

Report

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Report for – London Borough of Enfield
Draft Transport Plan 2019 and Local Implementation Plan
Strategic Environmental Assessment – Environmental Report



Document version control

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Report for: **London Borough of Enfield**

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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 Enfield's Transport Plan 2019 including the 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

Enfield's Transport Plan and LIP sets out the LB Enfield's proposals for implementing the Mayor's Transport Strategy including a timescale for implementing the proposals. It includes Enfield's transport objectives and identifies key local issues, challenges and opportunities to achieving the overarching mode share aim and the Mayor's Transport strategy nine outcomes. The LIP has seven transport objectives set out below and the SEA focuses on assessing each of these and their associated measures.

- O1 Deliver Cycle Enfield and supporting measures which encourage more cycling and walking in the borough.
- O2 Promote safe, active and sustainable transport to and from schools.
- O3 Monitor air quality and develop and deliver interventions which address local issues.
- O4 Manage growing demand for on-street parking.
- O5 Focus on and improve priority locations making them safer for vulnerable road users.
- O6 Improve local reliability of and accessibility to the public transport network.
- O7 Maintain and improve the transport network in Enfield including developing potential interventions.

In developing and preparing the programme of works for the Transport Plan and LIP, Enfield Council have considered the major projects in TfL's Business Plan and the milestones associated with these projects as well as more medium and longer terms proposals in the borough.

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 Transport Plan and 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 three European designated sites within a 10km radius of Enfield 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

The SEA concludes that no significant adverse environmental effects will result from the implementation of the Transport Plan and LIP in Enfield. As such, no specific recommendations for the mitigation of effects are required. At a strategic level all the effects identified are either considered to have no impact or will be positive. At this stage, it is not possible (in some cases) to determine on a scheme by scheme basis the positive or negative effects of individual schemes, because the level of information available at the time of assessment does not allow for a clear judgement to be made.

The main effects of the seven objectives of the LIP, together with the actions and outcomes associated with them, are listed below.

- **O1 Deliver Cycle Enfield and supporting measures which encourage more cycling and walking in the borough.** This objective and the associated measures will directly support increases in cycling and walking in the borough. The increase in active travel will have health and environmental benefits and support improvements in the attractiveness of the public realm as well as broadly supporting emissions reduction and energy efficiency.
- **O2 Promote safe, active and sustainable transport to and from schools.** This objective and the associated measures will provide substantial support for improvements in travel to schools which are healthier and environmentally beneficial. The measures will help reduce inequalities and increase inclusivity as well as having health benefits for those walking and

cycling to school. They will also provide some support for emissions reduction and energy efficiency.

- **O3 Monitor air quality and develop and deliver interventions which address local issues.** This objective and associated measures will work to support improvements in air quality locally complementing vehicle technological changes to achieve this. The measures will support emissions reduction and overall transport energy efficiency improvements.
- **O4 Manage growing demand for on-street parking.** This objective and the associated measures will support a lessening of reliance on the private car and more car-free environments in the borough with associated environmental and health benefits. These stem from reduced emissions and more attractive streetscape environments which are more conducive to active travel, are safer and more inclusive.
- **O5 Focus on and improve priority locations making them safer for vulnerable road users.** This objective and associated measures will directly support improved road safety and a reduction in road casualties with direct benefits to all though particularly vulnerable users and associated benefits to streetscape environments.
- **O6 Improve local reliability of and accessibility to the public transport network.** This objective and associated measures will provide significant improvements in accessibility for public transport users and pedestrians increasing inclusivity and supporting increased uptake of public transport. They will also provide urban realm improvements.
- **O7 Maintain and improve the transport network in Enfield including developing potential interventions.** This objective and the associated measures will provide an enhanced transport network and significantly enhanced streetscape environments with associated environmental (air quality and emission) benefits as well as health benefits.

In some cases, the way in which these objectives and measures are implemented provides opportunities to enhance their effects, and this has been indicated where appropriate.

1.5 Monitoring

The draft Plan and LIP include some proposals for environmental monitoring, specifically in relation to emissions of carbon dioxide (CO₂), oxides of nitrogen (NO_x) and particulates from road transport. However, it is recommended that key indicators from the set compiled by the London Sustainable Development Commission (LSDC) on Quality of Life issues also be used by Enfield Council to monitor the environmental effects of the final Strategy and LIP.

1.6 Next Steps

The draft Transport Plan and LIP was submitted to Transport for London in November 2018 for comment. Taking account of the comments received from TfL together with the analysis presented in this Environmental Report, Enfield Council will make any revisions to the Transport Plan and LIP that may be necessary, and a final version of the LIP will be approved in January 2019.

Following this, Enfield 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 Enfield's Transport Plan and 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 transport¹. 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 SEA² was forwarded to the consultation bodies by the London Borough of Enfield earlier this year. 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 (MTS)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.

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

² Temple and Steer (2018) - **Local Implementation Plan: Strategic Environmental Assessment Scoping Report** – London Borough of Enfield, September 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 3.3**.

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 Requirements⁴ 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 3.7
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 draft Transport Plan and LIP for the London Borough of Enfield is described based on work completed by the Council to date. This sets out:

- The background policies that shape the proposals set out in the LIP and Transport Plan, 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 Transport Plan, 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 Enfield target is 69%.

3.2.2 The Sub Regional Transport Plan (North)

This Plan⁵ 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 CO₂ 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.

3.3 Short and long-term transport proposals for Enfield

A summary list of seven programme level measures for three year i.e. short term investment are listed together with number of long-term transport interventions for Enfield. The latter are identified by the Council as required to ensure the economic and social vitality of the borough. Those named in the Transport Plan are Crossrail 2, Northern Access and Bus Rapid Transit. As there are no details available on either the short term measures (albeit that these are broadly consistent with the seven objectives) or long term measures (aside from publicly available information on Crossrail 2) these have not been assessed separately under the SEA. Other projects that will become long-term transport proposals though are not yet identified clearly cannot be considered in the SEA.

3.4 Summary of the LIP

Enfield's transport objectives have been developed in the LIP to help achieve the overarching mode share target for Enfield and for London, as well as delivering against the various mayoral outcomes identified in the MTS. The focus of the LIP will be in accordance with the following seven objectives:

- O1 Deliver Cycle Enfield and supporting measures which encourage more cycling and walking in the borough;
- O2 Promote safe, active and sustainable transport to and from schools;
- O3 Monitor air quality and develop and deliver interventions which address local issues;
- O4 Manage growing demand for on-street parking;
- O5 Focus on and improve priority locations making them safer for vulnerable road users;
- O6 Improve local reliability of and accessibility to the public transport network; and
- O7 Maintain and improve the transport network in Enfield including developing potential interventions.

More details on the focus and proposals which fall under each objective are set out below.

O1 Deliver Cycle Enfield and supporting measures which encourage more cycling and walking in the borough. Includes redesigning street to shift priority to active modes, supporting

'Healthy Routes' and an increase in cycle infrastructure provision. It will see a continuation of the strategy in the Mini-Holland proposals.

O2 Promote safe, active and sustainable transport to and from schools. Includes junction safety improvements, low speed environments – normally 20 mph, community schemes such as 'walking-school buses'. It promotes healthier alternatives to the car particularly walking and cycling.

O3 Monitor air quality and develop and deliver interventions which address local issues. Includes working with business to promote active travel by staff, working with TfL to develop appropriate emergency measures to reduce or restrict vehicle use when air pollution is very high or forecast to be so, and reliable charging infrastructure to support electric vehicle (EV) take up.

O4 Manage growing demand for on-street parking. Includes more effective management of on-street parking, encouraging new car-free developments, ensuring new developments contain high levels of access to cycle parking and supporting uptake of car club membership. It seeks to address the issue of there not being enough road space to accommodate current and future parking and vehicle use.

O5 Focus on and improve priority locations making them safer for vulnerable road users. Includes traffic management schemes, lowering speeds through street design and prioritising road danger reduction measures. It seeks to directly reduce road traffic casualties.

O6 Improve local reliability of and accessibility to the public transport network. Includes ensuring all bus stops are accessible, accessibility improvements such as dropped kerbs, tactile paving and tonal distinction between areas for pedestrians and those for vehicles, plus working with TfL to deliver station improvements and potential locations for demand-responsive bus services. It seeks to directly improve the attractiveness of public transport in Enfield.

O7 Maintain and improve the transport network in Enfield including developing potential interventions. Includes public realm and pedestrian environment improvements, green infrastructure including SuDS provision, retrofitting of rain gardens, designing 'in passing' surveillance, new tree planting and net gains in green infrastructure and biodiversity.

3.5 Defining the assessment area

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

Figure 3.1: London Borough of Enfield area and adjoining boroughs



3.6 Timeframe for the Plan

The Transport Plan and LIP includes policies and proposals that cover the period up to 2024. Although there is reference to longer term and aspirational schemes to 2040, the focus is on the short and medium term goals and transport objectives for the borough up to 2024 with a three year programme of investment 2019-2022. This is therefore also the timeframe for the SEA.

3.7 Other policies, Plans, Programmes and Sustainability Objectives

3.7.1 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 following) are set out in Table 2.1 following:

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)

Topic	Policy Document
	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)

3.7.2 London Borough of Enfield Policies

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

- London Borough of Enfield: Air Quality Action Plan 2007;
- London Borough of Enfield: Enfield Characterisation Study 2011;
- London Borough of Enfield: Enfield Borough Profile 2017;
- Enfield Local Plan 2010;
- London Borough of Enfield: Review of Enfield's Sites of Local and Borough Importance for Nature Conservation 2012;
- London Borough of Enfield: The Enfield Update - November 2017; and
- London Borough of Enfield: Enfield Local Heritage List 2018.

4.0 Baseline Environmental Conditions

4.1 Air Quality

In common with other local authorities, air quality in Enfield is monitored at several specific locations. This information is also used to model the quality of air across the borough. Enfield continues to breach the UK Government’s air quality objectives for nitrogen dioxide (NO₂) and the standards particulate matter (PM₁₀). Consequently, the council designated an Air Quality Management Area (AQMA) across the whole of the Borough and produced an Air Quality Action Plan⁶ (AQAP) in recognition of the legal requirement on the council to work towards air quality objectives within the Borough. The dominant source of NO₂ and PM₁₀ emissions in Enfield is road traffic. Problems arise on roads which are heavily trafficked or have large amounts of congestion. For NO₂ there are widespread exceedances of the annual mean objective along main roads in the Borough. For PM₁₀ there are exceedances of the daily mean objective along parts of the busiest main roads in the Borough, including the M25, A406 North Circular Road and A10. The annual mean objective is exceeded in parts of the M25 and A406 North Circular Road only, very close to the centre of the roads.

The TfL MTS3 LIP Outcomes Borough Data pack 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** below.

