Consultation Draft Mayor’s Transport Strategy 3
Integrated Impact Assessment: Non-Technical
Summary June 2017

Introduction

An Integrated Impact Assessment (IIA) has been carried out on the Consultation Draft Mayor’s Transport Strategy (MTS) 3. The purpose of an IIA is to promote sustainable development by ensuring that environmental, social and economic issues are considered during the preparation of the Consultation Draft MTS 3 and consulted upon. Figure 1 illustrates the main stages of the IIA process.

The IIA incorporates the following types of assessment, which are described in Table 1:

- Strategic Environmental Assessment
- Habitats Regulations Assessment
- Equality Impact Assessment
- Health Impact Assessment
- Assessment of Economic Impacts
- Community Safety Impact Assessment

This Non-Technical Summary reports on the IIA findings of the Consultation Draft MTS 3. It provides a summary of the information contained within the IIA Report which is being consulted upon alongside the draft transport strategy.

Table 1: Assessments included in the IIA of the Consultation Draft MTS 3

<table>
<thead>
<tr>
<th>Assessment type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Strategic environmental assessment (SEA)</td>
<td>This is a statutory requirement for new or revised plans or programmes(^1). SEA identifies, describes and evaluates the likely significant effects on the environment of implementing a plan or programme (such as the MTS). SEA requires consideration of the following issues: biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape and the interrelationship between these issues. A report is required to be prepared and made available to the public reporting the SEA.</td>
</tr>
<tr>
<td>Habitats Regulations Assessment (HRA)</td>
<td>This assessment is a statutory requirement(^2) for any plans or projects that may have significant effects on European nature conservation sites such as Special Areas of Conservation (SAC); Special Protection Areas (SPA) and European Offshore Marine Sites (EOMS). A plan or project, such as the MTS, cannot be given effect or consent unless it can be determined that it would not have an adverse effect on the integrity of European sites or, where there are no alternative solutions, there are imperative reasons of overriding public interest for the plan or project to proceed, and compensatory measures are secured.</td>
</tr>
<tr>
<td>Equality Impact Assessment (EqIA)</td>
<td>EqIA is undertaken to help fulfil the Mayor’s duty under the Equality Act 2010 to work to eliminate discrimination and promote equality in all activities. Compliance with the duty may involve treating people with a protected characteristic more favourably than those without the characteristic. The assessment identifies likely disproportionate or differential effects of the MTS on groups of people with protected characteristics under the Equality Act 2010. The protected characteristics: age, disability, gender reassignment, pregnancy and maternity, race, gender, religion or belief, sexual orientation and marriage/civil partnership status.</td>
</tr>
<tr>
<td>----------------------------------</td>
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<tr>
<td>Health Impact Assessment (HIA)</td>
<td>When preparing or revising a strategy, the Mayor is required to consider policies and proposals best calculated to promote improvements in health of persons in Greater London. The purpose of a HIA is to assist decision-makers in understanding the health impacts of a plan. It seeks to highlight practical ways to:   - Enhance the positive health, health equality and well-being effects of a plan; and   - Avoid or reduce the negative health, health inequality and well-being effects.</td>
</tr>
<tr>
<td>Assessment of Economic Impacts (AEI)</td>
<td>The Mayor has a duty to promote economic development and wealth creation in Greater London. While there is no statutory guidance on undertaking an AEI, the AEI has been undertaken to identify likely significant effects on society and the economy through assessing issues such as: climate change; crime and security; connectivity; economic competitiveness; employment; energy use and generation.</td>
</tr>
<tr>
<td>Community Safety Impact Assessment (CSIA)</td>
<td>There is no specific statutory requirement for a CSIA to be carried out. However, it has been included to support the Mayor in his duty to do all that reasonably can be done, when carrying out his activities (including preparation of the MTS), to prevent crime and disorder.</td>
</tr>
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</table>

### Objectives and Content of the Consultation Draft MTS 3

London is growing with a forecast population of 10.5 million people over the next 25 years. This growth is expected to generate more than 5 million additional trips each day by 2041. The Consultation Draft MTS 3 sets out the Mayor’s vision for London’s transport and is being revised on behalf of the Greater London Authority (GLA) by Transport for London (TfL).

