522	2.3
Indian	6,147	2.2
Pakistani	1,870	0.7
Bangladeshi	4,367	1.5
Chinese	4,699	1.7
Other Asian	9,498	3.3
Black African	23,418	8.2
Black Caribbean	16,418	5.8
Other Black	7,468	2.6
Arab	2,634	0.9
Other ethnic groups	12,061	4.2
Total	*284,287*	*100*

Source: London Datastore

The borough also ranks as one of the most deprived in the country with pockets of extreme deprivation in the east of the area. Haringey is the 13th most deprived borough in England and the 4th most deprived in London.

The fastest growing population locally is typically among working age people aged between 30 and 50. The number of people aged 65 and over has typically been declining. Population growth locally seems mostly due to an increase in birth rates locally and net gain from international migration, principally from EU states in Eastern and Southern Europe.

There are marginally more women and girls than men and boys living in the borough, but no significant differences from the proportions at London and national levels.

4.6 Flood risk

Flood zones for planning purposes are defined by the Environment Agency, based on the likelihood of an area flooding. The three zones are:

- **Flood Zone 1** has less than 0.1% chance of flooding in any year (or 1:1000-year chance). There are very few restrictions on development these areas, exception where proposed development over 1ha in size, or is in a Critical Drainage Areas (i.e. deemed to be at high risk of flooding from rainfall).

- **Flood Zone 2** has between 0.1% – 1% chance of flooding from rivers in any year (between 1:1000 and 1:100 chance).

- **Flood zone 3** has 1% or greater probability of flooding from rivers.

The flood risk zones in the London Borough of Haringey are illustrated in **Figure 4.2** following and are principally in the east of the borough, associated with the natural and man-made waterways in the Lee Valley. Other areas relate to the Moselle Brook flowing from Hornsey to Tottenham, and Pymmes Brook on the northern edge of the borough. More information on water resources in the borough is provided in **Section 4.14** below.

Figure 4.2: Flood Risk Areas in the London Borough of Haringey

Source: The Environment Agency

4.7 Geology and soils

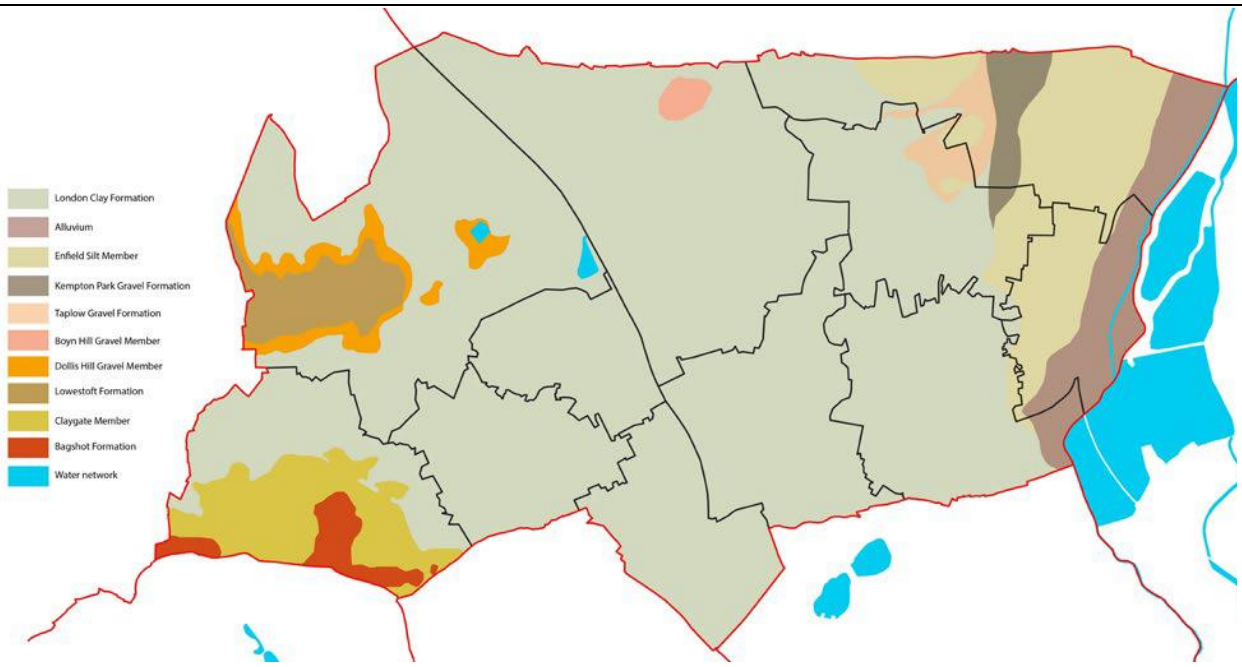
The Borough is within the London Basin, bounded by chalk uplands: to the south by the North Downs and to the north by the Chiltern Hills. Eight geological types are found within the Borough, i.e. London Clay, Enfield Silt Member, Alluvium, Kempton Park Gravel Formation, Taplow Gravel Formation, Boyn Hill Gravel Member (BHT), Dollis Hill Gravel Member, Lowestoft Formation, Claygate Member and Bagshot Formation. Of these, London Clay is most prevalent.

There are four principal soil types within the Borough, relating to the above geological type, as follows.

- 18: Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soil. This type covers most of the borough, linked to the underlying London Clay.
- 20: Loamy and clayey floodplain soil with naturally high groundwater. This is found around Tottenham Hale and the Lee Valley.
- 6: Freely draining slightly acid loamy soil. This is found in North Tottenham and parts of Tottenham Hale.
- 22: Loamy soil with naturally high groundwater. This is found around Highgate.

The geology and soils of the Borough are illustrated in **Figure 4.3** below.

Figure 4.3: Geology and Soils in the London Borough of Haringey



Source: London Borough of Haringey (2017) - **Urban Character Study** -February 2015

4.8 Historic Environment

The Boroughs historic assets include 286 listed buildings of Special Architectural or Historic Interest, six Grade I buildings and 280 Grade II buildings, 1150 locally listed Buildings of Merit, 28 Conservation Areas (some of which have had Character Appraisals13 completed), two Registered Parks and Gardens (Finsbury Park and Alexandra Park), 34 Local Historic Green Spaces, 23 Sites of Industrial Heritage Interest, and 22 Archaeological Priority Areas. Also, the view of St Paul's Cathedral and the City from Alexandra Palace is identified in the London Plan as a strategically important Viewing Corridor.

Haringey has 17 Listed Buildings and 5 Conservation Areas on English Heritage's Heritage at Risk Register including the Grade II Listed Alexandra Palace.

4.9 Materials and waste

The total amount of Municipal Solid Waste collected by Haringey in 2011 was 115,793 tonnes. 29% of the total was sent to landfill or 33,578 tonnes. Haringey has an overall capacity for waste management of approximately 104,800 tonnes per annum.

The Borough achieves good recycling rates. There are two Reuse & Recycling Centres, and these accept an increasing range of materials and items for reuse or recycling. Other waste, if suitable, is sent for incineration at Edmonton Waste Incinerator, which also generates electricity for the National Grid. The overall recycling and composting rate for the North London Waste Authority, including Haringey is 33.2%.

4.10 Mental and physical wellbeing

Health and well-being in Haringey typically are similar to the London average. Life expectancy rates in Haringey are increasing and are expected to improve further. Health inequalities are most evident in the more deprived areas in the east of the Borough where people tend to experience the poorest health. Mental illness, levels of physical activity and obesity a greater concern in more deprived parts of the borough. Men who live in the most deprived areas in the borough die on average 7.7 years younger than those in more affluent areas. Also, health inequalities are more prevalent among groups with protected characteristics. For example, obesity is more prevalent amongst black and minority ethnic groups with 41.4% of BME children overweight or obese compared to 23.4% of White British children. Women in Haringey typically live longer than men but spend more years of their lives in poor health (23 years versus 20 years).

Childhood obesity rates in the Borough are higher than the London and England average. One in four children aged 4-5 and one in three children aged 10-11 are overweight or obese. These children are more likely to live in the east of the Borough. About 112,865 adults in Haringey are estimated to be overweight or obese.

The effects of environmental issues on health are more concentrated in certain parts of the borough. For example, town centres and other areas with traffic congestion experience poorer air quality with consequent impacts for people vulnerable to respiratory and heart conditions. Some issues also impact more heavily in more deprived parts of the borough, with higher traffic accident casualty rates in the East of the borough.

4.11 Natural Capital and Natural Environment

There are two European Sites within a 10 km radius of Haringey:

- **Epping Forest Special Area of Conservation:** Epping Forest was designated as a SAC in 2005. It comprises a large ancient wood-pasture with habitats of high nature conservation value including ancient semi-natural woodland, old grassland plains, wet and dry heathland and scattered wetland. The forest is primarily beech on acid soils, which are important for a rare mosses, fungi, invertebrates and insects (including stag beetles) associated with decaying timber.

- **Lee Valley Special Protection Area and Ramsar Site:** Lee Valley comprises nearly 450 ha. of embanked water supply reservoirs, sewage treatment lagoons and former gravel pits that display a range of man-made and semi-natural wetland and valley bottom habitats. The area comprises the Sites of Special Scientific Interest (SSSIs) at Amwell Quarry, Rye Meads, Turnford and Cheshunt Pits, and Walthamstow Reservoirs. SPA status was granted in 2000 because of the site's European ornithological interest. It is used regularly by rare species such as Bittern and migratory birds like shoveler and gadwall. Other species of interest are cormorant, great crested grebe, tufted duck, pochard and grey heron.