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

Pollutant	2013	2021	2041
Oxides of Nitrogen (NO _x)	1,180	510	110
Particulates (PM ₁₀)	117	103	67
Particulates (PM _{2.5})	67	50	34

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

Enfield Council has conducted a characterisation study⁷ in the borough which identifies four macro-areas based on physical characteristics, history and social identity. These are identified in **Figure 3.1**, and can be characterised as follows:

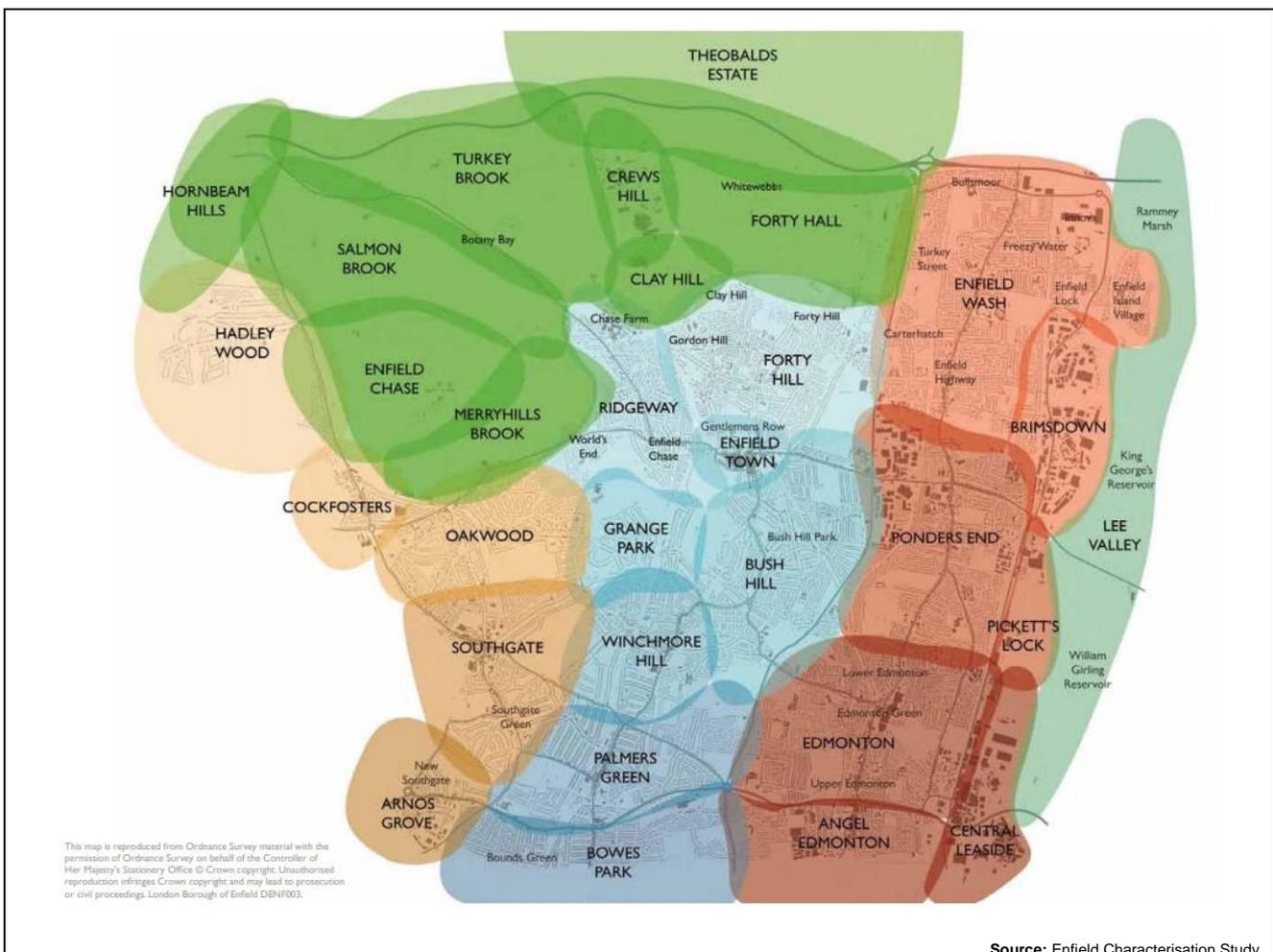
- **Western Corridor:** This area in the south-west of the Borough bordering Barnet and Haringey Boroughs comprises large, generously proportioned interwar suburbs and Metroland centres orientated towards Charles Holden’s iconic Underground stations that provide centrepieces and architectural landmarks for local neighbourhoods. These neighbourhoods are low density and are dominated by family housing. They are almost entirely residential development with

⁶ London Borough of Enfield (2007) - **Air Quality Action Plan**.

⁷ London Borough of Enfield (2011) – **Enfield Characterisation Study** – February 2011.

few significant employment areas, either for office space or industrial development. Oakwood neighbourhood retains many of the late Victorian hospital buildings which define the conservation area character; the street pattern and overall composition, however, is essentially suburban. New Southgate (Arnos Grove) is one of the Enfield's Place Shaping Priority Areas and subject of a new masterplan. The centres at Southgate, Arnos Grove, Cockfosters and Oakwood differ in terms of their streetscape. Cockfosters has the widest and grandest street profile, with grass verges with tree planting on both sides and an additional carriageway on both sides for local traffic and parking. The other centres are narrower. Oakwood comprises a classic, single-sided parade of shops, set back from the main road behind a grass verge with mature lime trees and a parking layby. Southgate comprises several busy thoroughfares lined with commercial units on both sides. The type and quantity of street greenery in the western corridor varies significantly, from the generous coverage in semi-rural Hadley Wood to the almost complete lack of greenery in Arnos Grove. In between these, the green spaces in the classic suburbs of Oakwood, Southgate and Cockfosters are under threat due to the pressure on street and garden areas to provide parking.

Figure 3.1: Neighbourhoods in London Borough of Enfield



- **Central Corridor:** The central corridor comprises neighbourhoods that have early village or hamlet origins. Among them is Enfield Town, which retains a strong historic market town character despite being absorbed into Greater London. Enfield Town is a key shopping

destination for the Borough with the Palace Exchange and Palace Gardens Shopping Centres, and a market operating on Thursdays, Fridays and Saturdays in the historic market square. It also is a key transport hub with two rail stations (Enfield Town and Enfield Chase) and a small bus terminus. The central corridor contains mature suburbs, ranging from late Victorian terraces in the south to early interwar semi-detached houses in the north. This includes many Edwardian streets that show an Arts and Crafts influence. Because the central corridor is developed at higher density than areas to the west there is pressure to remove street trees or front gardens to create space for parking and reduce maintenance. Palmers Green was historically a civic centre but has lost this function in recent times, although the former Southgate Town Hall is still an historic landmark.

- **Eastern corridor:** The eastern corridor is centred along Hertford Road following the Lee Valley and is characterised by linear centres. These vary in size from single retail parades in residential areas to major centres. Pubs are more common than in other parts of Enfield and remain as important corner buildings or significant presence in groups of buildings. Edmonton Green is in the south east of the Borough and is Enfield's second largest centre. The area is densely built and contains a large amount of affordable housing, along with significant shopping, community and leisure uses. To the north and south of Edmonton there are older terraces of housing along Hertford Road north of St Martins Road and just north of the junction with the North Circular. There is a good deal of industrial activity in the Lee Valley, including Brimsdown and Meridian industrial parks. This has recently diversified to include other uses such as self-storage facilities, trade counter retailers and cash and carry uses which serve the public as well as leisure uses such as indoor karting tracks. Freezy Water, at the extreme north-east of the borough, is characterised by Innova Park, a new business and enterprise area with office space and large-scale modern buildings.
- **Rural/urban interface:** The north of the borough comprises a mix of urban and rural landscape adjoining the Green Belt, characterised by farmland ridges and valleys. It is an important area of high quality open landscape with a special character which is highly valued. Much of the landscape is in productive agricultural use and all of it is protected as Green Belt. It extends from Hadley Wood in the north west corner of the borough, across the whole of the top northern edge of the borough to Capel Manor and Bulls Cross in the north east. The designation of the area as Green Belt has meant that the landscape has been well protected from twentieth century development and in places feels rural despite its location on the edge of Greater London. Salmon's Brook Valley together is one of the areas of highest landscape quality in the borough, while similarly, Turkey Brook Valley is an area of open agricultural land with undulating topography, characterised by large geometric field patterns that date back to the 1803 Enclosure Acts. These areas are highly valued by local residents and are well used by walkers. Parts of this area are under pressure for development. For example, Chase Farm hospital is presently being redeveloped for housing and with more leisure activities. Similarly, commercial activities at Crews Hill are expanding and diversifying from greenhouse and nursery use to general business and retail. This has a significant effect on the character of the area and in particular the frontage to the traditional lanes.

4.3 Climate change mitigation and adaptation

The UK local and regional carbon dioxide (CO₂) emissions statistics released by the Department of Energy and Climate Change (2012) identifies that baseline CO₂ emissions for the London Borough of Enfield were 1,427.5 kilotonnes per annum (kpa). Of this figure, 44% was from dwellings, 28% from non-domestic buildings and 28% from transport.

The most recent figures available, for 2012⁸, indicate that after reaching a peak of 1,739.6 kpa in 2006, this level has progressively declined to reach 2012 figures. This comprised 39% from dwellings, 36% from non-domestic buildings and 25% 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, CO₂ emissions from road transport in Enfield will reduce from 353.7 kta in 2013 to 335.1 kta in 2021 and to 153.9 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 statistics⁹ indicated that 411,000 tonnes of oil equivalent (ktoe) energy was consumed in the London Borough of Enfield. This is higher than the average for boroughs across Outer London. Of this, gas consumption accounted for 43%, while 22% was electricity consumption and just over 30% was of petroleum products. Nearly 25% of energy consumed was by industry, and 43% was consumed in people's homes. 31% of energy used was for transport.

4.5 Fairness and inclusivity

The population of the London Borough of Enfield was just over 314,000 at the 2011 Census. This is estimated to have risen to 337,698 at mid-2018, an increase of over 7.5%, making Enfield the 5th largest amongst the 33 London boroughs. The population is also very diverse, with almost two-thirds of people living in the borough from ethnic minority backgrounds. Many of those identifying in the 'other white' category living the borough are from the Greek, Turkish or Cypriot communities, which make up around 15% of the population. The School Census results indicate Enfield pupils recorded themselves under 95 different ethnic codes making the area one of the most ethnically diverse places in the country. The breakdown of Enfield's population by ethnicity is indicated in **Table 3.1** below.

