

6. Assessment of Environmental Effects

6.1. Overview of methods

The methods to be used for assessing each of the environmental topics are dependent on the ability to identify the impacts associated with measures contained within the LIP. The scale of change likely to be associated with each strategy or scheme identified in the LIP is such that in our view reliable prediction is not likely to be practicable. A more appropriate approach is to make a qualitative judgement based on an outline of the known and expected transport situations. This judgement will indicate whether a change will have positive or negative effects and whether such effects are likely to be of minor, moderate or major significance.

Impacts on the environment may result in potentially significant effects for biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage including architectural and archaeological heritage; landscape and the interrelationship between the above factors. These effects include secondary, cumulative, synergistic, short, medium and long term, permanent and temporary, positive and negative effects. It is our view that the measures in LIPs are only likely to have significant effects in limited areas and these areas are the focus of this assessment. In **Chapter 4** the following were identified as the core impacts which need to be addressed in the SEA of the LIP:

- Changes to emissions to air from transport within the borough as a result of the LIP and consequent effects on human health, on climate change, on the health of flora and fauna and on amenity;
- Changes to noise levels from transport within the borough as a result of the LIP and consequent effects on human health, on the health of flora and fauna and on amenity;
- Land-take, if any, from resources of environmental value, including for example open land, habitats, footways, as a result of the LIP;
- Changes in demand for material assets because the construction and maintenance of transport infrastructure is a major user of aggregates;
- Effects on people as a result of changes which affect people's ability to use particular modes of travel. This will include for example effects on human health where walking and cycling are made easier.

In developing methods for assessing the environmental effects of measures within LIPs we have focused on these areas.

6.2. Assessment methodology by core impact area

6.2.1. Air quality and climate change

Emissions to air from transport are summarised below in **Table 6.1** which also identifies the key factors which may influence emissions to air from transport. Climate change impacts will reflect the overall change in emissions.

In summary the factors potentially affected by LIP measures will influence emissions to air through:

- Increases or decreases in walking or cycling will result in no change in emissions to air although if these result in switches to or from motorised modes there may be adverse effects or benefits;
- Increases or decreases in distance travelled by motor vehicles of all types will, prima facie, lead to increases or decreases in emissions to air of a similar magnitude unless there are other factors at work, for example an increasing proportion of low emission vehicles;
- Increases or decreases in the speed of motor vehicles of all types will lead to changes in emissions to air depending on whether speeds move towards more or less fuel efficient speeds (note that the most fuel efficient speeds for motor vehicles are typically between 30 and 40mph, i.e. above the speed of most traffic in urban areas);
- Increases or decreases in the number of stop/start cycles by motor vehicles will lead to broadly corresponding increases or decreases in emissions to air.

The speed of motor vehicles and the extent of stop/start motoring can be combined on the basis that increases in speed may simply reflect reduced stops and starts.

6.2.2. Noise

Noise emissions from transport are summarised below in **Table 6.2** which also identifies the key factors which influence emissions to air from transport.

In summary the factors potentially affected by LIP measures will influence noise through:

- Increases or decreases in walking or cycling will have no change in noise;
- Increases or decreases in distance travelled by motor vehicles of all types will prima facie lead to increases or decreases in noise of a similar magnitude unless there are other factors at work, for example an increasing proportion of quieter vehicles;
- Increases or decreases in the speed of motor vehicles of all types will lead to changes in noise;
- Increases or decreases in the number of stop/start cycles by motor vehicles will lead to broadly corresponding increases or decreases noise.

As with air quality the speed of motor vehicles and the extent of stop/start motoring can be combined on the basis that increases in speed may simply reflect reduced stops and starts.

Table 6.1: Emissions to air from transport

<i>Mode</i>	<i>Emissions to air</i>	<i>Factors not affected by LIP which may affect level of emissions</i>	<i>Factors potentially affected by LIP which may affect level of emissions</i>
Walking	None	Any factor which leads to increased or reduced walking, for example changes in fuel costs, may affect the level of emissions through modal shift	Any factor which leads to increased or reduced walking, for example improved footways, may affect the level of emissions through modal shift
Cycling	None	Any factor which leads to increased or reduced cycling, for example changes in fuel costs, may affect the level of emissions through modal shift	Any factor which leads to increased or reduced cycling, for example improved cycle routes, may affect the level of emissions through modal shift
Motor vehicle including motorcycle, car, light goods vehicle, heavy goods vehicle, bus	Yes	<ul style="list-style-type: none"> • Age of vehicle • Type and size of vehicle • Fuel type used • Emission control equipment fitted • Maintenance of vehicle • Low emission zone 	<ul style="list-style-type: none"> • Speed • Extent of stop/start operation • Distance travelled
Electric train	None locally. All emissions to air at power generation plant	<ul style="list-style-type: none"> • Age of train • Maintenance of train • Speed • Extent of stop/start operation • Distance travelled 	
Diesel train	Yes	<ul style="list-style-type: none"> • Age of train • Emission control equipment fitted • Maintenance of train • Speed • Extent of stop/start operation • Distance travelled 	