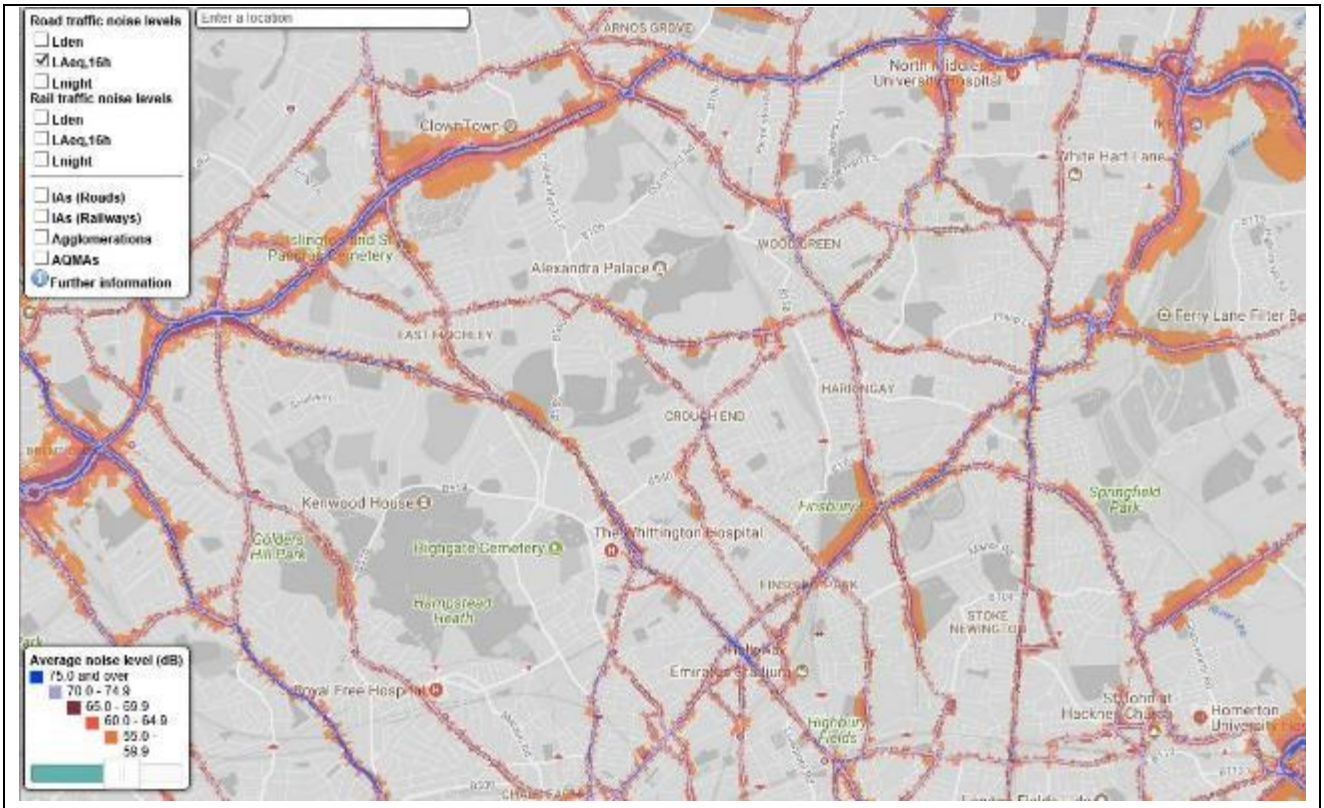
The Borough has a total of 60 areas designated as Sites of Importance for Nature Conservation Importance. Of these, five are of Metropolitan Importance, 22 of Borough Importance Grade I and Borough Grade II and 33 of Local Importance. Haringey also has five Local Nature Reserves (LNRs) - Alexandra Palace & Park, Coldfall Wood, Parkland Walk, Railway Fields and Queens Wood. The waterways also offer a valuable habitat, which it is recognised should be preserved and enhanced.

The Lee Valley Regional Park straddles the eastern boundary of the Borough. This area is home to European designated sites and is a Site of Special Scientific Interest.

4.12 Noise and vibration

Little information is available on noise and vibration generally across the Borough. **Figure 4.4**. following shows estimated levels of road traffic noise, which is the primary noise source in most parts of the Borough. This is based on the strategic noise mapping exercise undertaken by the Government in 2012, and shows results are shown for LAeq,16h, which is the annual average noise level (in dB) for the 16-hour period between 0700-2300.

Figure 4.4: LAeq 16-hour road traffic noise levels in London Borough of Haringey 2012



Source: http://extrium.co.uk/noiseviewer.html

The actual level of noise may have increased due to increases in traffic since 2012, but this is unlikely to be to a significant extent. The pattern and distribution of noise levels is likely to be relatively unchanged over this time. From **Figure 4.4** it may be seen that the main areas affected by traffic noise in Haringey unsurprisingly are along the main traffic routes through the Borough. In particular, areas close the A406 North Circular Road and A1055 Watermeaad Way are particularly affected by noise, but the other main routes such the A10 Tottenham High Road and Great Cambridge Road, A1010 Tottenham High Road, A105 Green Lanes and Wood Green High Road, A1 Archway Road, A504 through Hornsey and Muswell Hill and A503 Seven Sisters Road all experience higher levels of traffic noise.

The TfL MTS LIP3 Borough Datapack indicates that the amount of traffic on roads in Haringey may reduce by up to 20% by 2041, due to the MTS policies. However, this reduction would not be sufficient to lead to a significant decrease in noise from road traffic.

4.13 Safety and security

Crime has been steadily declining across Haringey over time, but some neighbourhoods and groups remain more likely to fall victim to crime than others. There has, however, been a recent increase in crime rates during 2017/18. This is now at 106.7 crimes per 1,000 population, which is above the London average and 8th highest in the capital. Crime is particularly prevalent in Noel Green Ward (i.e. the area around Wood Green town centre) and Tottenham Green Ward (the area around the southern End of Tottenham High Road).

Historically, property crime (includes robbery, burglary and vehicle crime) in the Borough has contributed significantly to overall crime figures and has also been a top concern of its residents. Unemployment is strongly correlated with acquisitive crime. However, most recently, the highest crime rates have related to anti-social behaviour and violent or sexual offences, where for both rates are above the London average also.

There is a spatial dimension to crime within the borough, with crime incidents, particularly incidents of violent crime, concentrated in places with high deprivation. Young people are more likely to be both victims and perpetrators of violent crime and those aged 13-21 are more likely to be victims of personal robbery

There is a strong gender dimension to violent crime with 1 in 3 violent crimes an incident of domestic violence.

4.14 Water resources and quality

The River Lee is located along the eastern extent of the Borough and flows south to the Thames, forming the boundary between Haringey and Waltham Forest. It drains a large rural catchment to the north of London in Hertfordshire and Essex, extending as far as Luton.

The New River flows southwards through the centre of the borough. It was constructed in 1613 to supply drinking water to London. It is owned and operated by Thames Water and is currently used to transport water from the surrounding reservoirs and treatment plants.

Pymmes Brook flows east mostly through the London Borough of Enfield, entering Haringey near Tottenham Marshes, then flowing south to the River Lee Navigation near Tottenham Hale.

The Moselle Brook was a natural tributary of the River Lee but is now flows in a culvert into Pymmes Brook. This flows east with only a small stretch above ground in Tottenham Cemetery.

5.0 SEA Objectives and Framework

5.1 Objectives

Temple and Steer have confirmed with Haringey Council that it is happy to use the TfL/GLA framework that was developed to satisfy SEA requirements for plans and strategies produced by the Mayor of London as the basis for the current assessment.

The SEA topics indicated as in scope in **Section** Error! Reference source not found. above and the objectives against which the proposals set out in the LIP will be evaluated are set out in **Table 5.1** below.

Table 5.1: TfL/GLA environmental objectives for SEA

Environmental topic	Objective
Air Quality	To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality, and reduce exposure
Attractive neighbourhoods	To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance existing sense of place and distinctiveness, reducing the need to travel by motorised transport.
Climate change adaptation	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
Climate change mitigation	To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050
Energy use and supply	To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system
Fairness and inclusivity	To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population; and
Historic Environment	To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.
Mental and physical Wellbeing	To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.
Natural Capital and Natural Environment	To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the services and benefits it provides, delivering a net positive outcome for biodiversity
Noise and vibration	To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure
Safety and security	To contribute to safety and security and generate the perceptions of safety;

We have reviewed the baseline information collated, together with the outcomes of the IIA undertaken for MTS3 and other information on the specific proposals likely to come forward through each LIP to identify the existing sustainability issues that are relevant.

5.2 Alternatives

To meet the requirements of the SEA Regulations, it is also necessary to identify reasonable alternatives to the proposals presented in the LIP, and meaningful comparisons made of the environmental implications of each. Experience tells us that, in the context of LIPs delivering the policies and proposals already identified in the MTS, it can be assumed that the only real reasonable alternative to the LIP proposals is the "do-nothing" scenario. On this basis, we do not propose to develop other alternatives simply for comparison in the SEA.

The proposals set out in the LIP have been identified through a structured appraisal and evaluation of candidate projects. Project ideas were generated through discussion with internal stakeholders, considering the council's Borough Plan objectives and other related priorities. In parallel, the Council reviewed the transport evidence base identify key issues to be addressed and trends such as clusters of accidents or locations where high traffic speeds were consistently recorded. The public and key stakeholders were also consulted on these matters.

Haringey Council then combined the evidence base and stakeholder feedback to identify correlations. This generated a 'long list' of projects for further evaluation using multicriteria analysis, scoring each against a range of local and Mayoral priorities as well as deliverability, value for money, and synergies with existing programmes. The resulting prioritised list of schemes is the basis of the 3-year programme set out in the LIP.

5.3 Habitats Regulations Assessment

As well as SEA, the LIP may also require a Habitats Regulations Assessment (HRA), as set out in the Conservation of Habitats and Species Regulations 2010 (as amended) if it is likely to have significant effects on European habitats or species.

Taking note of the reasons for designation of the sites described in **Section 4.11** above, the proximity of these areas in relation to the proposals set out in the LIP, and the characteristics of the proposals, it is concluded that no significant environmental effects on the protected areas that may affect their conservation objectives[10,11] will be likely to arise from implementation of the LIP. On this basis, no further assessment has been undertaken.

5.4 SEA Framework Matrices

5.4.1 Approach

To evaluate the effects of the LIP, Temple and Steer have used the adapted GLA SEA framework matrix in this section. The four Borough Transport Objectives of the LIP, together with the long-term and short-term programmes of proposals identified are assessed in turn in the matrix tables in

[10] Natural England (2014) - **European Site Conservation Objectives for Epping Forest Special Area of Conservation** - Site Code: UK0012720.

[11] Natural England (2014) - **European Site Conservation Objectives for Lee Valley Special Protection Area** - Site Code: UK9012111.

this section. **Table 5.2** provides a list of the seven matrices. The six broad categories of policies and proposals are cross-referenced against the principal objective which is most relevant. It should be noted that each of the six categories will work to meet more than one objective.

Table 5.2 Summary of SEA Matrices and Haringey LIP objectives

SEA Matrix	Objectives/proposals	Main categories of projects / measures relevant to each outcome
1	Outcome 1: A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.	6. Public Transport
2	Outcome 2: Active travel the default choice, with more people choosing to travel by walking or cycling.	3. Walking and Cycling 4. Smart Travel
3	Outcome 3: An improved air quality and a reduction in carbon emissions from transport.	5. Liveable Neighbourhoods
4	Outcome 4: A well maintained road network that is less congested and safer.	1. Local Safety Schemes 2. Traffic Calming and Community Streets
5	Long-term proposals	All
6	Short-term proposals	All

The likely effects of implementing the LIP has been based on the professional judgements of our SEA team, evidenced by information from the LIP3 MTS Outcomes Borough data pack that was provided to the London Boroughs by TfL. This data pack was based on transport modelling that was completed by TfL to inform the third MTS. The results of this modelling are useful in informing the assessment, given that purpose of the LIP is to implement the MTS is a borough. It should be noted that the results of the modelling cannot be used directly, as it was only conducted at a strategic level, with the purpose of obtaining London-wide results. As such, borough-specific outputs are not available. Furthermore, this modelling takes into account the entire MTS, only some of which may be reflected in the LIP.

Notwithstanding the above, the results of the MTS modelling provide an indication of the likely direction and scale of change expected as a result of the MTS policies. As such, by considering what proportion of the scenario modelled for the MTS is directly related to LIP policies, we gain insights into their potential effects.

This is made easier as various packages were modelled for the MTS, as described in **Table 5.3** below. Package A is the reference case, largely reflecting business as usual. Various packages were then modelled on top of this, with each subsequent package being cumulative (so for example, Package C includes the measures in Packages A and B plus some additional measures).