Table 3.1: Ethnic makeup of London Borough of Enfield 2018

Ethnicity	Number	%
White - British	113,898	33.7
White - Irish	6,750	2
Other White	70,841	21
White and Black Caribbean	6,078	1.8
White and Black African	3,345	1
White and Asian	5,244	1.6
Other Mixed	7,377	2.2
Indian	12,376	3.7
Pakistani	2,967	0.9

⁸ Department of Energy and Climate Change (2014) - **2005 to 2012 UK local and regional CO₂ 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	%
Bangladeshi	6,526	1.9
Chinese	2,918	0.9
Other Asian	15,040	4.5
Black African	33,197	9.8
Black Caribbean	18,897	5.6
Other Black	11,025	3.3
Arab	2,415	0.7
Other ethnic groups	18,804	5.6
<i>Total</i>	<i>337,698</i>	<i>100</i>

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, where the Lower Super Output Areas (LSOA) are among the 10% most deprived in England. Enfield is the 64th most deprived borough in England and the 12th 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. Although future population trends are highly uncertain, population growth locally seems mostly due to an increase in life expectancy 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.

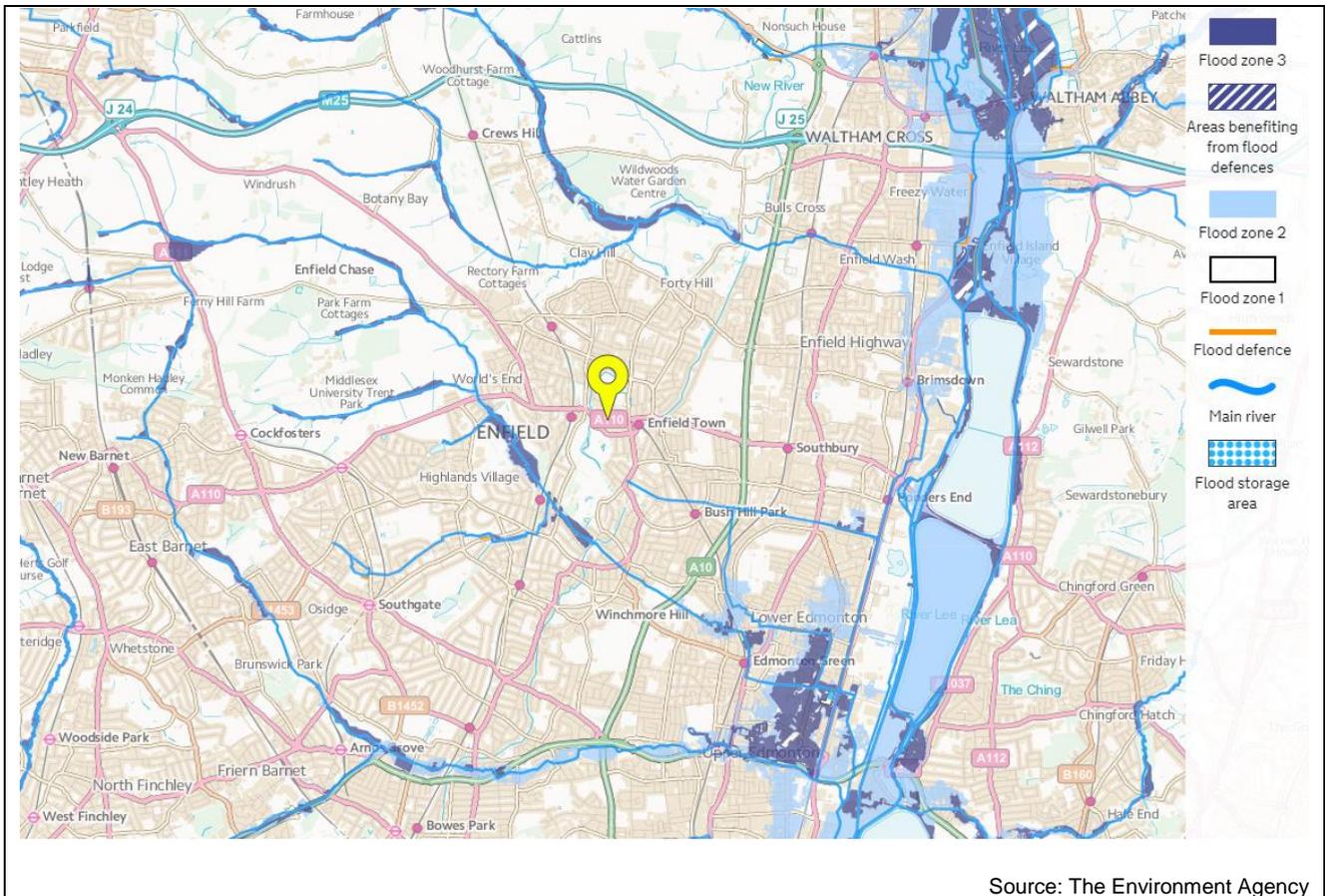
4.6 Flood risk

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 Enfield are illustrated in **Figure 3.2** below, 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 Salmon’s Brook flowing in the Enfield Town and Edmonton area, Turkey Brook on the northern edge of the borough, and Pymmes Brook on the southern edge of the borough. More information on water resources in the borough is provided in **Section Error!** Reference source not found. below.

Figure 3.2: Flood Risk Areas in the London Borough of Enfield

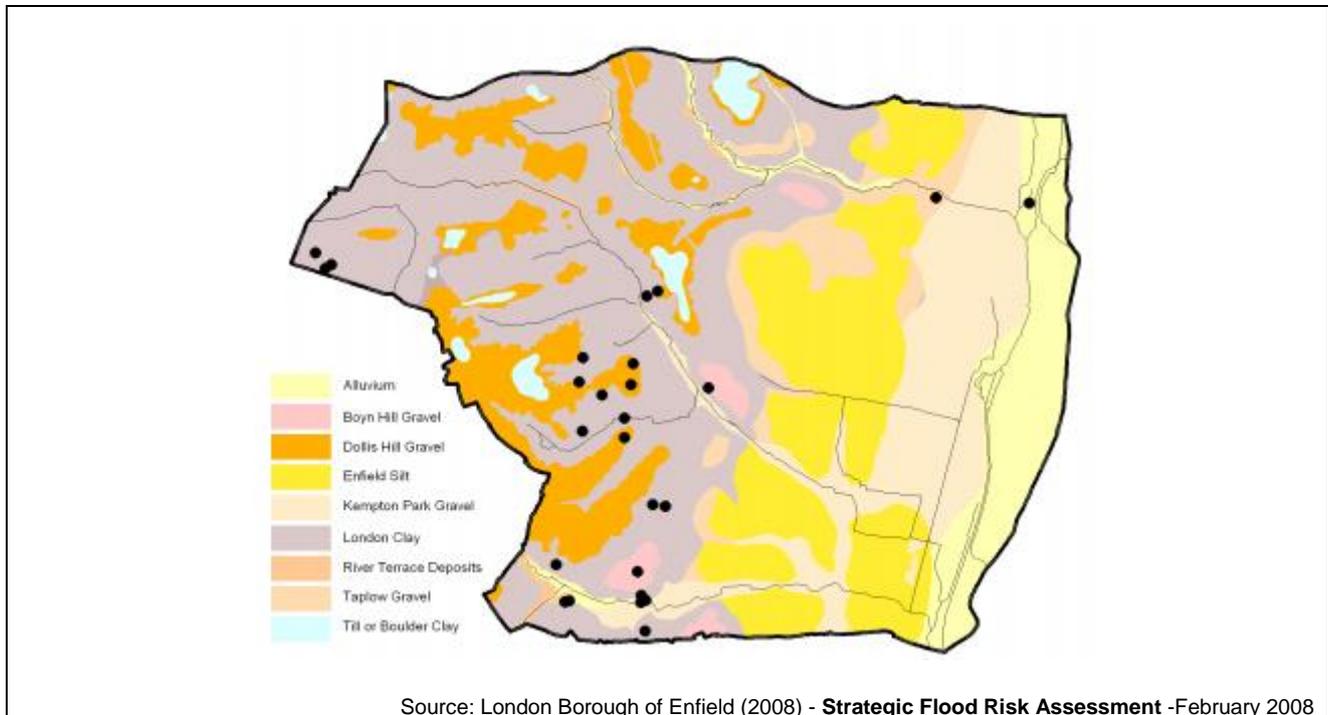


4.7 Geology and soils

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. Nine 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, River Terrace Deposits, and Till or Boulder Clay. Of these, London Clay is most prevalent.

The geology and soils of the Borough are illustrated in **Figure 3.3** below.

Figure 3.3: Geology and Soils in the London Borough of Enfield



4.8 Historic Environment

The London Borough of Enfield is rich in tangible heritage assets. These include 5 scheduled monuments and 1 local monument; 22 areas of archaeological interest; 451 statutorily listed (of which 3 are Grade 1) and 93 locally listed buildings; 21 conservation areas; and 5 nationally registered and 26 locally registered historic parks and gardens.

Enfield has 11 Listed Buildings and 2 Conservation Areas on the Heritage at Risk Register¹⁰.

4.9 Materials and waste

Enfield Borough achieves recycling rates in line with the London average and is home to one of the largest waste recycling facilities in the UK. The Edmonton Ecopark has prevented 21 million tonnes of waste from going to landfill over its lifetime and employs around 180 people. The facility is being redeveloped in 2019 into an energy recovery facility that would process household waste for the seven London boroughs of Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest in order generate power for around 127,000 homes, while also providing heat for local homes and businesses.

4.10 Mental and physical wellbeing

Health and well-being in Enfield typically are higher to the London average. Life expectancy rates in Enfield are increasing and are expected to improve further. Health inequalities are most evident

¹⁰ Historic England (2017) – **Heritage at Risk: London Register 2017**.

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 are a greater concern in more deprived parts of the borough. Men who live in the most deprived areas in the borough die on average 5 years younger than those in more affluent areas. Health inequalities are more prevalent among more vulnerable groups in the population.

Childhood obesity rates in the borough are higher than the London and England average. Data from Public Health England's annual National Child Measurement Programme for the school year 2015/16 estimate that in Enfield 23.9% of Reception age children and 41% of Year 6 children are either overweight or obese. For Year 6 children, Enfield's prevalence of overweight or obesity is the sixth highest of all London boroughs.

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 three European Sites are within a 10 km radius of Enfield, i.e.:

- **Epping Forest Special Area of Conservation (SAC):** 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 (SPA) 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 SPA is also designated as a Ramsar site given the international importance of the wetlands.

The Borough has a total of 50 areas designated as Sites of Importance for Nature Conservation Importance¹¹. Of these, seven are of Metropolitan Importance, 15 of Borough Importance Grade I and Borough Grade II and 33 of Local Importance. The waterways also offer a valuable habitat, which it is recognised should be preserved and enhanced.