The purpose of the Consultation Draft MTS 3 is to ensure that London’s transport system is able to accommodate this growth. To achieve this, the draft revised strategy sets out three themes, treated as objectives for the purpose of the IIA:

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

Part One outlines the challenges that London’s transport system faces, issues of public transport and quality of life, future growth and proposes a new approach.

Part Two sets out the vision, aims and a spatial approach.

Parts Three to Five set out how the Consultation Draft MTS 3 seeks to respond to overarching changes in how the city operates through the following three themes:

- **Healthy Streets and healthy people:** Improving air quality by reducing emissions from traffic and encouraging more walking, cycling and public transport use and reducing car use. Adopting a Vision Zero approach to reducing road danger and ensuring roads are reliable, enabling a high quality bus service and essential freight and servicing.
- **A good public transport experience:** enabling easy and safe travel around the capital. Providing good customer service and ensuring public transport is affordable, accessible, safe and secure, reliable and not overcrowded.
- **New homes and jobs:** Embedding more sustainable travel patterns, planning infrastructure and services in an integrated way to unlock housing and support regeneration to respond to forecast population growth. Ensuring that the transport system contributes to improving the environment by enabling London to become a zero carbon city and to be more resilient to the impacts of climate change.

Part Six outlines the delivery of the vision through changing technology, funding, delivery processes and proposes monitoring and reporting mechanisms.
**Relationship with other Mayoral Strategies**

The Consultation Draft MTS 3 is one of a number of strategies that the Mayor is required to produce. These strategies are closely interlinked and there is a need for consistency between the Consultation Draft MTS 3 and these other strategies. For example, the Mayor’s spatial development strategy the ‘London Plan’, sets out an integrated economic, transport and social framework for the development of London over the next 20–25 years, while the London Environment Strategy aims to tackle London’s key environmental issues, many of which are heavily influenced by transport.

**Relevant Environmental Conditions and Problems**

Since the Consultation Draft MTS 3 covers Greater London, the geographical area of the environment likely to be significantly affected is also considered to be Greater London. The IIA has considered London’s current environmental conditions and how these conditions are predicted to develop in the absence of the MTS review up until the year 2041. The IIA has also considered the key issues of relevance for the Consultation Draft MTS 3, around which the assessment has focused.

- The maintenance of the natural and built environment, by contributing to protecting and enhancing London’s natural, built and historic resources: and, as part of this, improving biodiversity, encouraging the prudent use of natural resources, minimising waste generation and pollution, and mitigating and adapting to climate change including moving towards a low carbon economy.

The environment is described with regard to different areas of London: central, north, east, south or west London (Figure 2); and Central Activities Zone, inner and outer London (Figure 3).

**Population**

There are currently 8.7 million residents in London and the population is projected to grow to over 10.5 million residents by 2041.

The most densely populated boroughs are Islington, Tower Hamlets and Hackney.

London has a younger age structure than the UK average and 11% of London’s population was aged over 65 in 2015. By 2036 the percentage of London’s population aged over 65 is projected to increase to 15%.

Population is a key issue of relevance to the Consultation Draft MTS 3 as it will place increased pressure on the capacity of public transport and the highway network, and this growth needs to be managed in a sustainable way.
Accessibility

Accessibility refers to the ability of all people to access the transport system and its infrastructure, including those with physical, sensory or cognitive impairments.

There has been a slight increase in the number of trips on public transport by disabled residents (0.57 per person per day compared with 0.51 per person per day). However, disabled people make 34% fewer trips to work and education than the average Londoner.

41% of public transport networks were not fully accessible for those who are mobility impaired or travelling with heavy luggage or a pushchair. Many people with sensory or cognitive impairments also struggle to use the transport network.

Older Londoners make fewer trips (especially those aged over 70) and tend to walk or catch the bus more than average. However, 45% of older people drive at least once a week.