The definitions of the packages are shown in **Table 5.3** below. There are elements in most of the packages that reflect what is contained in the LIP. However, it is Package E that is most closely related to what is proposed in the LIP. As such, whilst recognising that this is a simplistic approach, examining the marginal impact that Package E has provides a rough indication of the potential direction and magnitude of the impact of the LIP.

Table 5.3: Description of packages modelled for the MTS

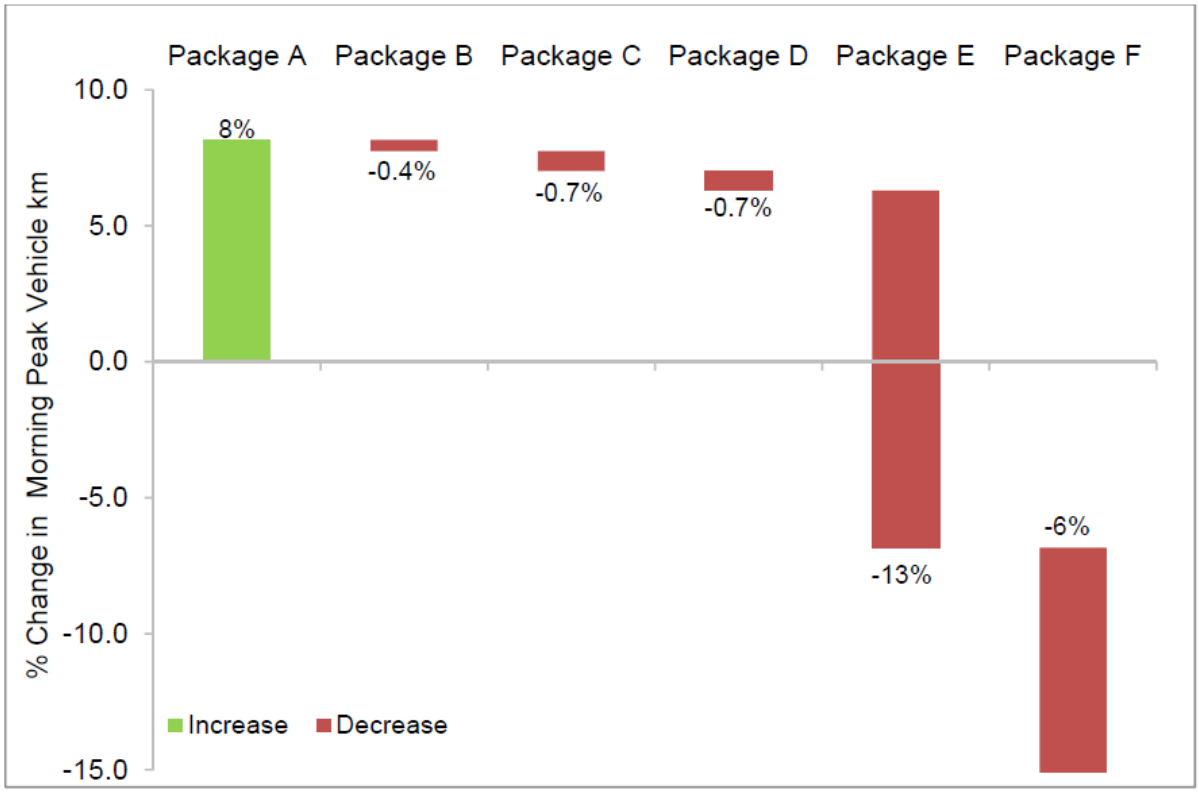
Package	Description
Package A: Core reference case	The core reference case includes funded public transport and highway schemes and likely changes in London's land use and economy. It assumes the latest available projections of population and employment from the GLA as well as Government assumptions on changes in the wider economy, and current funded schemes. A scheme list is provided in Appendix 1 of the MTS and a summary of key schemes is provided as follows: • Current view of funded National Rail2 schemes, HLOS programme, Thameslink programme, HS2, West Anglia and Great Western improvements. • The opening of the Elizabeth Line in 2019, the Northern Line Extension and Tube upgrades to the Victoria, Jubilee, Northern and Sub Surface Lines. • DLR, Trams, London Overground and bus service improvements. • TfL's Road Modernisation Plan, cycling infrastructure schemes and the introduction by 2020 of the Central London Ultra Low Emission Zone (ULEZ). Wider assumptions have been made about policies relating to aspects such as fares, fuel costs and car parking.
Package B: Optimising the network	One of the main challenges identified in the core reference case is continued traffic dominance with highway congestion affecting bus speeds. Package B aims to enhance the existing network through bus priority schemes the reallocation of road space in areas of high place value identified by the Street Types for London. It also includes frequency improvements to some rail services. A summary of key schemes is provided as follows; • Bus priority schemes, enabling faster journey times in Central London; low emission bus zones; and high frequency links; • 30 trains per hour on the Elizabeth Line; • Some selected National Rail and London Overground improvements; • Tram frequency uplifts; and • 10 to 30 per cent reduction in highway capacity on the highway links with the highest value ('place') as identified in Street Types for London.
Package C: Incremental expansion	Crowding on the Tube, Elizabeth Line, DLR, London Overground, Trams and National Rail is a key challenge in the core reference case because funded improvements do not go beyond the mid-2020s and demand for travel will increase. Building upon the improvement schemes included in package B, package C aims to reduce crowding, encourage further mode shift from the car and increase public transport demand. London can also maximise the benefits of National Rail in south London by creating a London Suburban Metro. These schemes represent improvements that require line or track upgrades and new rolling stock but not new rail lines. A summary of key schemes is provided below: • Deep Tube upgrade & World Class Capacity programmes including upgrades to the Bakerloo, Central, Waterloo & City, Piccadilly, Jubilee and Northern Lines; • Creating a London Suburban Metro; • Further National Rail investment including upgrades to West Anglia mainline, Brighton mainline, Chiltern Line and new stations; • 30 trains per hour on the DLR; • London Overground frequency increases; and • Construction of the Silvertown Tunnel and associated bus improvements.

Package	Description
Package D: New connections	New public transport connections are needed to unlock growth in jobs and homes, provide an improved public transport service and reduce crowding. These schemes also support further agglomeration benefits in London's economy. A summary of key schemes is provided as follows: • Crossrail 2, linking Surrey and Hertfordshire with two new 37-kilometre tunnels from Wimbledon to Tottenham Hale and New Southgate; • Bakerloo Line Extension to Lewisham and beyond; • Elizabeth Line extension to Slade Green; • DLR extensions from Gallions Reach; • London Overground extensions and strategic interchange investment including to Barking Riverside and Abbey Wood, and to Hounslow; • Tram extension from South Wimbledon to Sutton; and • Further bus network development.
Package E: Traffic reduction	Package E contains a range of measures to reduce traffic and achieve Healthy Streets for London. A summary of key schemes is provided below: • Further road space reallocation to walking, cycling and bus priority in order to reduce traffic dominance and deliver Healthy Streets for London. • Further increases in parking charges, limits on free commuter parking or a work place parking levy; • Measures to accelerate the rate of car ownership reduction resulting in a quarter of a million fewer cars owned in London; and • Measures to limit the growth of freight traffic, so that HGV traffic does not rise, and van traffic grows only in line with population.
Package F: Longer term changes to the way road use is paid for	Changes to the way road use is paid for in the longer term could help achieve an 80 per cent mode share for walking, cycling and public transport. A summary of the illustrative measures included is provided below: • An indicative distance-based charge. The inner London distance-based charge assessed was twice the outer London charge per kilometre; and • Measures to encourage green technology uptake.

Source: Transport for London, Mayor's Transport Strategy: Supporting Evidence Outcomes Summary Report, July 2017

Figure 5.1 below shows that on a London-wide basis, Package E accounts for a large proportion of the overall reduction of vehicle-kilometres travelled in the morning peak hour. As such, it is likely that the policies in the Haringey LIP are likely to result in a significant decrease in vehicle-kilometres travelled.

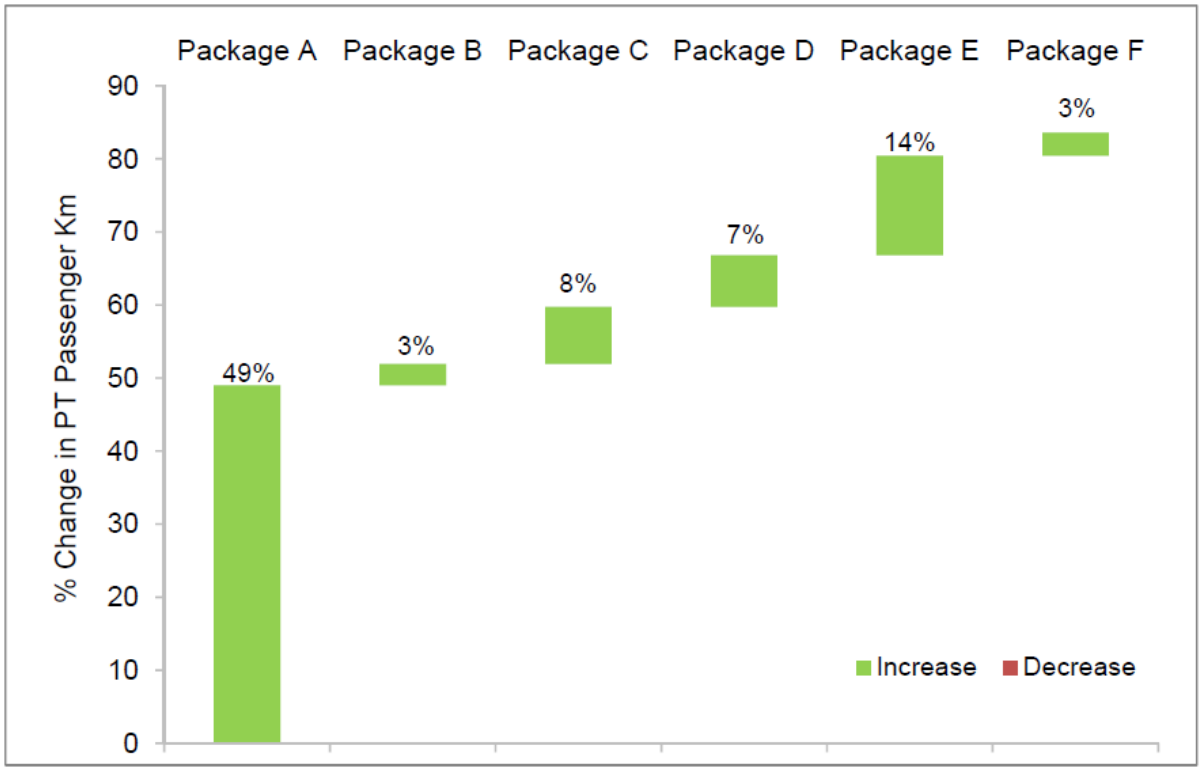
Figure 5.1: Change in London morning peak hour vehicle kilometres, 2015 to 2041 for packages A to F



Source: Transport for London (2017) -, Mayor's Transport Strategy: Supporting Evidence Outcomes Summary Report, July 2017

For public transport use, **Figure 5.2** following shows that the expected London-wide increase is primarily associated with Package A. However, Package E is expected to further increase public transport use, albeit by a smaller amount. This indicates that the policies in the Haringey LIP are likely to result in an increase in public transport usage.