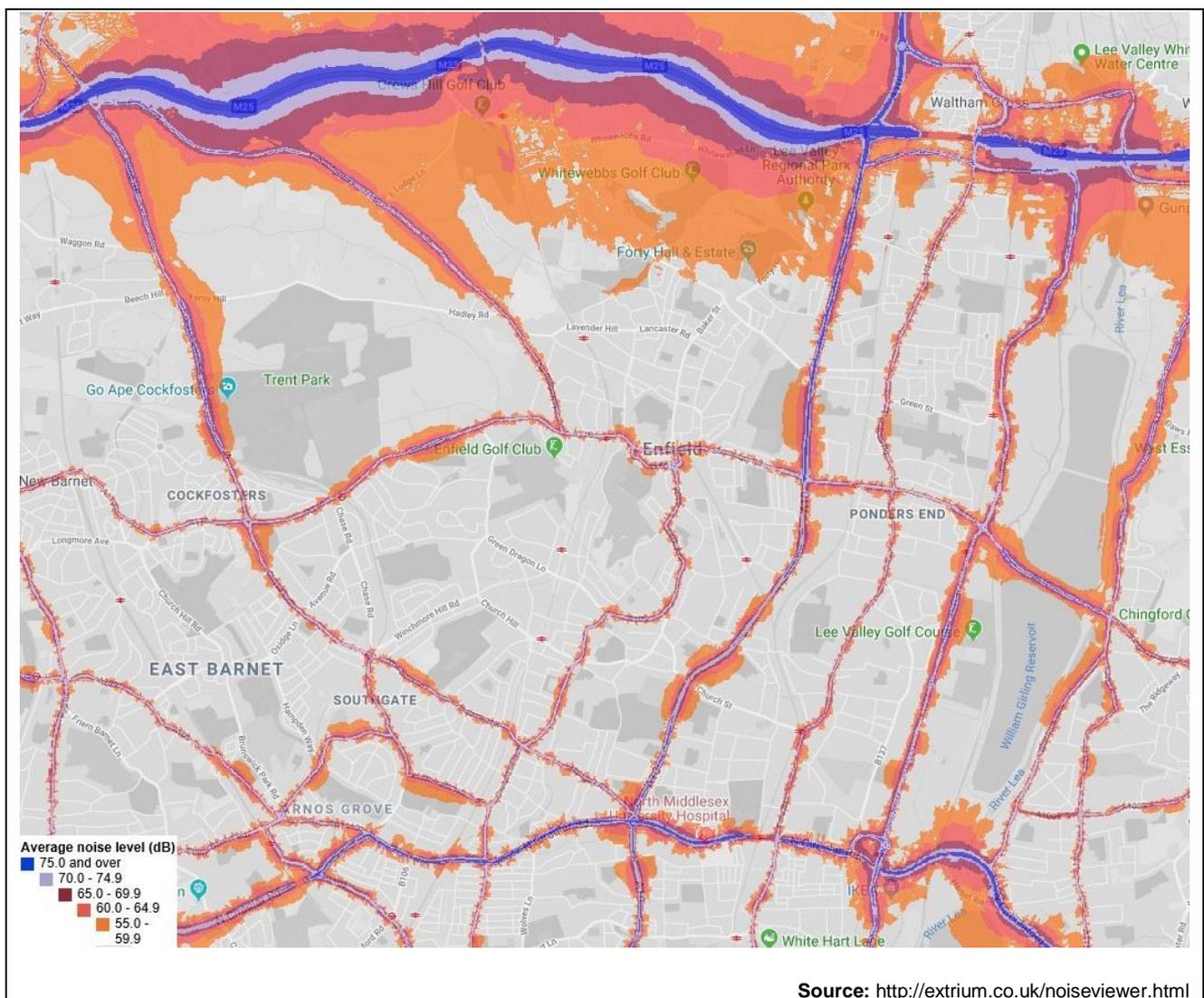
The Lee Valley Regional Park straddles the eastern boundary of the Borough and includes the designated sites referred to above.

¹¹ London Borough of Enfield (2012) - **Review of Enfield's Sites of Local and Borough Importance for Nature Conservation** – April 2012

4.12 Noise and vibration

Little information is available on noise and vibration generally across the Borough. **Figure 3.4.** below 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 3.4: LAeq 16-hour road traffic noise levels in London Borough of Enfield 2012



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 3.4** it may be seen that the main areas affected by traffic noise in Enfield unsurprisingly are along the main traffic routes through the Borough, in particular, areas close the M25 to the north of the borough are exposed to high levels of noise. Areas close to the A1005 The Ridgeway, the A1010 Southbury Road, the A105 Green Lanes and the A10 Great Cambridge Road are also particularly affected by noise.

The TfL MTS LIP3 Borough Data pack indicates that the amount of traffic on roads in Enfield may reduce by up to 10% 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

Enfield has a low overall crime rate when compared to neighbouring boroughs and London as a whole, with 58.5 reported crimes per 1,000 population recorded in 2016/17, which is continuing to drop according to Government Office statistics. The three most common types of recorded crime were theft and handling, violence against the person (excluding sexual offences) and burglary.

Data from the police shows that there were 7,255 calls concerning Anti-social Behaviour (ASB) logged in the period 2015/2016 – an increase of 1.7% from 2014/15 (7,134 calls). Of the main types of ASB logged, the most common complaints concerned street drinking, drugs and rowdy youths. ASB can lead to residents feeling unsafe when out alone after dark and be a barrier deterring people from travelling by sustainable modes such as walking, cycling or using public transport as they feel more vulnerable.

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

Turkey Brook flows east through the London Borough of Enfield and is mostly shallow, fast flowing and clean. Coarse fish, including dace, use the brook to spawn.

Salmon's Brook is a minor tributary of the River Lee, located in the London Borough of Enfield. It is mostly culverted, and it flows in a west direction through the Deephams Sewage Treatment Works, the Eley Industrial Estate and close to the Edmonton Incinerator. The Salmon's Brook is failing standards for water quality, so to improve it the Council in collaboration with Thames21, The Environmental Agency and Thames Water has been working on a Sustainable Drainage System (SuDS) inspired by nature and the support of local residents.

The Moselle Brook was a natural tributary of the River Lee, but it now flows in a culvert into Pymmes Brook.

5.0 SEA Objectives and Framework

5.1 Objectives

Temple and Steer have confirmed with Enfield 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 Transport Plan and LIP have been 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 Transport Plan and 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 Transport Plan and 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 Transport Plan and 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 to 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.

Enfield 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 forms 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** Error! Reference source not found. 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^{12,13} will be likely to arise from implementation of the LIP. On this basis, no further assessment has been undertaken.

¹² Natural England (2014) - **European Site Conservation Objectives for Epping Forest Special Area of Conservation** - Site Code: UK0012720.

¹³ Natural England (2014) - **European Site Conservation Objectives for Lee Valley Special Protection Area** - Site Code: UK9012111.

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 seven Borough Transport Objectives of the Transport Plan and LIP are assessed in turn in the matrix tables in this section.

The likely effects of implementing the Transport Plan and 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 in 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**. 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).

Table 5.2: Description of packages modelled for the MTS

Package	Description
Package A: Core reference case	<p>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 and a summary of key schemes is provided below:</p> <ul style="list-style-type: none"> • 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). <p>Wider assumptions have been made about policies relating to aspects such as fares, fuel costs and car parking.</p>

Package	Description
Package B: Optimising the network	<p>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 below:</p> <ul style="list-style-type: none"> • 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	<p>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:</p> <ul style="list-style-type: none"> • 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 D: New connections	<p>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 below:</p> <ul style="list-style-type: none"> • 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	<p>Package E contains a range of measures to reduce traffic and achieve Healthy Streets for London. A summary of key schemes is provided below:</p> <ul style="list-style-type: none"> • 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.

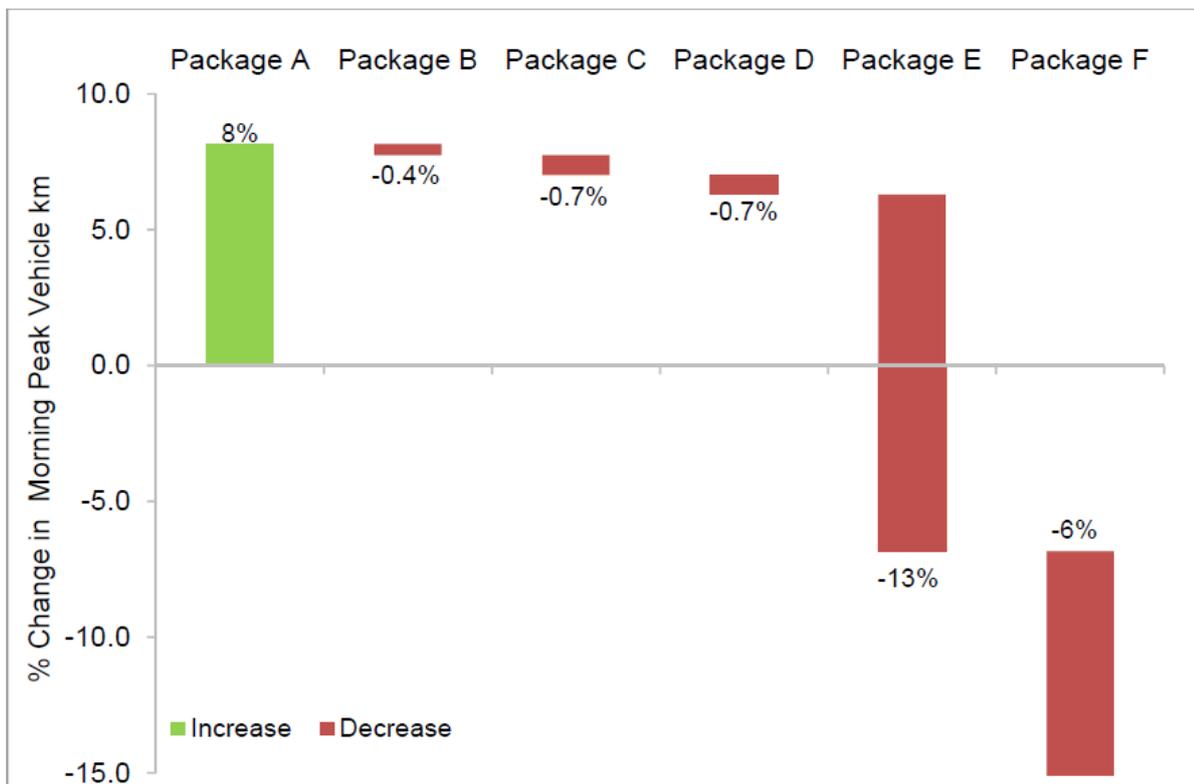
Package	Description
Package F: Longer term changes to the way road use is paid for	<p>Changes to the way road use is paid for in the longer term could help achieve an 80 per cent mode share for walking, cycling and public transport. A summary of the illustrative measures included is provided below:</p> <ul style="list-style-type: none"> • 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

The definitions of the packages are shown in the table below. It can be seen that there are elements in most of the packages that reflect the details contained in the LIP. However, it is Package E that is most closely related to the proposals 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.