Table 6.2: Noise from transport

<i>Mode</i>	<i>Noise</i>	<i>Factors not affected by LIP which may affect level of noise</i>	<i>Factors potentially affected by LIP which may affect level of noise</i>
Walking	Minimal	Any factor which leads to increased or reduced walking, for example changes in fuel costs, may affect the level of noise through modal shift	Any factor which leads to increased or reduced walking, for example improved footways, may affect the level of noise through modal shift
Cycling	Minimal	Any factor which leads to increased or reduced cycling, for example changes in fuel costs, may affect the level of noise through modal shift	Any factor which leads to increased or reduced cycling, for example improved cycle routes, may affect the level of noise through modal shift
Motor vehicle including motorcycle, car, light goods vehicle, heavy goods vehicle, bus	Yes	<ul style="list-style-type: none"> • Age of vehicle • Type and size of vehicle • Fuel type used • Exhaust control and silencer equipment fitted • Tyres fitted • Maintenance of vehicle • Night and weekend lorry bans • Topography and built environment generally 	<ul style="list-style-type: none"> • Speed • Extent of stop/start operation • Distance travelled • Road surface
Electric train	None locally. All emissions to air at power generation plant	<ul style="list-style-type: none"> • Age of train • Maintenance of train • Speed • Extent of stop/start operation • Distance travelled • Track (extent of continuous welded track and junctions) • Topography and built environment generally 	
Diesel train	Yes	<ul style="list-style-type: none"> • Age of train • Exhaust control equipment fitted • Maintenance of train • Speed • Extent of stop/start operation • Distance travelled • Track (extent of continuous welded track and junctions) • Topography and built environment generally 	

6.2.3. Land-take from resources of environmental value

This is only likely where there are proposals for new or changed transport infrastructure. Proposals for new transport infrastructure are unlikely within the Haringey LIP and there may be no requirement to complete this element. Landtake may be within land already used for transport infrastructure or on vacant land or land used for other purposes. It potentially includes the reallocation of road space from pedestrians or verges to motor vehicles or vice versa. Concerns will be site specific and environmental resources may include soil, archaeology and cultural heritage, landscape/townscape character areas, wildlife habitats and pedestrian areas.

6.2.4. The ability for people to use particular modes of travel

The measures in the LIP may affect the ability of people to use particular modes of transport. Changes will include:

- Improved or reduced transport quality of route;
- Improved or reduced safety of route;
- Increased or reduced costs and/or travel time;
- Improved or reduced environmental quality.

6.2.5. Cumulative effects

The measures in the LIP may result in a series of effects which, while insignificant in themselves, may accumulate to a level that is significant. Receptors who may be affected include:

- People in their homes;
- People in the street;
- People in other places; and
- Flora and fauna

For example small changes in noise, air quality, intimidation and difficulty in crossing the street may accumulate to a significant adverse effect on people in the street.

6.3. Assessment of effects

6.3.1. LIP measures

Chapter 5 of the London Borough of Haringey LIP outlines the Mayoral priority schemes and measures put forward by the Borough to implement them. Mayoral priority schemes and associated Borough measures are given in **Table 6.3** below.

Table 6.3: Mayoral priority schemes and associated Borough measures

<i>Mayoral priority</i>	<i>Measure</i>
Improving road safety	Partnership working
	Speed management
	Protecting vulnerable road users
	Education, training and publicity
Improving bus journey times and reliability	Partnership work
	London bus priority network
Relieving traffic congestion and improving journey time reliability	Traffic management
	Promotion of sustainable transport modes
Improving the working of parking and loading arrangements	Parking enforcement plan
Improving accessibility and social inclusion	Safety and security
	Door to door transport
	Accessibility to rail stations
	Bus stop accessibility
Encouraging walking	Walking action plan
Encouraging cycling	Cycle action plan
Bringing transport infrastructure to a state of good repair	Street maintenance plan
Town Centres	Town Centre improvement measures include: <ul style="list-style-type: none"> • Tottenham; • Green Lanes; • West Green and Seven Sisters; • Crouch End; and • Muswell Hill
Travel awareness and travel plans	Promotion of sustainable transport modes

Source: London Borough of Haringey LIP

6.3.2. Assessment of core impacts of measures

The assessment of each measure and scheme proposed in the Haringey LIP against the core impact, outlined in Section 6.2, is given in **Table 6.3** below.