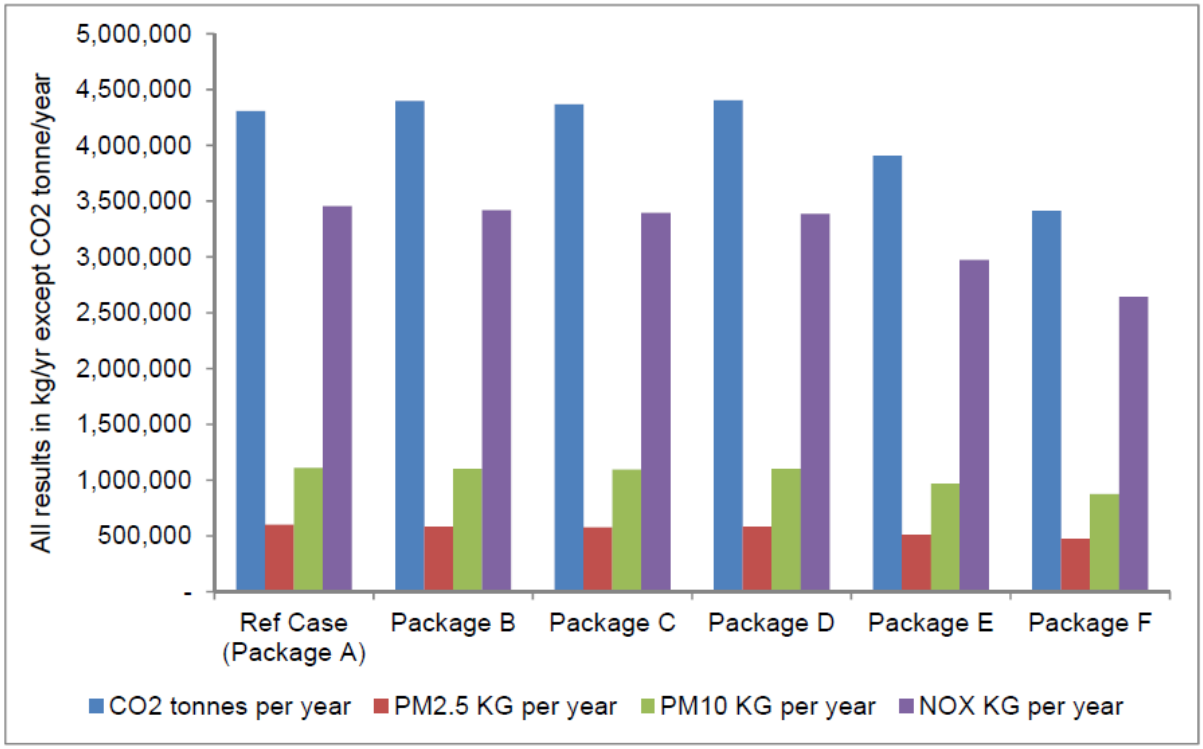
Figure 5.2: Change in 12-hour public transport passenger kilometres, 2015 to 2041 for packages A to F



Source: Transport for London (2017) - Mayor's Transport Strategy: Supporting Evidence Outcomes Summary Report, July 2017

In terms of greenhouse gas and local air pollutant emissions from transport, **Figure 5.3** following shows that there is a noticeable decrease between Package D and Package E, which shows that the marginal impact of Package E is positive. However, this should be viewed in the context of a very large reduction between the existing situation and Package A, primarily due to factors such as technological changes. As such, relative to the existing situation, the marginal emission reductions due to Package E are very small. This means that the impacts of the policies in the Haringey LIP are likely to the positive in this regard, however at a very small scale when compared to the existing situation.

Figure 5.3: CO_2, $PM_{2.5}$, PM_{10} and NO_X emissions from road-based transport, 2041 for packages A to F



Source: Transport for London (2017) - Mayor's Transport Strategy: Supporting Evidence Outcomes Summary Report, July 2017

In the SEA framework matrix, effects have been evaluated using the following scale, as set out in **Table 5.3**.

Table 5.4: Scale to be used for Evaluation of Environmental Effects in the SEA

Scale of effect		Definition
+ +	Major positive effect	Strategy/LIP contributes greatly towards achieving the SEA objective/Significant Effect
+	Minor positive effect	Strategy/LIP contributes to achieving the SEA objective
0	Neutral or no effect	Strategy/LIP does not impact upon the achievement of the SEA objective
-	Minor negative effect	Strategy/LIP conflicts with the SEA objective
- -	Major negative effect	Strategy/LIP greatly hinders or prevents the achievement of the SEA objective/Significant Effect
?	Uncertain	Strategy/LIP can have positive or negative effects but the level of information available at a time of assessment does not allow a clear judgement to be made

5.4.2 Matrix 1: LIP Objective 1: A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.

Outcomes:

1. To increase connectivity, capacity and accessibility on our road, cycling and public transport networks to support our regeneration and growth ambitions for businesses, housing and jobs.

2. To work with partners to maximise investment in road and public transport network.

Table 5.5: SEA Matrix 1 LIP Objective 1: A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Air Quality	To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality, and reduce exposure	Will it help to reduce emissions of priority pollutants (e.g. PM_{10}, NO_x, NO_2)?	The increased connectivity, capacity and accessibility on roads, cycling and public transport networks have the potential to reduce emissions of priority pollutants by reducing road congestion. However, overall, measures are not likely to give a significant improvement in air quality in addition to that due to changes in vehicle technology.	0	None required
		Will it help to achieve national and international standards for air quality?	Measures unlikely to be sufficiently great to give a significant improvement in air quality at the national level	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Measures unlikely to have a direct impact on this.	0	None required
		Will it result in air quality changes which negatively impact the health of the public?	Measures will not have a negative impact on health.	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	Improvements of the transport network are unlikely to be sufficiently great to reduce number of people exposed to poor air quality in addition to that due to changes in vehicle technology.	0	None required
		Will it improve air quality around areas which may have high concentrations of vulnerable people such as schools, outdoor play areas, care homes and hospitals?	Measures unlikely to have a direct impact on this.	0	None required
Attractive neighbourhoods	To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance existing	Will it protect and enhance the character, integrity and liveability of key streetscapes and townscapes, including removing barriers to use?	The increased connectivity, capacity and accessibility on roads, cycling and public transport networks will have a positive impact on these measures.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
	sense of place and distinctiveness, reducing the need to travel by motorised transport.	Will it improve the use of the urban public realm by improving its attractiveness and access?	The increased connectivity, capacity and accessibility on roads, cycling and public transport networks will have a positive impact on these measures.	+	None required
Climate change adaptation	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	Will it protect London from climate change impacts?	Proposed measures will not lead to physical changes/ adaptation to climate change.	0	None required
		Will it help London function during extreme weather events (e.g. heat, drought, flood) without impacts on human health and/or well-being?	Proposed measures will not lead to physical changes/ adaptation to climate change.	0	None required
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Measures unlikely to have a direct impact on this.	0	None required
		Will it improve access to services during severe weather events?	Proposed measures will not have a bearing on access to services during severe weather events.	0	None required
		Will it reduce exposure to heat during heatwaves?	Not applicable	0	None required
		Will it enable those vulnerable during severe weather events to recover?	Not applicable	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Climate change mitigation	To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050	Will it help reduce emissions of greenhouse gases (including from transport), and help London meet its emission targets?	Improvements to the public transport network are unlikely to significantly reduce GHG emissions in addition to that due to result from changes in vehicle technology.	0	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	Improvements to the public transport network are unlikely to give a significant reduction in GHG emissions in addition to that due to result from changes in vehicle technology, nor address associated health inequalities.	0	None required
Energy use and supply	To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system	Will it reduce the demand and need for energy, whilst not leading to overheating?	Mode shift should lead to greater energy efficiency.	+	None required
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	Mode shift and the focus around schools should lead to greater energy efficiency.	+	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	Measures unlikely to have impacts on this.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	Measures unlikely to have impacts on this.	0	None required
		Will it provide infrastructure to make a better use of renewable energy sources?	Improvements of the public transport network will positively impact on this.	+	None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	No direct effect.	0	None required
Fairness and inclusivity	To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	Will it enable deficiencies of access to facilities to be positively addressed?	Improvements of the public transport network will increase accessibility for these groups.	+	None required
Historic Environment	To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural,	Will it protect and enhance sites, features and areas of historical, archaeological and cultural value/potential?	Improvements of the public transport network will provide nominal strategic support for this - the extent and scale of support is low.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
	archaeological and cultural value in relation to their significance and their settings.	Will it improve the wider historic environment and sense of place?	Improvements of the public transport network will provide nominal strategic support for this - the extent and scale of support is low.	0	None required
		Will it protect and enhance the historic environment, including removing barriers to use from vulnerable communities and at-risk groups?	Improvements of the public transport network will enhance accessibility to the historic environment.	+	None required
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Improvements of the public transport network will support inclusive design associated with the historic environment.	+	None required
Mental and physical Wellbeing	To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	Will it improve connectivity to key services by promoting active modes of transport, thereby helping to reduce emissions from road transport	Increased connectivity, capaqcity and accessibility on roads, cycling and public transport networks will have positive impacts on this.	+	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Measures are unlikely to have direct impacts on this.	0	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	Measures are unlikely to have direct impacts on this.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	The scale of interventions is unlikely to have direct impacts on flooding, heat and drought risk.	0	None required
		Will it improve access to greenspaces for recreational and health benefits?	Improved connectivity, capacity and accessibility on roads, cycling and public transport networks will lead to more active travel including to green spaces.	+	None required
		Will it help to reduce the number of people dying prematurely from preventable causes such as extreme heat and poor air quality?	Achieving the objective is likely to have positive effects, however this is unlikely to be to a significant extent for this topic.	0	None required
Natural Capital and Natural Environment	To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the services and benefits it provides, delivering a net positive outcome for biodiversity	Will it enhance the potential for the green space network to provide ecosystem services?	No direct effect.	0	None required
		Will it protect and improve the quality and extent of sites of importance for nature conservation and help restore wildlife habitats?	No direct effect.	0	None required
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	No direct effect.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it protect and enhance the biodiversity of the region's waterbodies to achieve a good ecological status?	No direct effect.	0	None required
		Will it increase the planting of green roofs, green walls and soft landscaping?	No direct effect.	0	None required
		Will it create better access to green space to enhance mental and physical health benefits for all Londoners, particularly those with existing mental health conditions?	Measures are likely to support access to green space.	+	None required
		Will it result in a greener public realm that can enhance mental health benefits?	Measures are unlikely to have direct effects on this objective.	0	None required
Noise and vibration	To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure	Will it improve access to quiet and tranquil places for all?	Measures are unlikely to contribute to this to a significant extent.	0	None required
		Will reduce levels of noise generated?	Measures are unlikely to contribute to this to a significant extent.	0	None required
		Will it reduce inequalities in exposure to ambient noise?	Measures are unlikely to contribute to this to a significant extent.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Measures are unlikely to contribute to this to a significant extent.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 1:** A public transport network that is better connected, has greater capacity and is more accessible, supporting our growth ambitions.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce night time noise in residential areas?	Mode shift is unlikely to be sufficient to reduce noise levels.	0	None required
		Will it reduce the number of people exposed to high levels of noise with the potential to cause annoyance, sleep disturbance or physiological effects?	Mode shift is unlikely to be sufficient to reduce noise levels	0	None required
Safety and security	To contribute to safety and security and generate the perceptions of safety;	Will it promote the design and management of green spaces that helps to reduce crime and anti-social behaviour?	No direct effect.	0	None required

5.4.3 Matrix 2: LIP Objective 2: Active travel the default choice, with more people choosing to travel by walking or cycling.