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 Enfield LIP are likely to result in a significant decrease in vehicle-kilometres travelled.

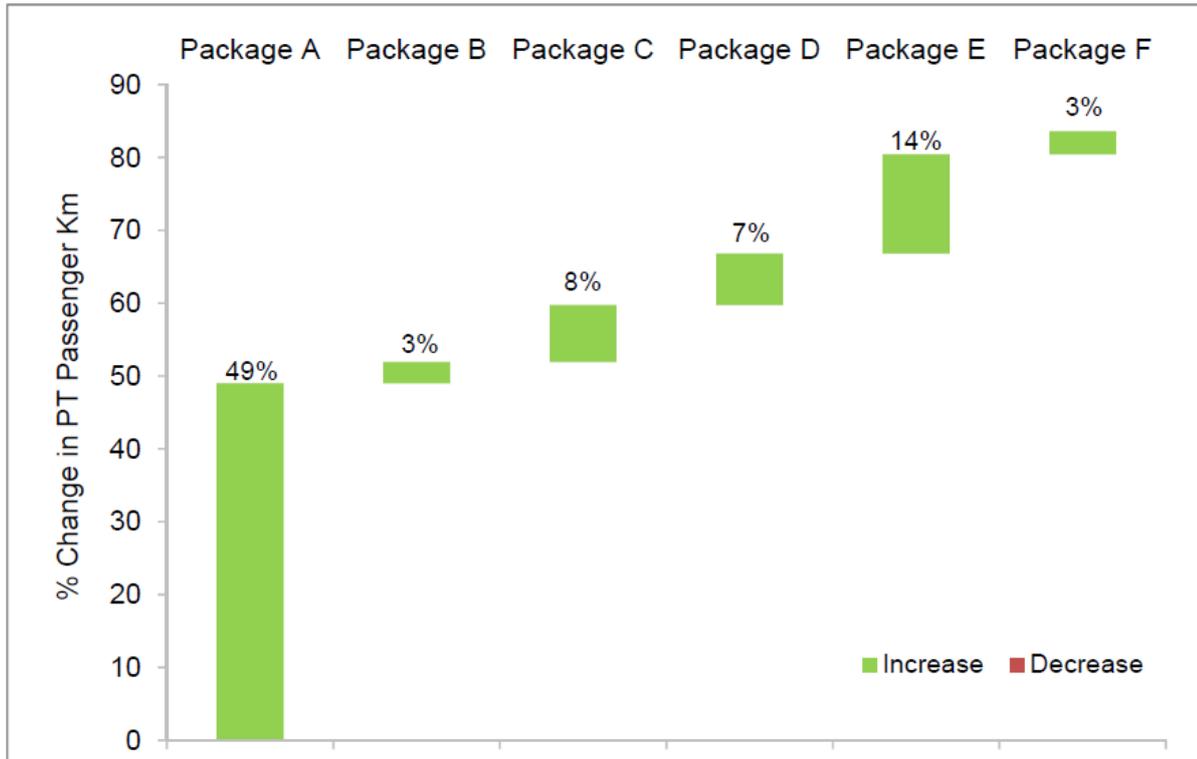
Figure 5.1: Change in London morning peak hour vehicle kilometres, 2015 to 2041 for packages A to F



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 Enfield LIP are likely to result in an increase in public transport usage.

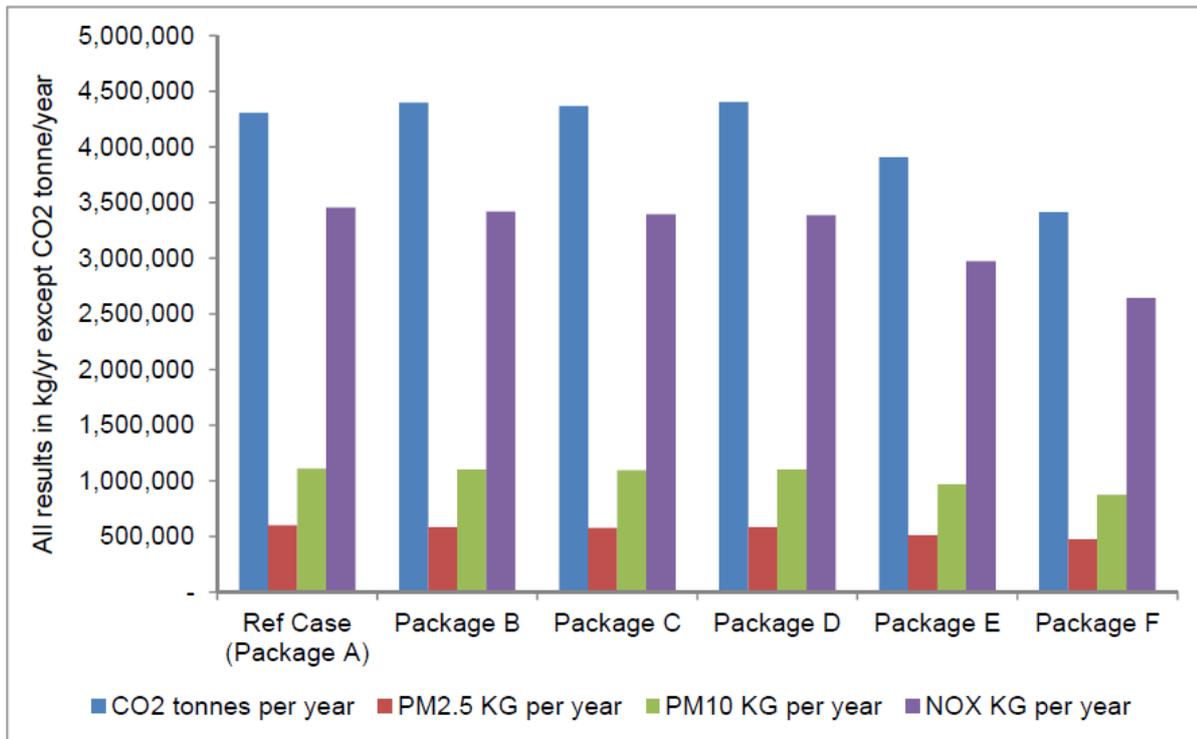
Figure 5.2: Change in 12-hour public transport passenger kilometres, 2015 to 2041 for packages A to F



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** below 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 Enfield LIP are likely to be positive in this regard, however at a very small scale when compared to the existing situation.

Figure 5.3: CO₂, PM_{2.5}, PM₁₀ 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 5.3: 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: Transport Plan and LIP Objectives 1 Deliver Cycle Enfield and supporting measures which encourage more cycling and walking in the borough

Table 5.4: SEA Matrix 1 O1: Deliver Cycle Enfield and supporting measures which encourage more cycling and walking in the borough

Topic	Objective	Assessment guide questions	LIP Objective 1: Deliver Cycle Enfield and supporting measures which encourage more cycling and walking in the borough.		
			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)?	Encouraging mode shift and active travel through cycling will support emissions reduction.	+	None required
		Will it help to achieve national and international standards for air quality?	Mode shift due to the proposals is unlikely to lead to a significant improvement in compliance with national standards, though is broadly positive in this direction.	0	None required
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Encouraging mode shift and active travel is likely to improve local air quality conditions and benefit vulnerable communities.	+	None required
		Will it result in air quality changes which negatively impact the health of the public?	The promotion of active travel and modal shifts will not have a negative impact on health.	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	Although the objective will have positive impacts on air quality it is difficult to draw direct conclusions or direct correlation 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?	The promotion of modal shift and active travel is likely to have broadly positive impacts on local air quality, including schools, outdoor play areas, care homes and hospitals though the scale of the effect will likely be slight.	0	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?	Greater emphasis on walking, cycling and active travel will positively impact neighbourhoods and barriers to their use.	+	None required
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Greater emphasis on walking, cycling and active travel will improve public realm attractiveness by reducing the dominance of motor vehicles, while improving access by sustainable modes.	+	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?	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?	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?	Modal shift to more active travel will not lead to physical changes to protect vulnerable communities from climate change.	0	None required
		Will it improve access to services during severe weather events?	Changes to cycling and walking infrastructure will improve access,	0	None required

			though there will be no difference during severe weather. .		
		Will it reduce exposure to heat during heatwaves?	Changes to cycling and walking infrastructure will improve access, though there will be 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?	The promotion of and provision for active travel will support mode shift and associated emissions reduction. Although GHG emissions reduction will predominantly be achieved by changes in vehicle technology, mode shift has an important contribution to achieving emissions reduction.	+	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at risk groups	The promotion of and provision for active travel will support mode shift and associated emissions reduction. Although GHG emissions reduction will predominantly be achieved by changes in vehicle technology, mode shift has an important contribution to achieving emissions reduction including the effect on vulnerable communities and at risk groups. .	+	None required
Energy use and supply	To manage and reduce demand for energy, achieve greater energy efficiency, utilise new and existing energy sources	Will it reduce the demand and need for energy, whilst not leading to overheating?	The objective is likely to reduce the demand and need for energy in the borough whilst not leading to overheating.	+	None required.

	effectively, and ensure a resilient smart and affordable energy system	Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	The promotion of cycling and walking should lead to greater energy efficiency in transport overall	+	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	Not applicable as cycling and walking do not directly require power.	?	.None required
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	Not applicable as cycling and walking do not directly require power. Electric cycles may increase in use, but are unlikely to have any significant effect.	?	None required
		Will it provide infrastructure to make a better use of renewable energy sources?	Not applicable as cycling and walking do not directly require power..	?	.None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at risk groups?	The promotion of and provision for walking, cycling and active travel is likely to have positive impacts on vulnerable communities health inequalities.	+	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 active travel will increase accessibility and inclusivity across the population.	+	None required
Historic Environment	To conserve and enhance the existing historic environment, including sites, features, landscapes and areas of	Will it protect and enhance sites, features and areas of historical, archaeological and cultural value/potential?	Greater emphasis on walking, cycling and active travel will support this.	+	None required

	historical, architectural, archaeological and cultural value 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 active travel 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, cycling and active travel will support this..	+	None required
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Greater emphasis on walking, cycling and active travel 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, cycling and active travel will support this..	++	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Greater emphasis on walking, cycling and active travel will support this..	+	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	The promotion of and provision for active travel should provide a modest contribution to this.	+	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	The objective will not have any direct discernable impact which can be correlated with reducing flooding, heat and drought risk.	0	None required
		Will it improve access to greenspaces for recreational and health benefits?	Greater provision for and promotion of walking, cycling and active travel will lead to improved accessibility to or via 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?	The promotion of active travel should provide a broadly positive contribution to this though it is difficult to draw direct conclusions or direct correlation relating to premature deaths from poor air quality.	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 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 all Londoners, particularly those with existing mental health conditions?	No direct effects.	0	None required