Employment

The workplace population of 5.52 million (2014) is projected to grow to 5.8 million by 2021, 6.4 million by 2036 and 6.7 million by 2041.

The growth in employment is expected to be concentrated in the Central Activities Zone. There is a shift to higher density employment in the service sector compared to the lower density employment of the manufacturing sector.

Demand for employment growth in central London will depend on rail routes and multi-modal connectivity towards central London.

Connectivity and Economic Competitiveness

Central London has greater accessibility to public transport than outer London, while east London has fewer connections across the River Thames and the cross river bus network in east London is poor.

Levels of economic activity are lower and unemployment rates are higher in east London.

There has been a steady increase of 6% of jobs available within 45 minutes travel time between 2006 and 2013. However, one in six people working in London actually live outside its boundaries. Poor access to jobs in London for those living outside its boundaries, as well as poor connectivity for those in east London, are key issues.

It is predicted that public transport trips per day will increase from an average of 26.7 million in 2015 to 32.2 million in 2041.

36% of trips in 2015 were by private transport (down from 47% in 2000). Road congestion has increased on average from 2006 to 2015.

Between 2009 and 2015 there was a 20% increase in Underground journey stages, a 6% growth in bus passenger stages and a 67% increase in DLR journey stages.

Air Quality

Nitrogen dioxide (NO₂) and particulate matter (PM) are air pollutants associated with transport emissions that are harmful to human health.

In 2014, 39 out of 67 monitoring sites did not achieve annual average air quality objectives for nitrogen dioxide. Eight sites recorded an annual average of twice the European legal limit or above. 2.6 million Londoners live in areas exceeding the European legal limit for nitrogen dioxide.

All 47 PM₁₀ monitoring sites measured met the annual average air quality objective for particulate matter of 10 micrometres or less in diameter (PM₁₀) although one site did not meet the daily average objective.

Air pollution causes the equivalent of around 9,400 deaths every year in London. The economic cost of air pollution in London is estimated to be between £1.4 billion and £3.7 billion.

Natural Capital and Natural Environment

This topic considers all living things and the places where they live, as well as the value to society.

Approximately 47% of London is green space, with 33% of London classed as vegetated green space. 2.5% of London is ‘blue space’ (rivers, canals and reservoirs). 24% of London is covered by private gardens and over 22,500 hectares of woodland and orchard habitat were recorded in London in 2015.

London has targets to meet in terms of increasing and enhancing each habitat by 2020. However, it is unlikely to meet its targets due to increased demand for development.

A key issue is how to protect and improve connectivity between habitats and green spaces, whilst making land available for improving transport infrastructure and meeting transport demand.
Climate Change Adaptation, Mitigation and Energy

Carbon dioxide (CO₂) is the primary greenhouse gas emitted through human activities. The main human activity that emits CO₂ is the combustion of fossil fuels (coal, natural gas, and oil) for energy and transport. The increase of greenhouse gases in the atmosphere due to human activities is causing climate change. Effects of climate change are likely to include increased incidents of extreme weather events (storms, flooding, drought) as well as sea level rise. Climate change is likely to disproportionately affect vulnerable groups, and is likely to increase existing inequalities without targeted intervention.

London has a target to reduce CO₂ emissions by 60% against 1990 levels by 2025. Previous Mayoral strategies identified a reduction in London’s transport emissions of 48% over this timescale.

Road transport made up approximately 16% of total CO₂ emissions in London in 2013 compared to 15% in 2010. The transport sector accounts for 40% of the UK’s energy consumption.

On current projections, the Mayor’s 2025 target to reduce CO₂ emissions will not be met. Further action to help meet the targets and reduce reliance on fossil fuels is therefore a critical issue for the MTS.

Crime, Safety and Security

The Mayor has a target for a 40% reduction in the number of people killed or seriously injured by road traffic collisions on London’s streets by 2020 (compared with the 2005 to 2009 average). A key issue for the MTS is that road safety concerns are a barrier to active travel (walking and cycling) and contribute to inactivity which, in turn, has impacts on health and wellbeing.