Outcomes:

1. To get more people to choose walking, cycling, and public transport as means of travel by:
    - making Haringey one of the most cycling and pedestrian friendly boroughs in London;
    - managing parking demand and provision on the borough's road network; and
    - improving wayfinding and signage across Haringey.
2. To deliver our health ambitions by:
    - enabling active travel;

- increasing the use of electric vehicles and car sharing schemes;
- reducing overall motor vehicle movements; and
- taking account of the needs of mobility impaired users of all transport modes.

Table 5.6: SEA Matrix 2 LIP Objective 2: Active travel the default choice, with more people choosing to travel by walking or cycling.

Topic	**Objective**	**Assessment guide questions**	**LIP Objectives 2:** Active travel the default choice, with more people choosing to travel by walking or cycling.		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Air Quality	To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality, and reduce exposure	Will it help to reduce emissions of priority pollutants (e.g. PM_{10}, NO_x, NO_2)?	Measures such as, cncouraginghealthier lifestyles, active travel, and car-sharing will reduce overall vehicles movement, together with support for liveable neighbourhoods and increase in use of electric vehicles will support emissions reduction.	+	None required
		Will it help to achieve national and international standards for air quality?	Mode shift and encouraging active travel are not likely to be sufficiently great to give a significant improvement in air quality at national scale in addition to that due to changes in vehicle technology.	0	None required
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Measures such as reduction in vehicle use, mode shift and encouraging active travel will contribute to reduction in emissions. However, the number of people exposed to poor air quality is unlikely to be reduced to a signifcant extent.	+	None required

		Will it result in air quality changes which negatively impact the health of the public?	The promotion of active travel will not have a negative impact on health.	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	The promotion of active travel is not likely to be sufficiently great to reduce number of people exposed to poor air quality in addition to that due to changes in vehicle technology.	0	None required
		Will it improve air quality around areas which may have high concentrations of vulnerable people such as schools, outdoor play areas, care homes and hospitals?	The promotion of active travel is not likely to be sufficiently great to give a significant improvement in air quality in addition to that due to changes in vehicle technology.	0	Consider traffic management measure to reduce traffic flows in areas with high concentrations of vulnerable people
Attractive neighbourhoods	To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance existing sense of place and distinctiveness, reducing the need to travel by motorised transport.	Will it protect and enhance the character, integrity and liveability of key streetscapes and townscapes, including removing barriers to use?	Greater emphasis on walking, cycling, public transport and urban realm will positively impact these factors.	+	None required
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Greater emphasis on walking, cycling, public transport and urban realm will positively impact these factors.	++	None required
Climate change adaptation	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	Will it protect London from climate change impacts?	Changes to services and modal shift to more active travel will not lead to physical changes to protect London from climate change.	0	None required
		Will it help London function during extreme weather events (e.g. heat, drought, flood) without impacts on human health and/or well-being?	Changes to services and modal shift to more active travel will not lead to physical changes to protect London from climate change.	0	None required

		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Changes to services and modal shift to more active travel will not lead to physical changes to protect London from climate change.	0	None required
		Will it improve access to services during severe weather events?	Changes to services will improve access, though no difference during severe weather.	0	None required
		Will it reduce exposure to heat during heatwaves?	Changes to services will improve access, though no difference during heatwaves.	0	Not required
		Will it enable those vulnerable during severe weather events to recover?	Not applicable	0	Not required
Climate change mitigation	To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050	Will it help reduce emissions of greenhouse gases (including from transport), and help London meet its emission targets?	Encouragment of active travel, mode shifting and car-sharing will reduce overall vehicle movement, and an increase in use of electric vehicles will support emissions reduction.	+	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	Health inequalities will be reduced, although this is unliley to be to an significant extent.	+	None required
Energy use and supply	To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system	Will it reduce the demand and need for energy, whilst not leading to overheating?	Not applicable.	0	None required
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	The promotion of active travel should lead to greater energy efficiency in transport.	+	None required

		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	This is dependent on the energy procurement policies of London Overground (LO) and other train operating companies (TOCs)	?	Encourage LO and TOCs to procure greater proportion of energy from renewable sources for traction
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	This is dependent on the energy procurement policies of London Overground (LO) and other train operating companies (TOCs)	?	Encourage LO and TOCs to procure greater proportion of energy from renewable sources for traction
		Will it provide infrastructure to make a better use of renewable energy sources?	This is dependent on the energy procurement policies of London Overground (LO) and other train operating companies (TOCs)	?	Encourage LO and TOCs to procure greater proportion of energy from renewable sources for traction
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	No direct effect	0	None required
Fairness and inclusivity	To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	Will it enable deficiencies of access to facilities to be positively addressed?	Greater emphasis on walking, cycling and public transport, as well addressing the need for mobility by impaired users of all transport modes will increase accessibility for these groups.	++	None required
Historic Environment	To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value	Will it protect and enhance sites, features and areas of historical, archaeological and cultural value/potential?	Greater emphasis on walking, cycling and public transport, as well addressing the need for mobility by impaired users of all transport modes will support this.	+	None required

	in relation to their significance and their settings.	Will it improve the wider historic environment and sense of place?	Greater emphasis on walking, cycling and public transport will support this.	+	None required
		Will it protect and enhance the historic environment, including removing barriers to use from vulnerable communities and at-risk groups?	Greater emphasis on walking and cycling as well addressing the need for mobility by impaired users of all transport modes will support this and may enhance accessibility to the historic environment.	++	None required
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Greater emphasis on walking and cycling will support this.	+	None required
Mental and physical Wellbeing	To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	Will it improve connectivity to key services by promoting active modes of transport, thereby helping to reduce emissions from road transport	Greater emphasis on walking and cycling as well addressing the need for mobility by impaired users of all transport modes will directly support this.	++	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	The promotion of healthier lifestyles should provide a modest contribution to this.	+	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	The promotion of healthier lifestyles should provide a modest contribution to this..	+	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	No direct effects.	0	None required

		Will it improve access to greenspaces for recreational and health benefits?	Greater emphasis on walking andcycling will lead to improved accessibility and more active travel including to or via green spaces will support these improvements.	+	None required
		Will it help to reduce the number of people dying prematurely from preventable causes such as extreme heat and poor air quality?	The promotion of healthier lifestyles should provide a small contribution to this.	+	None required
Natural Capital and Natural Environment	To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the services and benefits it provides, delivering a net positive outcome for biodiversity	Will it enhance the potential for the green space network to provide ecosystem services?	No direct effects	0	None required
		Will it protect and improve the quality and extent of sites of importance for nature conservation and help restore wildlife habitats?	No direct effects.	0	None required
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	No direct effects.	0	None required
		Will it protect and enhance the biodiversity of the region's waterbodies to achieve a good ecological status?	No direct effects.	0	None required
		Will it increase the planting of green roofs, green walls and soft landscaping?	No direct effects.	0	None required
		Will it create better access to green space to enhance mental and physical health benefits for	No direct effects.	0	None required

		all Londoners, particularly those with existing mental health conditions?			
		Will it result in a greener public realm that can enhance mental health benefits?	No direct effects.	0	None required
Noise and vibration	To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure	Will it improve access to quiet and tranquil places for all?	Greater emphasis on walking andcycling will support this.	+	None required
		Will reduce levels of noise generated?	Mode shift is unlikely to be sufficient to reduce noise levels.	0	None required
		Will it reduce inequalities in exposure to ambient noise?	Mode shift is unlikely to be sufficient to reduce noise levels.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Mode shift is unlikely to be sufficient to reduce noise levels.	0	None required
		Will it reduce night time noise in residential areas?	Mode shift is unlikely to be sufficient to reduce noise levels.	0	None required
		Will it reduce the number of people exposed to high levels of noise with the potential to cause annoyance, sleep disturbance or physiological effects?	Mode shift is unlikely to be sufficient to reduce noise levels.	0	None required
Safety and security	To contribute to safety and security and generate the perceptions of safety;	Will it promote the design and management of green spaces that helps to reduce crime and anti-social behaviour?	Greater emphasis on walking and cycling will support this through increased “natural surveillance”.	+	None required

5.4.4 Matrix 3: LIP Objective 3

Table 5.7: SEA Matrix 3 LIP Objective 3. Improved air quality and a reduction in carbon emissions from transport.

Outcomes:

1.To improve air quality by pursuing projects and programmes to reduce vehicle use, particularly diesel-powered vehicles.
2. To support alternative means of transport to motor vehicles such as through behavioural change programmes.
3. To reduce the need to travel by linking transport and land use planning.
4. To support the use of electric/hybrid vehicles, bike hire schemes, car clubs, car sharing and electric motorcycles/scooters.