		Will it result in a greener public realm that can enhance mental health benefits?	Application of of the objective may result in greener streets at a local level, but positive impact may be small in aggregate.	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, cycling and active travel will support this.	+	None required
		Will reduce levels of noise generated?	Mode shift is unlikely to be sufficient to noticeably reduce noise levels	0	None required
		Will it reduce inequalities in exposure to ambient noise?	Mode shift is unlikely to be sufficient to noticeably 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 noticeably reduce noise levels	0	None required
		Will it reduce night time noise in residential areas?	Mode shift is unlikely to be sufficient to noticeably 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 noticeably 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 noticeably 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, cycling and active travel will support this through increased "natural surveillance".	+	None required

5.4.3 Matrix 2: Transport Plan and LIP Objective 2 Promote safe, active and sustainable transport to and from schools

Table 5.6: SEA Matrix 2 Objective 2: Promote safe, active and sustainable transport to and from schools

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			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 modal shift to active and sustainable travel to schools is anticipated to have a positive benefit on reducing growth in emissions.	+	None required
		Will it help to achieve national and international standards for air quality?	Mode shift in travel to schools is not likely to be sufficiently great to achieve a significant improvement in air quality at a 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?	The focus on sustainable travel to schools is likely to have positive impacts on communities, particularly school children, vulnerable to poor air quality	+	None required
		Will it result in air quality changes which negatively impact the health of the public?	Mode shift in travel to schools will not have a negative impact on health.	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	Although the objective will have positive impacts on air quality it is difficult to draw direct conclusions or direct correlation relating to premature deaths..	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			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?	The focus on sustainable travel to schools is likely to have positive impacts on communities, particularly schoolchildren, vulnerable to poor air quality	+	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?	Increasing sustainable travel to schools is likely to have a broadly positive impact on character and liveability including removing barriers to use though the overall scale of the effect will be slight.	0	None required
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Increasing sustainable travel to schools is likely to have a broadly positive impact on on public realm access and attractiveness though the overall scale of the effect will be slight.	0	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

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at risk groups?	Proposed measures will not lead to physical changes/ adaptation to climate change to reduce impacts on vulnerable and at risk groups. .	0	None required
		Will it improve access to services during severe weather events?	Proposed measures will improve access though there will be no difference during severe weather events.	0	None required
		Will it reduce exposure to heat during heatwaves?	Proposed measures will improve access though there will be no difference during heatwaves..	0	None required
		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?	Mode shift by a proportion of the population travelling to and from school is not likely to be sufficiently large scale to give a notable reduction in 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	Mode shift towards active travel is likely to have benefits to health inequalities in the borough.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			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?	Mode shift towards greater active travel to and from schools 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 towards greater active travel to and from schools should lead to greater energy efficiency in transport to and from schools.	+	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	No direct effect as measures focused principally on active travel which does not require power.	0	None required
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	Not applicable as measures focused principally on active travel which does not require power.	0	None required
		Will it provide infrastructure to make a better use of renewable energy sources?	Not applicable as measures focused principally on active travel which does not require power.	0	None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at risk groups?	Active and sustainable travel to schools is likely to have positive effects on vulnerable communities and at risk groups travelling to and from school.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			Assessment	Scale of Effect	Mitigation or Enhancement
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 active travel to and from school will increase accessibility and inclusivity for those travelling to and from school.	+	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?	Greater emphasis active travel to and from schools will provide nominal support for this though the extent and scale of support is low.	0	None required
		Will it improve the wider historic environment and sense of place?	Greater emphasis active travel to and from schools will provide nominal support for this though 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?	Greater emphasis active travel to and from schools will provide nominal support for this though the extent and scale of support is low.	0	None required
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Greater emphasis active travel to and from schools will provide nominal support for this though the extent and scale of support is low..	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			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	Greater emphasis on active travel to and from schools will support this.	+	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Greater emphasis on active travel to and from schools will support this.	+	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	The promotion of and provision for active and sustainable travel to and from schools will provide an important contribution to the reduction in exposure to poor air quality by vulnerable groups including school children this	+	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	The objective will not have any direct discernable impact which can be correlated with reducing flooding, heat and drought risk.	0	None required
		Will it improve access to greenspaces for recreational and health benefits?	Greater provision for and promotion of active travel to and from schools will also support accessibility to or via green spaces.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			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?	The promotion of active travel should provide a broadly positive contribution to this though it is difficult to draw direct conclusions or direct correlation relating to premature deaths from poor air quality.	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 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 effect.	0	None required
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	No direct effect.	0	None required
		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

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			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 may support access to green space and enhance mental health benefits through active travel, but not at the scale to benefit all Londoners.	0	None required
		Will it result in a greener public realm that can enhance mental health benefits?	The promotion of active and sustainable travel for schools may support greener streets at a local level, but positive impact likely to be small in aggregate.	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 sustainable and active travel for schools will support this though mode shift unlikely to be sufficient to noticeably reduce noise levels	0	None required
		Will reduce levels of noise generated?	Greater emphasis on sustainable and active travel for schools will support this though mode shift unlikely to be sufficient to noticeably reduce noise levels	0	None required
		Will it reduce inequalities in exposure to ambient noise?	Greater emphasis on sustainable and active travel for schools will support this though mode shift unlikely to be sufficient to noticeably reduce noise levels	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 2: Promote safe, active and sustainable transport to and from schools.		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Greater emphasis on sustainable and active travel for schools will support this though mode shift unlikely to be sufficient to noticeably reduce noise levels.	0	None required
		Will it reduce night time noise in residential areas?	Active travel to schools is predominantly during the day so there would be no direct effect on night time noise..	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 in travel to schools unlikely to be of sufficient scale to noticeably reduce the effects from noise levels	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Mode shift in travel to schools unlikely to be of sufficient scale to noticeably reduce the effects from 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?	Increased active travel to schools will support this through increased "natural surveillance".	+	None required

5.4.4 Matrix 3: Transport Plan and LIP Objective 3 Monitor air quality and develop and deliver interventions which address local issues

Table 5.7: SEA Matrix 3, O3: Monitor air quality and develop and deliver interventions which address local issues.

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			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)?	Modal shift, active travel, increased use of public transport, workplace travel plans etc are likely to contribute towards achieving this objective.	+	None required
		Will it help to achieve national and international standards for air quality?	The measures in themselves are unlikely to lead to a significant improvement in compliance with national and international standards, given their scale, though are broadly positive in this direction.	0	None required
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Modal change, active travel, public transport, workplace travel plans etc, together with alerting residents of high pollution events are likely to have positive impacts on this objective.	+	None required
		Will it result in air quality changes which negatively impact the health of the public?	Mode shift and other aspects of the objective will not have a negative impact on health.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it reduce the number of premature deaths caused by poor air quality?	Although the objective will have positive impacts on air quality it is difficult to draw direct conclusions or direct correlation 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?	The measures including workplace travel plans, increased charging infrastructure etc. are likely to have positive impacts on communities vulnerable to poor air quality	+	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?	The measures including reduction in car usage, improvement in active travel and increased charging infrastructure etc. are likely to have positive effects on character, integrity and removing barriers to use.	+	None required
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Reduction in car usage, improvement in active travel and increased charging infrastructure etc. are likely to have positive effects on attractiveness and access.	+	None required
Climate change adaptation	To ensure London adapts and becomes more resilient to the impacts of climate change and	Will it protect London from climate change impacts?	Proposed measures will not lead to physical changes/ adaptation to climate change.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			Assessment	Scale of Effect	Mitigation or Enhancement
	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?	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?	The focus around active travel along with the communication of high pollution events is likely to have health benefits for vulnerable groups.	+	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
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?	Although GHG emissions reduction will predominantly be achieved by changes in vehicle technology, the measures will have an important contribution to achieving emissions reduction..	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it reduce health inequalities and impacts on more vulnerable communities and at risk groups	Mode shift towards active travel and communication on high pollution events is likely to support a reduction in health inequalities in the borough.	+	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?	Measures should lead to greater energy efficiency.	+	None required
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	Measures 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?	No identifiable direct effect though there could be a marginal positive effect depending on the supplier/ source of electricity for charging infrastructure	0	Seek to ensure supplier of electricity for charging infrastructure procures energy from renewable sources.
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	No identifiable direct effect though there could be a marginal positive effect depending on the supplier/ source of electricity for charging infrastructure	0	Seek to ensure supplier of electricity for charging infrastructure procures energy from renewable sources
		Will it provide infrastructure to make a better use of renewable energy sources?	No identifiable direct effect though there could be a marginal positive effect depending on the supplier/ source of electricity for charging infrastructure	0	Seek to ensure supplier of electricity for charging infrastructure procures energy from renewable sources

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at risk groups?	The measures may have broadly positive impacts on vulnerable communities' health inequalities though not of sufficient scale to be identifiable.	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?	The measures will support this objective helping to increase accessibility and inclusivity	+	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?	The measures will provide nominal support for this though the extent and scale of support is low. .	0	None required
		Will it improve the wider historic environment and sense of place?	The measures will provide nominal support for this though 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?	The measures will support accessibility to the historic environment.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	The measures 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	The measures include a direct focus on active modes of travel, which will have positive impacts on this.	+	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	The measures include a direct focus on active modes of travel and improving air quality which will have positive impacts in reducing health inequalities..	+	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	The communication of high pollution events will have positive impacts on communities vulnerable to poor air quality.	++	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	The scale of interventions is unlikely to have any direct impacts on flooding, heat and drought risk.	0	None required
		Will it improve access to greenspaces for recreational and health benefits?	Greater emphasis active travel will lead to improved accessibility including to green spaces	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			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?	The communication of high pollution events will have positive impacts on communities vulnerable to poor air quality.	++	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 effect.	0	None required
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	No direct effect.	0	None required
		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

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			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 may support access to green space and enhance mental health benefits through active travel, but not at the scale to benefit all Londoners.	0	None required
		Will it result in a greener public realm that can enhance mental health benefits?	The measures including promotion of active travel is likely support greener streets at a local level.	+	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?	The measures including support for active travel will support this.	+	None required
		Will reduce levels of noise generated?	The measures including support for active travel will broadly support this though are unlikely to be sufficient to noticeably reduce noise levels .	0	None required
		Will it reduce inequalities in exposure to ambient noise?	The measures including support for active travel will broadly support this though are unlikely to be sufficient to noticeably reduce noise levels.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	The measures including support for active travel will broadly support this though are unlikely to be sufficient to noticeably reduce noise levels.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 3: Monitor air quality and develop and deliver interventions which address local issues		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it reduce night time noise in residential areas?	The measures including support for active travel will broadly support this though are unlikely to be sufficient to noticeably 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?	Measures are unlikely to be sufficient to noticeably reduce noise levels	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Measures are unlikely to be sufficient to noticeably 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 active travel will support this through increased "natural surveillance".	+	None required