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Air Quality	To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality, and reduce exposure	Will it help to reduce emissions of priority pollutants (e.g. PM_{10}, NO_x, NO_2)?	Reduction in vehicle use, supporting alternative means of transport, behaviour changing and encouraging walking and cycling, as well as the use of electric/hybrid vehicles will help reduce growth in emissions.	+	None required
		Will it help to achieve national and international standards for air quality?	Measures will contribute to the reduction of emission of priority pollutants. However, it is unlikely that the reduction will be significant at the national level in addition to effects of changes in vehicle technology and other MTS policies.	0	None required
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Proposed measures to encourage mode shift, behaviour changing and reduce reliance on cars are likely to improve air quality conditions and benefit vulnerable communities.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it result in air quality changes which negatively impact the health of the public?	No negative effects from these measures.	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	Although proposed measures will have positive impacts on air quality, it is difficult to draw direct conclusions relating to premature deaths.	0	None required
		Will it improve air quality around areas which may have high concentrations of vulnerable people such as schools, outdoor play areas, care homes and hospitals?	Measures to encourage mode shift, use of electric/hybrid vehicles, behaviour changing and reduce reliance on cars will contribute to a reduction of emission of priority pollutants and improvements on local air quality, including schools, outdoor play areas, care homes and hospitals. However, it is unlikely that the reduction will be significant in addition to effects of changes in vehicle technology and other MTS policies.	+	Consider traffic management measure to reduce traffic flows in areas with high concentrations of vulnerable people
Attractive neighbourhoods	To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance existing sense of place and	Will it protect and enhance the character, integrity and liveability of key streetscapes and townscapes, including removing barriers to use?	Greater emphasis on walking, cycling, improving public transport connection and prioritisation of reduction of emission via linking transport and land use planning will positively impact these factors.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
	distinctiveness, reducing the need to travel by motorised transport.	Will it improve the use of the urban public realm by improving its attractiveness and access?	Greater emphasis on walking, cycling, improving public transport connection, reducing vehicle use and prioritisation of reduction of emissions via linking transport and land use planning will positively impact these factors.	++	None required
Climate change adaptation	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	Will it protect London from climate change impacts?	Increase provision for EV charging points, and support for reduced vehicle use will contribute to this.	+	None required
		Will it help London function during extreme weather events (e.g. heat, drought, flood) without impacts on human health and/or well-being?	Active travel the default choice.	0	None required
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Proposed measures will not have a direct impact on this.	0	The measures should be applied in areas where
		Will it improve access to services during severe weather events?	Proposed measures will not have a direct impact on this.	0	None required
		Will it reduce exposure to heat during heatwaves?	Proposed measures will not have a direct impact on this.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it enable those vulnerable during severe weather events to recover?	Not applicable	0	None required
Climate change mitigation	To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050	Will it help reduce emissions of greenhouse gases (including from transport), and help London meet its emission targets?	Measures to encourage mode shift, use of electric/hybrid vehicles, behaviour changing and reduce reliance on cars will contribute to a reduction of emission of greenhouse gasses in London.	++	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	Measures are unlikely to have any direct effect in this respect.	0	None required
Energy use and supply	To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system	Will it reduce the demand and need for energy, whilst not leading to overheating?	Not applicable	+	None required
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	Measures contribute to improvement in energy efficiency in transport but overall are unlikely to contribute to significant reductions in demand for energy.	+	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	Measures are unlikely to have any direct effect in this respect.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	Expanding provision for EV charging points to encourage a shift from traditional petrol and diesel vehicles will contribute to this	+	None required
		Will it provide infrastructure to make a better use of renewable energy sources?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	Measures are unlikely to have any direct effect in this respect.	0	None required
Fairness and inclusivity	To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	Will it enable deficiencies of access to facilities to be positively addressed?	Measures to support alternative means of transport to motor vehicles will contribute to this.	+	None required
Historic Environment	To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	Will it protect and enhance sites, features and areas of historical, archaeological and cultural value/potential?	Measures to support alternative means of transport to motor vehicles, particularly behaviour change to support active travel will contribute to this.	+	None required
		Will it improve the wider historic environment and sense of place?	Measures to support alternative means of transport to motor vehicles, particularly behaviour change to support active travel, will contribute to this.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it protect and enhance the historic environment, including removing barriers to use from vulnerable communities and at-risk groups?	Measures to support alternative means of transport to motor vehicles, particularly behaviour change measures to support active travel will contribute to this.	+	None required
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Measures to support alternative means of transport to motor vehicles, particularly behaviour change measures to support active travel will broadly support this.	+	None required
Mental and physical Wellbeing	To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	Will it improve connectivity to key services by promoting active modes of transport, thereby helping to reduce emissions from road transport	Measures to support alternative means of transport to motor vehicles, particularly behaviour change measures to support active travel,, as well as expanding provision for EV charging points will contribute to this.	++	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Measures are unlikely to have any direct effect in this respect.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	Depends on the location of the scheme. Measures to encourage mode shift, use of electric/hybrid vehicles, behaviour changing and reduce reliance on cars will contribute to a reduction of emissions.	+	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	Measures are unlikely to have any direct effect in this respect	0	None required
		Will it improve access to greenspaces for recreational and health benefits?	Measures to support alternative means of transport to motor vehicles, particularly behaviour change measures to support active travel,will broadly support improved accessibility to green spaces	+	None required
		Will it help to reduce the number of people dying prematurely from preventable causes such as extreme heat and poor air quality?	Although proposed measures will have positive impacts on air quality and climate change effects, it is difficult to draw direct conclusions relating to premature deaths.	0	None required
Natural Capital and Natural Environment	To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the	Will it enhance the potential for the green space network to provide ecosystem services?	No direct effects.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
	services and benefits it provides, delivering a net positive outcome for biodiversity	Will it protect and improve the quality and extent of sites of importance for nature conservation and help restore wildlife habitats?	No direct effects.	0	None required
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	No direct effects.	0	None required
		Will it protect and enhance the biodiversity of the region's waterbodies to achieve a good ecological status?	No direct effects.	0	None required
		Will it increase the planting of green roofs, green walls and soft landscaping?	No direct effects.	0	None required
		Will it create better access to green space to enhance mental and physical health benefits for all Londoners, particularly those with existing mental health conditions?	Measures to support alternative means of transport to motor vehicles, particularly behaviour change measures to support active travel will broadly contribute to this.	+	None required
		Will it result in a greener public realm that can enhance mental health benefits?	Measures are unlikely to have any direct effect in this respect.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Noise and vibration	To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure	Will it improve access to quiet and tranquil places for all?	Proposed measures particularly the reduction in vehicle use and encouraging behaviour change will broadly contribute to this.	+	None required
		Will reduce levels of noise generated?	Proposed measures particularly the reduction in vehicle use and encouraging behaviour change and expanded provision of EV charging points will contribute to this.	+	None required
		Will it reduce inequalities in exposure to ambient noise?	Proposed measures particularly the reduction in vehicle use and encouraging behaviour change and expanded provision of EV charging points are likely to contribute to this.	+	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Proposed measures particularly the reduction in vehicle use and encouraging behaviour change and expanded provision of EV charging points are likely to contribute to this.	+	None required
		Will it reduce night time noise in residential areas?	Proposed measures particularly the reduction in vehicle use and encouraging behaviour change and expanded provision of EV charging points are likely to contribute to this.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 3:** Improved air quality and a reduction in carbon emissions from transport		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce the number of people exposed to high levels of noise with the potential to cause annoyance, sleep disturbance or physiological effects?	Proposed measures particularly the reduction in vehicle use and encouraging behaviour change and expanded provision of EV charging points are likely to contribute to this.	+	None required
Safety and security	To contribute to safety and security and generate the perceptions of safety;	Will it promote the design and management of green spaces that helps to reduce crime and anti-social behaviour?	Proposed measures particularly the reduction in vehicle use and encouraging behaviour change and expanded provision of EV charging points are likely to contribute to this.through increased “natural surveillance”.	+	None required

5.4.5 Matrix 4: LIP Objective 4

Table 5.8: SEA Matrix 4 LIP Objective 4. A well-maintained road network that is less congested and safer

Outcomes:

1. To maintain and enhance our road network, making it best in class in London;
2. To reduce road user causalities, especially among children, pedestrians, cyclists, motorcyclists/scooters and other vulnerable road users;
3. To minimise the use of our back streets as ‘rat runs’; and
4. To reduce the speed and enforce speed limits of road traffic in residential areas and shopping streets.

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Air Quality	To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality, and reduce exposure	Will it help to reduce emissions of priority pollutants (e.g. PM_{10}, NO_x, NO_2)?	This will reduce emissions of priority pollutants, although not to a significant extent.	+	Implementation of the measures should consider local circumstances and employ relevant mitigation measures when required
		Will it help to achieve national and international standards for air quality?	The measures will be implemented locally and unlikely to give a significant contribution to national or international air quality standards.	0	None required
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Measures to minimise the use of back streets as "rat runs" will contribute to this.	+	None required
		Will it result in air quality changes which negatively impact the health of the public?	No negative effects from these measures.	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	The impact of the proposed measures is unlikely to contribute directly to this.	0	None required
		Will it improve air quality around areas which may have high concentrations of vulnerable people such as schools, outdoor play areas, care homes and hospitals?	Depends on local circumstances, the measure aiming to reduce the use of back streets will contribute this.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Attractive neighbourhoods	To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance existing sense of place and distinctiveness, reducing the need to travel by motorised transport.	Will it protect and enhance the character, integrity and liveability of key streetscapes and townscapes, including removing barriers to use?	Improvements to local road network and measures to improve road safety will have a positive impact on removing barriers to the use of key streetscape and townscapes.	++	None required
		Will it improve the use of the urban public realm by improving its attractiveness and access?	The implementation of these measures will positively contribute to this.	+	None required
Climate change adaptation	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	Will it protect London from climate change impacts?	Measures will not lead to physical changes/ adaptation to climate change.	0	None required
		Will it help London function during extreme weather events (e.g. heat, drought, flood) without impacts on human health and/or well-being?	Improvements to road network will contribute to this..	+	None required
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Measures are not likely to have any direct impact on health inequalities	0	None required
		Will it improve access to services during severe weather events?	Improvements to road network will contribute to this	+	None required
		Will it reduce exposure to heat during heatwaves?	Measures are not likely to have any direct impact on this.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it enable those vulnerable during severe weather events to recover?	Measures are unlikely to support a recovery of those vulnerable during severe weather.	0	None required
Climate change mitigation	To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050	Will it help reduce emissions of greenhouse gases (including from transport), and help London meet its emission targets?	Measures are not likely to have any direct impact on this.	0	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	Measures are not likely to have any direct impact on this.	0	None required
Energy use and supply	To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system	Will it reduce the demand and need for energy, whilst not leading to overheating?	The measure is unlikely to have any direct effect in this respect.	0	None required
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	The measure is unlikely to have any direct effect in this respect.	0	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	The measure is unlikely to have any direct effect in this respect.	0	None required
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	The measure is unlikely to have any direct effect in this respect.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it provide infrastructure to make a better use of renewable energy sources?	Measures unlikely to have any direct effect in this respect.	0	None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	Measures unlikely to have any direct effect in this respect.	0	None required
Fairness and inclusivity	To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	Will it enable deficiencies of access to facilities to be positively addressed?	Improvements to road network as well as measures supporting road safety will contribute to this	+	None required
Historic Environment	To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	Will it protect and enhance sites, features and areas of historical, archaeological and cultural value/potential?	Measures will positively contribute this, although not to a significant extent.	+	None required
		Will it improve the wider historic environment and sense of place?	Measures will positively contribute this, although not to a significant extent.	+	None required
		Will it protect and enhance the historic environment, including removing barriers to use from vulnerable communities and at-risk groups?	Measures will positively contribute this.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Measures will positively contribute this.	+	None required
Mental and physical Wellbeing	To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	Will it improve connectivity to key services by promoting active modes of transport, thereby helping to reduce emissions from road transport	Measures will positively contribute this.	+	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Measures unlikely to have direct impacts on this.	0	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	Measures unlikely to have direct impacts on this.	0	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	Measures unlikely to have direct impacts on this.	0	None required
		Will it improve access to greenspaces for recreational and health benefits?	Enhancement of road network, road safety and speed reduction measures in residential areas, as well as measures to minimise to the "rat run" of traffic, will contribute to this.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it help to reduce the number of people dying prematurely from preventable causes such as extreme heat and poor air quality?	Measures unlikely to have direct impacts on this.	0	None required
Natural Capital and Natural Environment	To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the services and benefits it provides, delivering a net positive outcome for biodiversity	Will it enhance the potential for the green space network to provide ecosystem services?	Measures unlikely to have direct impacts on this.	0	None required
		Will it protect and improve the quality and extent of sites of importance for nature conservation and help restore wildlife habitats?	Measures unlikely to have direct impacts on this.	0	None required
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	Measures unlikely to have direct impacts on this.	0	None required
		Will it protect and enhance the biodiversity of the region's waterbodies to achieve a good ecological status?	Measures unlikely to have direct impacts on this.	0	None required
		Will it increase the planting of green roofs, green walls and soft landscaping?	Measures unlikely to have direct impacts on this.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it create better access to green space to enhance mental and physical health benefits for all Londoners, particularly those with existing mental health conditions?	Enhancement of road network, road safety and speed reduction measures in residential areas, as well as measures to minimise "rat run" traffic, will contribute to this.	+	None required
		Will it result in a greener public realm that can enhance mental health benefits?	Measures unlikely to have direct impacts on this.	0	None required
Noise and vibration	To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure	Will it improve access to quiet and tranquil places for all?	Enhancement of road network, road safety and speed reduction measures in residential areas, as well as measures to minimise "rat run" traffic via back streets will contribute to this, although not to a significant extent.	+	None required
		Will reduce levels of noise generated?	Enhancement of road network, road safety and speed reduction measures in residential areas, as well as measures to minimise "rat run" traffic via back streets will contribute to this, although not to a significant extent.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce inequalities in exposure to ambient noise?	Enhancement of road network, road safety and speed reduction measures in residential areas, as well as measures to minimise "rat run" traffic via back streets will contribute to this.	+	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Enhancement of road network, road safety and speed reduction measures in residential areas, as well as measures to minimise "rat run" traffic via back streets will contribute to this.	+	None required
		Will it reduce night time noise in residential areas?	Enhancement of road network, road safety and speed reduction measures in residential areas, as well as measures to minimise "rat run" traffic via back streets will contribute to this , although not to a significant extent..	+	None required
		Will it reduce the number of people exposed to high levels of noise with the potential to cause annoyance, sleep disturbance or physiological effects?	Enhancement of road network, road safety and speed reduction measures in residential areas, as well as measures to minimise "rat run" traffic via back streets will contribute to this, although not to a significant extent..	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Objective 4:** A well maintained road network that is less congested and safer		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Safety and security	To contribute to safety and security and generate the perceptions of safety;	Will it promote the design and management of green spaces that helps to reduce crime and anti-social behaviour?	Enhancement of road safety, as well as intalation of additional street lighting will contribute to this.	++	None required