5.4.5 Matrix 4: Transport Plan and LIP Objective 4. Manage growing demand for on-street parking

Table 5.8: SEA Matrix 4 O4 Manage growing demand for on-street parking

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			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 are likely to result from improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments.	+	None required
		Will it help to achieve national and international standards for air quality?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments should provide a small contribution to this though this is not likely to be sufficiently great to achieve a significant improvement in air quality at a 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?	Managing private car use is likely to contribute to improvements in local air quality and benefit vulnerable communities.	+	None required
		Will it result in air quality changes which negatively impact the health of the public?	Improved management of on-street parking and car use will not have a negative impact on this.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it reduce the number of premature deaths caused by poor air quality?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments it is difficult to draw direct conclusions or direct correlation 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?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments will have broadly positive impacts on air quality though though the scale of the effect will likely be slight.	0	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?	Improved management of on-street parking and kerbside space will positively impact neighbourhoods and barriers to their use.	+	None required.
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Improved management of on-street parking and kerbside space will improve attractiveness and access to areas where implemented.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			Assessment	Scale of Effect	Mitigation or Enhancement
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?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments 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?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments will not lead to physical changes to help London function during extreme weather events.	0	None required
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a significant impact on the reduction of health inequalities.	0	None required
		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

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			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?	The improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments will support. GHG emissions reduction.	+	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	Although GHG emissions reduction will predominantly be achieved by changes in vehicle technology, improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments have an important contribution to achieving emissions reduction including the effect on vulnerable communities and at risk groups.	+	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	Will it reduce the demand and need for energy, whilst not leading to overheating?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments will help manage the demand and need for energy..	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			Assessment	Scale of Effect	Mitigation or Enhancement
	smart and affordable energy system	Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments should lead to greater energy efficiency in transport overall.	+	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments will not have an identifiable direct effect..	0	None required
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	No identifiable direct effect.	0	None required
		Will it provide infrastructure to make a better use of renewable energy sources?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a direct impact in this respect.	0	None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a direct impact in this respect.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			Assessment	Scale of Effect	Mitigation or Enhancement
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?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments will support this objective helping to increase accessibility and inclusivity.	+	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?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are likely to have a positive impact in this respect.	+	
		Will it improve the wider historic environment and sense of place?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are likely to have a positive impact in this respect.	+	
		Will it protect and enhance the historic environment, including removing barriers to use from vulnerable communities and at-risk groups?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a significant impact in this respect.	0	None required
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a significant impact in this respect.	0	None required.

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			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	Measures encourage car-free developments promoting active modes of transport and contributing to this objective.	+	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a direct impact in this respect.	0	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a direct impact in this respect.	0	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	The measures are unlikely to have any direct impacts on flooding, heat and drought risk..	0	None required
		Will it improve access to greenspaces for recreational and health benefits?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a direct impact in this respect.	0	None required.

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			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?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments are not likely to have a direct impact 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?	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 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

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			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 may support access to green space and enhance mental health benefits through active travel, but not at the scale to benefit all Londoners.	0	
		Will it result in a greener public realm that can enhance mental health benefits?	The development of more car-free developments may support a greener public realm which can enhance mental health.	?	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?	The measures including car-free developments will support this.	+	.
		Will it reduce levels of noise generated?	The measures including car-free developments will support this..	+	Measures focused near tranquil areas.
		Will it reduce inequalities in exposure to ambient noise?	The measures including car-free developments will support this..	+	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Whilst supportive, the scale is unlikely to be sufficient to noticeably reduce noise levels for vulnerable groups.	0	None required
		Will it reduce night time noise in residential areas?	Whilst supportive, the scale is unlikely to be sufficient to noticeably reduce noise levels across the borough's residential areas..	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 4: Manage growing demand for on-street parking		
			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?	Whilst supportive, the scale is unlikely to be sufficient to contribute noticeably to this.	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?	Improved management of on-street parking and measures to encourage reduced private car ownership and car-free developments will support this through increased "natural surveillance".	+	None required.

5.4.6 Matrix 5: Transport Plan and LIP Objective 5 Focus on and improve priority locations making them safer for vulnerable road users

Table 5.7: SEA Matrix 5 O5: Focus on and improve priority locations making them safer for vulnerable road users

Topic	Objective	Assessment guide questions	LIP Objective 5: focus on and improve priority locations making them safer for vulnerable road users		
			Assessment	Scale of Effect	Mitigation or Enhancement
Air Quality	To reduce emissions and concentrations of harmful atmospheric pollutants,	Will it help to reduce emissions of priority pollutants (e.g. PM ₁₀ , NO _x , NO ₂)?	Measures to improve road safety for vulnerable users are not likely to have a significant impact on air quality.	0	None required

	particularly in areas of poorest air quality, and reduce exposure	Will it help to achieve national and international standards for air quality?	Measures to improve road safety for vulnerable users are not likely to have a significant impact on air quality.	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 improve road safety for vulnerable users are not likely to have a significant impact on air quality.	0	None required
		Will it result in air quality changes which negatively impact the health of the public?	Measures to improve road safety for vulnerable users will not have a negative impact on health.	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	Measures to improve road safety for vulnerable users are not likely to significantly contribute towards the reduction of the number of people exposed to poor air quality.	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 improve road safety for vulnerable users are not likely to have a significant impact on air quality.	0	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?	Measures to improve road safety for vulnerable users will support character and liveability including removing barriers to use.	+	None required
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Measures to improve road safety for vulnerable users will support attractiveness and access to public realm.	+	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 to improve road safety for vulnerable users are unlikely to protect London from climate change impacts.	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?	Measures to improve road safety for vulnerable users are not likely to help London function during extreme weather.	0	None required
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Measures to improve road safety for vulnerable users are unlikely to help reduce health inequalities and impacts on vulnerable groups during extreme weather.	0	None required.
		Will it improve access to services during severe weather events?	No direct effects..	0	None required
		Will it reduce exposure to heat during heatwaves?	No direct effects.	0	None required
		Will it enable those vulnerable during severe weather events to recover?	No direct effects..	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?	No direct effects.	0	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	No direct effects..	+	Focus measures on key streetscapes and townscapes to maximise benefits to Enfield population.

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?	No direct effects.	0	None required.
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	No direct effects.	0	None required
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	No direct effects..	0	None required
		Will it encourage uptake of green/cleaner fuels and renewable energy provision across all transport providers and private cars?	No direct effects.	0	None required
		Will it provide infrastructure to make a better use of renewable energy sources?	No direct effects..	0	None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	No direct effects.	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 improve road safety for vulnerable users will increase accessibility and inclusivity.	+	None required
	To conserve and enhance the existing historic environment,	Will it protect and enhance sites, features and areas of historical,	No direct effects..	0	None required.

Historic Environment	including sites, features, landscapes and areas of historical, architectural, archaeological and cultural value in relation to their significance and their settings.	archaeological and cultural value/potential?			
		Will it improve the wider historic environment and sense of place?	Measures to improve road safety for vulnerable users and traffic management schemes 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?	Measures to improve road safety for vulnerable users and traffic management schemes and speed reduction will support the removal of barriers to use from vulnerable communities.	+	None required.
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Measures to improve road safety for vulnerable users could potentially support inclusive design and management depending on design though the overall contribution is likely to be slight.	0	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 improve road safety for vulnerable users and traffic management schemes and speed reduction have the potential to improve connectivity to key services by promoting active modes of transport, though the level of impact is deemed to be slight..	0	None required.
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Measures to improve road safety for vulnerable users are not likely to help to reduce health inequalities.	0	None required

		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	Measures to improve road safety for vulnerable users are not likely to reduce at risk and vulnerable groups' exposure to poor air quality.	0	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?	Measures to improve road safety for vulnerable users will provide some support to access to greenspaces for recreational and health benefits	+	None required
		Will it help to reduce the number of people dying prematurely from preventable causes such as extreme heat and poor air quality?	Measures to improve road safety for vulnerable users will not 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?	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	No direct effects.	0	None required

		waterbodies to achieve a good ecological status?			
		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 improve road safety for vulnerable users and traffic management schemes and speed reduction have the potential to improve connectivity to green space with associated health benefits by promoting active modes of transport, though the impact of this is deemed to be slight..	0	None required
		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?	No direct effects..	0	None required
		Will reduce levels of noise generated?	No direct effects.	0	None required
		Will it reduce inequalities in exposure to ambient noise?	No direct effects.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	No direct effects..	0	None required
		Will it reduce night time noise in residential areas?	No direct effects.	0	None required
		Will it reduce the number of people exposed to high levels of	No direct effects.	0	None required

		noise with the potential to cause annoyance, sleep disturbance or physiological effects?			
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 likely to provide modest opportunities for design and management of green spaces that helps to reduce crime and anti-social behaviour and contribute to increased “natural surveillance”. Traffic management schemes and speed reduction and Road Safety Audits will reduce road danger.	+	None required

5.4.7 Matrix 6: Transport Plan and LIP Objective 6 Improve local reliability of and accessibility to the public transport network

Table 5.8: SEA Matrix 6 O6: Improve local reliability of and accessibility to the public transport network

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			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 to improve reliability and accessibility to the public transport network will broadly support emissions reduction through the contribution is likely to be slight.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it help to achieve national and international standards for air quality?	Measures to improve reliability and accessibility to the public transport network are unlikely to contribute to improvement in compliance with 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 improve reliability and accessibility to the public transport network are unlikely to significantly impact air quality.	0	None required
		Will it result in air quality changes which negatively impact the health of the public?	Measures to improve reliability and accessibility to the public transport network will not negatively impact the health of the public.	0	None required
		Will it reduce the number of premature deaths caused by poor air quality?	Measures to improve reliability and accessibility to the public transport network are unlikely to assist this reduction.	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 improve reliability and accessibility to the public transport network are unlikely to significantly impact air quality.	0	Measures focused on areas near schools, outdoor play areas, care homes and hospitals.

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			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?	Measures will protect and enhance character, integrity and liveability of areas where implemented, while removing barriers to use.	+	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 the public realm in areas where implemented.	+	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 to improve reliability and accessibility to the public transport network are unlikely to protect London from climate change impacts.	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..	0	None required
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	No direct effects.	0	None required
		Will it improve access to services during severe weather events?	No direct effects.	0	None required
		Will it reduce exposure to heat during heatwaves?	No direct effects.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it enable those vulnerable during severe weather events to recover?	No direct effects.	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 improve reliability and accessibility to the public transport network are unlikely to help reduce GHG emissions.	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?	No direct effects.	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
		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

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			Assessment	Scale of Effect	Mitigation or Enhancement
		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?	Measures to improve reliability and accessibility to the public transport network will positively impact on 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 improve reliability and accessibility to the public transport network have the potential to enhance these sites, depending on the location of schemes brought forward.	?	Measures focused near such sites, features and areas.
		Will it improve the wider historic environment and sense of place?	Measures to improve reliability and accessibility to the public transport network have the potential to improve the sense of place, depending on the location of schemes brought forward.	?	Measures focused near such sites, features and areas.

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			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 improve reliability and accessibility to the public transport network have the potential to contribute to this depending 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?	Measures to improve reliability and accessibility to the public transport network have the potential to contribute to this depending 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	Measures to improve reliability and accessibility to the public transport network will improve connectivity to key services.	+	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 significant impacts on this.	0	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	No direct effects	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			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?	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

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it increase the planting of green roofs, green walls and soft landscaping?	Measures unlikely to have direct impacts on this.	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.	?	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 location of specific schemes delivered.	?	Measures focused on areas near to greenspace.
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 unlikely to have a significant impact on noise levels	0	None required.
		Will reduce levels of noise generated?	Measures unlikely to have a significant impact on noise levels.	0	None required
		Will it reduce inequalities in exposure to ambient noise?	Measures unlikely to have a significant impact on noise levels.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Measures unlikely to have a significant impact on noise levels.	0	None required
		Will it reduce night time noise in residential areas?	Measures unlikely to have a significant impact on noise levels.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 6: Improve local reliability of and accessibility to the public transport network.		
			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?	Measures unlikely to have a significant impact on noise levels.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Measures unlikely to have a significant impact on 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?	Measures to improve areas around stations and accessibility to the public transport network will support these factors.	+	Measures focused on areas with highest levels of crime and anti-social behaviour.

5.4.8 Matrix 7: Transport Plan and LIP Objective 7 Maintain and improve the transport network in Enfield including developing potential interventions

Table 5.11: SEA Matrix 7 O7 Maintain and improve the transport network in Enfield including developing potential interventions

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			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 to maintain and improve the transport network in Enfield including Healthy Streets should contribute to the reduction in emissions of priority pollutants.	+	None required
		Will it help to achieve national and international standards for air quality?	Improvements of the transport network, including improvements against the ten Healthy Streets Indicators is broadly positive in this direction though is unlikely to lead to a significant improvement in compliance with national standards.	+	None required
		Will it reduce the number of people exposed to poor air quality, particularly for vulnerable communities and 'at risk' groups?	Improvements of the transport network, including improvements against the ten Healthy Streets Indicators, should contribute to this.	+	None required
		Will it result in air quality changes which negatively impact the health of the public?	Improvements of the transport network will not have negative impacts on this.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it reduce the number of premature deaths caused by poor air quality?	Improvements of the transport network, including improvements against the ten Healthy Streets Indicators, will have positive impacts though it is difficult to draw direct conclusions or direct correlation 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?	Improvements of the transport network, including improvements against the ten Healthy Streets Indicators, should contribute to this.	+	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?	Improvements of the transport network and public realm, including the delivery of green infrastructures, planting of new trees and improved accessibility of the pedestrian environment will protect and enhance these elements.	++	Measures focused on key streetscapes and townscapes.
		Will it improve the use of the urban public realm by improving its attractiveness and access?	Improvements of the transport network and public realm, including the delivery of green infrastructures, planting of new trees and improved accessibility of the pedestrian environment will improve accessibility and attractiveness of the urban public realm.	++	None required

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			Assessment	Scale of Effect	Mitigation or Enhancement
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?	Improvements of the transport network, including the delivery of green infrastructures and SuDS will contribute to protecting London from climate change impacts.	+	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 of the transport network, including the delivery of green infrastructures and SuDS will provide a contribution to this.	+	None required
		Will it reduce health inequalities and impacts on vulnerable groups / communities and at-risk groups?	Improvements of the transport network, including the delivery of green infrastructures and SuDS are not likely to have a significant impact on the reduction of health inequalities.	0	None required
		Will it improve access to services during severe weather events?	Improvements of the transport network, including the delivery of green infrastructures and SuDS will contribute to this.	+	None required
		Will it reduce exposure to heat during heatwaves?	Improvements of the transport network, including the delivery of green infrastructure and provision of shading will contribute to this.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it enable those vulnerable during severe weather events to recover?	Improvements of the transport network, including the delivery of green infrastructures and SuDS will marginally contribute to this i.e. not to any notable extent.	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 reduction is unlikely to be significantly driven by the physical improvement of the transport network.	0	None required
		Will it reduce health inequalities and impacts on more vulnerable communities and at-risk groups	Improvements of the transport network, including the delivery of green infrastructures and SuDS is unlikely to contribute to 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?	Improvements to the transport network, including improvements against the ten Healthy Streets Indicators, are not likely to have a direct impact in this respect.	0	None required
		Will it promote and improve energy efficiency in transport, homes, schools, hospitals and other public buildings?	Improvements to the transport network, including improvements against the ten Healthy Streets Indicators, are not likely to have a direct impact in this respect.	0	None required

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it increase the proportion of energy both purchased and generated from renewable and sustainable sources?	Improvements to the transport network, including improvements against the ten Healthy Streets Indicators, are not likely to have a direct impact 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?	Improvements to the transport network, including improvements against the ten Healthy Streets Indicators, are not likely to have a direct impact in this respect.	0	None required
		Will it provide infrastructure to make a better use of renewable energy sources?	Improvements to the transport network, including improvements against the ten Healthy Streets Indicators, are not likely to have a direct impact in this respect.	0	None required
		Will it reduce health inequalities and impacts of fuel poverty on vulnerable communities and at-risk groups?	Improvements of the transport network, including improvements against the ten Healthy Streets Indicators, are not likely to have a direct impact 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 of the transport network, including the delivery of green infrastructure and improved accessibility of the pedestrian environment will improve accessibility.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			Assessment	Scale of Effect	Mitigation or Enhancement
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?	Improvements of the transport network, including the delivery of green infrastructure, tree planting and improved accessibility of the pedestrian environment will positively impact on this.	+	None required.
		Will it improve the wider historic environment and sense of place?	Improvements of the transport network, including the delivery of green infrastructure, tree planting and improved accessibility of the pedestrian environment may marginally impact on this.	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 transport network, including the delivery of green infrastructures, tree planting and improved accessibility of the pedestrian environment will positively impact on this.	+	None required.
		Will it protect and enhance valued/important historic environment and streetscape settings through inclusive design and management?	Improvements of the transport network, including the delivery of green infrastructures, tree planting and improved accessibility of the pedestrian environment will positively impact on this.	+	None required.

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			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	Improvements of the transport network, including the delivery of green infrastructures, tree planting and improved accessibility of the pedestrian environment should marginally impact on this.	0	None required
		Will it help to reduce health inequalities and their key contributory factors for all Londoners?	Improvements of the transport network, including the delivery of green infrastructure, tree planting and improved accessibility of the pedestrian environment are unlikely to significantly impact on this.	0	None required
		Will it reduce at risk and vulnerable groups' exposure to poor air quality?	Improvements of the transport network, including the delivery of green infrastructures, tree planting and improved accessibility of the pedestrian environment are unlikely to significantly impact on this.	0	None required
		Will it reduce flooding, heat and drought risk for at risk and vulnerable communities?	Improvements of the transport network and public realm, including the delivery of green infrastructures, SuDS, tree planting and improved accessibility of the pedestrian environment will positively impact on this.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it improve access to greenspaces for recreational and health benefits?	Improvements of the transport network and public realm, including the delivery of green infrastructure, SuDS, tree planting and improved accessibility of the pedestrian environment will positively impact on this.	+	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?	Improvements of the transport network and public realm, including the delivery of green infrastructures, SuDS, tree planting and improved accessibility of the pedestrian environment will contribute to this, although not to a significant extent.	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?	Improvements of the transport network and public realm, including the delivery of green infrastructures, SuDS, tree planting and measures that deliver a net gain in biodiversity will contribute to this.	+	None required.
		Will it protect and improve the quality and extent of sites of importance for nature conservation and help restore wildlife habitats?	Improvements of the transport network and public realm, including the delivery of green infrastructures, SuDS, tree planting and measures that deliver a net gain in biodiversity will contribute to this.	+	None required

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			Assessment	Scale of Effect	Mitigation or Enhancement
		Will it provide opportunities to enhance the natural environment or restore wildlife habitats?	Improvements of the transport network and public realm, including the delivery of green infrastructures, SuDS, tree planting and measures that deliver a net gain in biodiversity will contribute to this..	+	None required
		Will it protect and enhance the biodiversity of the region's waterbodies to achieve a good ecological status?	Improvements of the transport network and public realm, including the delivery of green infrastructures, SuDS, tree planting and measures that deliver a net gain in biodiversity may contribute to this though the level of impact is marginal	0	None required
		Will it increase the planting of green roofs, green walls and soft landscaping?	Improvements of the transport network and public realm, including the delivery of green infrastructures, SuDS, tree planting and measures that deliver a net gain in biodiversity will contribute to this.	+	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 location of specific schemes delivered.	?	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 location of specific schemes delivered.	?	Measures focused on areas near to greenspace.

Topic	Objective	Assessment guide questions	LIP Objective 7: maintain and improve the transport network in Enfield including developing potential interventions		
			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?	Dependent on the design of specific schemes.	?	Encourage design of measures to include green infrastructure.
		Will reduce levels of noise generated?	Dependent on the location of specific schemes delivered.	?	Measures focused near tranquil areas.
		Will it reduce inequalities in exposure to ambient noise?	Unlikely to be sufficient to noticeably reduce noise levels.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Unlikely to be sufficient to noticeably reduce noise levels.	0	None required
		Will it reduce night time noise in residential areas?	Unlikely to be sufficient to noticeably 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?	Unlikely to be sufficient to noticeably reduce noise levels.	0	None required
		Will it protect vulnerable groups at risk from impacts of noise pollution?	Unlikely to be sufficient to noticeably 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?	Improvements of the transport network and public realm, including lighting, access to paths and design 'in passing' surveillance will contribute to this.	++	None required.

5.5 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 Enfield Council to monitor the environmental effects of the final Transport Plan 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 are set out in **Table 5.12** below.

Table 5.12: Recommended indicators for monitoring the SEA for the draft Transport Plan 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 ¹⁴	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

¹⁴ 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 Transport Plan and LIP was submitted to Transport for London in November 2018 for comment. Taking account of the comments received from TfL together with the analysis presented in this Environmental Report, Enfield Council will then make any revisions to the Transport Plan and LIP that may be necessary, and a final version will be approved in January 2019. The LIP will come 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 Enfield 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.