5.5 Matrix 5: LIP Long Term Interventions

Table 5.9: SEA Matrix 5: LIP Long Term Interventions up to 2041.

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Air Quality	To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality, and reduce exposure	Will it help to reduce emissions of priority pollutants (e.g. PM_{10}, NO_x, NO_2)?	Measures will contribute to reduction of emission of priority pollutants, in addition to the effects of changes in vehicle technology and other MTS policies.	++	None required
		Will it help to achieve national and international standards for air quality?	Measures will contribute to reduction of emission of priority pollutants. However, it is unlikely that the reduction will be significant in addition to effects of changes in vehicle technology and other MTS policies.	+	None required
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Measures will contribute to significant reductions in poor air quality in addition to the effects of changes in vehicle technology and other MTS policies.	++	None required
		Will it result in air quality changes which negatively impact the health of the public?	No negative effects from these measures.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce the number of premature deaths caused by poor air quality?	Measures will contribute to significant reductions in emissions of pollutants in addition to effects of changes in vehicle technology and other MTS policies.	+	None required
		Will it improve air quality around areas which may have high concentrations of vulnerable people such as schools, outdoor play areas, care homes and hospitals?	Measures will contribute to the reduction of emission of priority pollutants in addition to the effects of changes in vehicle technology and other MTS policies	+	None required
Attractive neighbourhoods	To create attractive, mixed-use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance existing sense of place and distinctiveness, reducing the need to travel by motorised transport.	Will it protect and enhance the character, integrity and liveability of key streetscapes and townscapes, including removing barriers to use?	Public realm improvements, making the environment more attractive for active travel, highway schemes at key locations, train station improvements and reducing the dominance of motor vehicles in neighbhourhoods will improve streetscapes and townscapes.	+	None required
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Making the environment more attractive for active travel, highway schemes at key locations and reducing the dominance of motor vehicles in neighbourhoods will improve use of the public realm.	+	None required
Climate change adaptation	To ensure London adapts and becomes more resilient to the	Will it protect London from climate change impacts?	Measures are unlikely to have any direct effect in this respect.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
	impacts of climate change and extreme weather events such as flood, drought and heat risks	Will it help London function during extreme weather events (e.g. heat, drought, flood) without impacts on human health and/or well-being?	Dependent on the design of specific schemes delivered.	?	Encourage the design of measures to include climate adaption, including the introduction of SUDs through transport schemes.
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it improve access to services during severe weather events?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it reduce exposure to heat during heatwaves?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it enable those vulnerable during severe weather events to recover?	Measures are unlikely to have any direct effect in this respect.	0	None required
Climate change mitigation	To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050	Will it help reduce emissions of greenhouse gases (including from transport), and help London meet its emission targets?	Measures will contribute to reduction of GHG , in addition to the effects of changes in vehicle technology and other MTS policies	+	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	Measures are unlikely to have any direct effect in this respect.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Energy use and supply	To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system	Will it reduce the demand and need for energy, whilst not leading to overheating?	Measures are unlikely to contribute to significant reductions in demand for energy in addition to the effects of changes in vehicle technology and other MTS policies.	0	None required
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	Measures will support energy efficiency in transport, although to a modest extent.	+	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	This is dependent on the energy procurement policies of London Overground (LO) and other train operating companies (TOCs) as well as the vehicle industry and suppliers ofvehicle charging points.	?	Encourage LO and TOCs and suppliers of vehicle charging points to procure greater proportion of energy from renewable sources for traction.
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	This is dependent on the energy procurement policies of London Overground (LO) and other train operating companies (TOCs) as well as the vehicle industry and suppliers ofvehicle charging points.	?	Encourage LO and TOCs and suppliers ofvehicle charging points to procure greater proportion of energy from renewable sources for traction.
		Will it provide infrastructure to make a better use of renewable energy sources?	This is dependent on the energy procurement policies of London Overground (LO) and other train operating companies (TOCs) as well as the vehicle industry and suppliers ofvehicle charging points..	?	Encourage LO and TOCs and suppliers of vehicle charging points to procure greater proportion of energy from renewable sources for traction.

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	Measures are unlikely to have any direct effect in this respect.	0	None required
Fairness and inclusivity	To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	Will it enable deficiencies of access to facilities to be positively addressed?	Improvements in accessibility will be provided, particularly by encouraging more active travel and improving rail station accessibility	+	None required
Historic Environment	To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	Will it protect and enhance sites, features and areas of historical, archaeological and cultural value/potential?	Dependent on the location of the schemes delivered.	?	None required.
		Will it improve the wider historic environment and sense of place?	Improvements in accessibility and the delivery of Liveable Neighbourhoods principles will create a better sense of place.	+	None required.
		Will it protect and enhance the historic environment, including removing barriers to use from vulnerable communities and at-risk groups?	Dependent on the location of the schemes delivered though measures are likely to be broadly supportive	+	None required
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Dependent on the location of schemes brought forward though measures are likely to be broadly supportive	+	None required.

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Mental and physical Wellbeing	To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	Will it improve connectivity to key services by promoting active modes of transport, thereby helping to reduce emissions from road transport	Implementation of new cycling and walking links and facilities., support for active travel and enhanced urban realm will support mental and physical wellbeing.	++	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	Dependent on the location of schemes brought forward. Measures will contribute to the overall improvement in air quality in addition to the effects of changes in vehicle technology and other MTS policies	+	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it improve access to greenspaces for recreational and health benefits?	Development of walking and cycling links to green areas across the borough along with measures supporting walking and cycling will improve access to green spaces for recreation and health benefits.	+	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it help to reduce the number of people dying prematurely from preventable causes such as extreme heat and poor air quality?	Measures are unlikely to have any direct effect in this respect.	0	None required
Natural Capital and Natural Environment	To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the services and benefits it provides, delivering a net positive outcome for biodiversity	Will it enhance the potential for the green space network to provide ecosystem services?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it protect and improve the quality and extent of sites of importance for nature conservation and help restore wildlife habitats?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it protect and enhance the biodiversity of the region's waterbodies to achieve a good ecological status?	Measures are unlikely to have any direct effect in this respect.	0	None required
		Will it increase the planting of green roofs, green walls and soft landscaping?	Dependent on the design of specific schemes delivered.	?	Encourage the design of measures to include green infrastructure.

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it create better access to green space to enhance mental and physical health benefits for all Londoners, particularly those with existing mental health conditions?	Measures supporting walking and cycling will improve access to green spaces for benefits of all Londoners.	+	None required
		Will it result in a greener public realm that can enhance mental health benefits?	Measures will support this.	+	None required.
Noise and vibration	To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure	Will it improve access to quiet and tranquil places for all?	Measures supporting walking and cycling and enhanced public realm will improve access to quiet and tranquil places for all.	+	None required
		Will reduce levels of noise generated?	Proposed railway schemes might lead to increase the level of noise. However other measures supporting active travel and enhanced urban realm will support noise reduction.	0	None required
		Will it reduce inequalities in exposure to ambient noise?	Schemes supporting active travel and enhanced urban realm will support noise reduction including inequalities in ambient noise exposure.	+	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Measures will not specifically protect vulnerable groups at risk from impacts of noise pollution.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Long term interventions up to 2041**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce night time noise in residential areas?	Depends on design of the specific measures/ transport schemes.	?	Ensure design of new schemes includes appropriate noise mitiation
		Will it reduce the number of people exposed to high levels of noise with the potential to cause annoyance, sleep disturbance or physiological effects?	Measures will not specifically reduce the number of people exposed to high levels of noise.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Measures will not specifically protect vulnerable groups at risk from noise pollution.	0	None required
Safety and security	To contribute to safety and security and generate the perceptions of safety;	Will it promote the design and management of green spaces that helps to reduce crime and anti-social behaviour?	Dependent on the design of specific measures.	?	Encourage designs to include measures for increased electronic and natural surveillance. Measures focused on areas with highest levels of crime and anti-social behaviour.

5.5.1 Matrix 6: LIP Short Term Interventions

Table 5.10: SEA Matrix 6: LIP Three-Year Indicative Programme.

Topic	**Objective**	**Assessment guide questions**	**LIP Three-Year Indicative Programme.**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
Air Quality	To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality, and reduce exposure	Will it help to reduce emissions of priority pollutants (e.g. PM_{10}, NO_x, NO_2)?	Reductions in pollutant emissions will result from measures.	+	None required
		Will it help to achieve national and international standards for air quality?	The measures are positive towards this objective but the scale of interventions are unlikely to impact at the national level.	0	None required
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Measures will support reductions in the number of people exposed to poor air quality including vulnerable and at risk groups though these are likely to be slight in the short term.	+	None required
		Will it result in air quality changes which negatively impact the health of the public?	Air quality improvements will be positive so not negative	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	Measures will support reductions in the number of people exposed to poor air quality so will support this reduction though in the short term this will be very slight.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Three-Year Indicative Programme.**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it improve air quality around areas which may have high concentrations of vulnerable people such as schools, outdoor play areas, care homes and hospitals?	Measures will support reductions in the number of people exposed to poor air quality including at these locations albeit that this will be slight in the short term.	+	Measures focused on areas near schools, outdoor play areas, care homes and hospitals.
Attractive neighbourhoods	To create attractive, mixed use neighbourhoods, ensuring new buildings and spaces are appropriately designed that promote and enhance existing sense of place and distinctiveness, reducing the need to travel by motorised transport.	Will it protect and enhance the character, integrity and liveability of key streetscapes and townscapes, including removing barriers to use?	Measures will protect and enhance character, integrity and liveability of areas where implemented, including key destinations in the borough.	+	Measures focused on key streetscapes and townscapes.
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Measures will improve attractiveness and access to areas where implemented, including key destinations in the borough.	+	None required
Climate change adaptation	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	Will it protect London from climate change impacts?	GHG emissions unlikely to be significantly reduced in the short term.	0	None required
		Will it help London function during extreme weather events (e.g. heat, drought, flood) without impacts on human health and/or well-being?	No direct effects on these.	0	None required
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Health inequalities unlikely to be reduced in the short term.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Three-Year Indicative Programme.**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it improve access to services during severe weather events?	Unlikely to have any direct impact in this respect.	0	None required
		Will it reduce exposure to heat during heatwaves?	Unlikely to have any direct impact in this respect.	0	None required
		Will it enable those vulnerable during severe weather events to recover?	Unlikely to have any direct impact in this respect.	0	None required
Climate change mitigation	To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050	Will it help reduce emissions of greenhouse gases (including from transport), and help London meet its emission targets?	GHG emissions unlikely to reduce significantly in the short term.	0	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	Unlikely to have any direct impact in this respect.	0	None required
Energy use and supply	To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources effectively, and ensure a resilient smart and affordable energy system	Will it reduce the demand and need for energy, whilst not leading to overheating?	Unlikely to have any direct impact in this respect.	0	None required
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	Unlikely to have any direct impact in this respect in the short term.	0	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	Unlikely to have any direct impact in this respect in the short term.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Three-Year Indicative Programme.**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	Unlikely to have any direct impact in this respect in the short term.	0	None required
		Will it provide infrastructure to make a better use of renewable energy sources?	Unlikely to have any direct impact in this respect in the short term.	0	None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	Unlikely to have any direct impact in this respect in the short term.	0	None required
Fairness and inclusivity	To make London a fair and inclusive city where every person is able to participate, reducing inequality and disadvantage and addressing the diverse needs of the population.	Will it enable deficiencies of access to facilities to be positively addressed?	Improvements in accessibility will be provided along corridors, in neighbourhoods and key locations in the borough.	+	None required
Historic Environment	To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value	Will it protect and enhance sites, features and areas of historical, archaeological and cultural value/potential?	Dependent on the location of schemes brought forward.	?	None required
		Will it improve the wider historic environment and sense of place?	Dependent on the location of schemes brought forward.	?	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Three-Year Indicative Programme.**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
	in relation to their significance and their settings.	Will it protect and enhance the historic environment, including removing barriers to use from vulnerable communities and at-risk groups?	Dependent on the location of schemes brought forward.	?	None required
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Dependent on the location of schemes brought forward.	?	None required.
Mental and physical Wellbeing	To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the city and between communities.	Will it improve connectivity to key services by promoting active modes of transport, thereby helping to reduce emissions from road transport	Active modes encouraged, and emissions reduced, but not significantly in the short term.	+	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Unlikely to have direct impacts on this in the short term.	0	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	Unlikely to have direct impacts on this in the short term.	0	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	Unlikely to have direct impacts on this in the short term.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Three-Year Indicative Programme.**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it improve access to greenspaces for recreational and health benefits?	Depends on the location of schemes delivered.	?	Measures focused on areas near to greenspace.
		Will it help to reduce the number of people dying prematurely from preventable causes such as extreme heat and poor air quality?	Unlikely to have direct impacts on this in the short term.	0	None required
Natural Capital and Natural Environment	To protect, connect and enhance London's natural capital (including important habitats, species and landscapes) and the services and benefits it provides, delivering a net positive outcome for biodiversity	Will it enhance the potential for the green space network to provide ecosystem services?	Measures will help deliver these, although not to a very significant extent in the short term.	+	None required.
		Will it protect and improve the quality and extent of sites of importance for nature conservation and help restore wildlife habitats?	Unlikely to have any direct impacts in this respect.	0	None required
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	Unlikely to have any direct impacts in this respect.	0	None required
		Will it protect and enhance the biodiversity of the region's waterbodies to achieve a good ecological status?	Unlikely to have any direct impacts in this respect.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Three-Year Indicative Programme.**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it increase the planting of green roofs, green walls and soft landscaping?	Unlikely to have any direct impacts in this respect.	0	None required
		Will it create better access to green space to enhance mental and physical health benefits for all Londoners, particularly those with existing mental health conditions?	Dependent on the design of specific schemes.	0	Encourage design of measures to include green infrastructure.
		Will it result in a greener public realm that can enhance mental health benefits?	Dependent on the design of specific schemes.	?	Ensure measures actively seek to incorporate greening and planting.
Noise and vibration	To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities in exposure	Will it improve access to quiet and tranquil places for all?	Unlikely to reduce noise levels significantly in the short term.	0	None required
		Will reduce levels of noise generated?	Unlikely to reduce noise levels significantly in the short term.	0	None required
		Will it reduce inequalities in exposure to ambient noise?	Unlikely to reduce noise levels significantly in the short term.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Unlikely to reduce noise levels significantly in the short term.	0	None required
		Will it reduce night time noise in residential areas?	Unlikely to reduce noise levels significantly in the short term.	0	None required

Topic	**Objective**	**Assessment guide questions**	**LIP Three-Year Indicative Programme.**		
			Assessment	**Scale of Effect**	**Mitigation or Enhancement**
		Will it reduce the number of people exposed to high levels of noise with the potential to cause annoyance, sleep disturbance or physiological effects?	Unlikely to reduce noise levels significantly in the short term.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Unlikely to reduce noise levels significantly in the short term.	0	None required
Safety and security	To contribute to safety and security and generate the perceptions of safety;	Will it promote the design and management of green spaces that helps to reduce crime and anti-social behaviour?	Measures will broadly support this through increase natural surveillance. .	+	None required.

5.6 Monitoring

The LIP does not currently include specific proposals for environmental monitoring. However, in relation to the effects identified in the SEA, Temple and Steer recommend that key indicators from the set compiled by the London Sustainable Development Commission (LSDC) on Quality of Life issues be used by Haringey Council to monitor the environmental effects of the final Strategy and LIP. The LSDC indicator set is designed to gauge how London is performing against key measures of a sustainable city that supports and enhances quality of life. It has been specifically designed to be used by policy-makers to monitor trends and to inform future policy-making.

The recommended indicators for monitoring set out in **Table 5.12** below.

Table 5.12: Recommended indicators for monitoring the SEA for the draft Transport Strategy and LIP

No.	Indicator	Measure
	Environment	
1, 2	CO_2 emissions	Total CO_2 emissions in London
4	Oxides of nitrogen emissions	Tonnes of NO_x emitted in London
5	Particulate emissions	Tonnes of $PM_{2.5}$ and PM_{10} emitted in London
8b	Flood risk (surface water)	Properties at risk of surface water flooding
	Social	
10	Healthy Life Expectancy	Healthy life expectancy at birth for men and women
N/A[12]	Child Obesity	Percentage of overweight and obese children in Reception Year (aged 4-5) and Year 6 (aged 10-11)
15	Happiness	Self-reported levels of happiness
16	Satisfaction with London	% of Londoners satisfied with the capital as a place to live
18	Social integration	% of people who think their local area is a place where people from different backgrounds get on well together
	Economic	
19	Gross Value Added	Gross Value Added (GVA) per head (£) in London
20	Employment	Employment rate in London
24	Income inequality	Disposable income differentials in London
25	Child poverty	Children living in households below 60 per cent median income
27	London Living Wage	% of people earning less than London Living Wage (LLW) per hour in London

[12] Department of Health statistics on prevalence of childhood obesity available at www.data.london.uk.

6.0 Next Steps

6.1 Development of the LIP

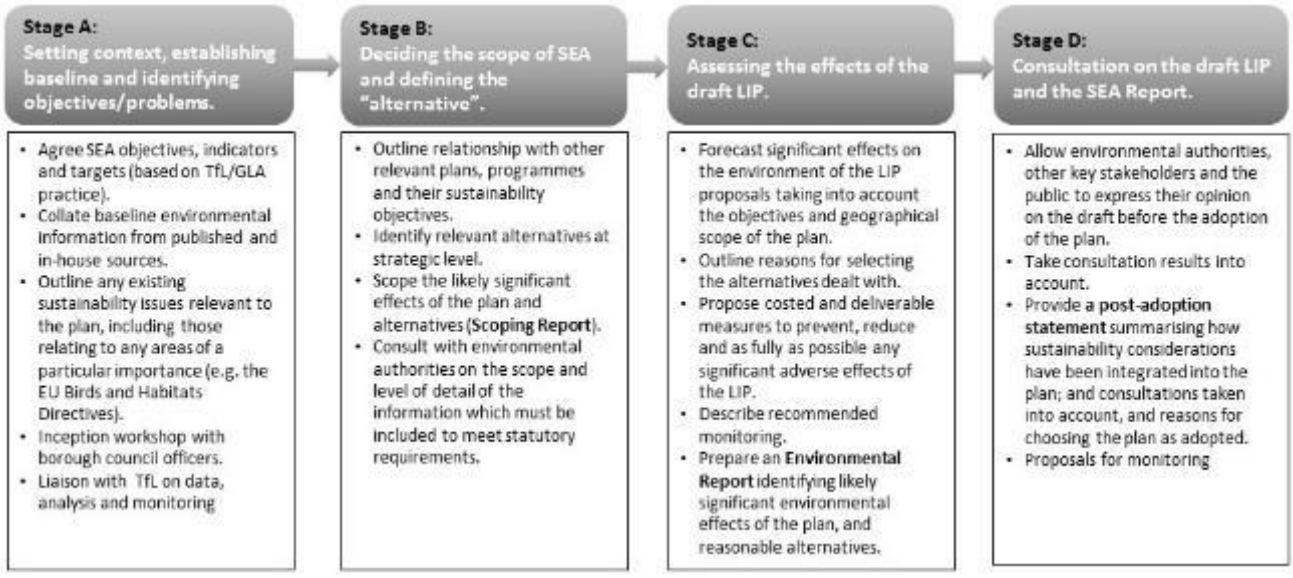
A draft of the LIP was submitted to Transport for London in autumn 2018 for comment. Haringey Council conducted a public consultation exercise on the LIP proposals until 31st January 2019.

Taking account of the comments received from TfL and the outcomes of the consultation, together with the analysis presented in this Environmental Report, Haringey Council will then make any revisions to the LIP that may be necessary, and a final version will be approved by the Council and TfL before the LIP comes into operation in April 2019.

6.2 Remaining Stages in the SEA Process

The stages that Temple and Steer are following in the SEA process are shown in **Figure 6.1** below.

Figure 6.1: Stages in the SEA Process



Adapted from: ODPM (2005) - **A Practical Guide to the Strategic Environmental Assessment Directive**

This Environmental Report represents the output from Stage C of the process illustrated above.

During Stage D, Temple and Steer will prepare the Post-Adoption Statement on behalf of Haringey Council, who will publish this in turn. The Post-Adoption Statement will clearly summarise the way that consultation has influenced the assessment process, demonstrate how feedback has been considered, identify changes that have been made and the reasons for choosing the preferred policies and options. We will ensure this is clearly and sensitively set out, avoiding potential difficulties with interested stakeholders.

In line with the requirements of the SEA Regulations, the Borough Council will monitor the effects of the LIP. This will feed into any future LIP progress reporting.

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