Rates of recorded crime on London’s public transport are falling in general (fell by 8.3% in 2014/15 compared to the previous year), although reports of violence and sexual offences have risen.

Concern over antisocial behaviour discourages three out of ten Londoners from using public transport.

Reducing the rates of violence and sexual offences and antisocial behaviour are key issues for the Consultation Draft MTS 3.

Historic Environment

The designated historic assets in London include four World Heritage Sites, over 1,000 Conservation Areas, almost 19,000 listed buildings, over 150 Registered Parks and Gardens, more than 150 Scheduled Monuments and one Registered Battlefield (Barnet).

The trends related to historic assets have been relatively stable although there is a slight increase in the number of listed buildings at risk. Such assets may be at risk from factors such as neglect, decay or inappropriate development.

Flood Risk

Surface water flooding is caused when rainwater does not drain away through the existing drainage systems or soak into the ground quickly enough. This type of flooding is usually short lived and associated with heavy downpours of rain and thunder storms.

Hundreds of kilometres of road and rail are at risk of surface water flooding in London.

There are 85 sites (including stations, shafts and tunnel portals) on the London Underground which are at high and increasing risk of flooding.

The most significant annual economic risks from flooding to London’s assets are associated with burst water mains and surface water flood events.

It is estimated that climate change could cause river and coastal flood risk to increase eight to twelve times by the 2080s and winters will be 30% wetter, with heavy winter rainfall likely to occur twice as frequently.

Geology and Soils

Soils in London have high levels of contamination from historic land uses. Pollutants in soil include lead, other heavy metals, solvents and hazardous hydrocarbons. Measures are therefore required to remediate this land prior to development to prevent significant risks to human health.

Whilst much of the land within London is classed as urban and non-agricultural, there are approximately 14,000 hectares of land within Greater London which is dedicated to agriculture, and approximately 830 hectares of land in the Lea Valley covered by horticulture and allotment land.

Housing Supply, Quality, Choice and Affordability

Around 49,000 new homes are required every year in London over the next two decades to meet rapid growth and deal with an existing backlog of need. Currently only half the homes London needs are being built.

The proportion of homes built which are affordable has decreased and fell to 28% in 2015.
There is a need to deliver major station improvements and other new transport infrastructure to unlock development. New housing needs to be close to public transport networks, and housing density guided by planning policy.

**Design**

Londoners’ satisfaction with streets, pavements and public spaces has generally remained reasonable over years.

There has been a significant increase in the proportion of Londoners who think that the quality of their local area has got ‘a lot’ better between 2011 and 2012 (22% to 29% of Londoners).

72% of Londoners say that they would walk more if there was improved safety and security, for example better street lighting or safer road crossings, and 66% say that they would walk more if streets were cleaner and more attractive.

Transport related design issues that Londoners were least satisfied with in 2011 were traffic congestion, the availability and condition of cycle lanes and the time allowed to stop, pick-up and drop-off in loading bays for commercial vehicles.

**Materials and Waste**

In 2013, London produced 4.7 million tonnes of commercial and industrial waste accounting for about 32 percent of London’s total waste.

The transport, storage and communication sector accounted for roughly 18,107 tonnes (5%) of London’s hazardous waste in 2011.

Key issues for the Consultation Draft MTS 3 are reducing the amount of waste produced by the transport sector, and using and promoting sustainable forms of transporting waste.

**Noise and Vibration**

The main source of ambient noise in London is road traffic, followed by rail. 13% of people rate road transport as the greatest source of noise and consider it a ‘serious problem’.

41% of Londoners were disturbed by road traffic in 2012.

Noise disturbance is associated with a number of health issues such as levels of annoyance, anxiety, sleep disruption and can be associated with cardiovascular disease through increased blood pressure.

**Water Resources and Quality**

Physical modifications affect 44% of water bodies in the Thames river basin district. Pollution from waste water affects 45% of water bodies in the Thames river basin district.

In 2013, pollution from towns, cities and transport affected 17% of water bodies in the Thames river basin district.

Key issues are how to develop transport infrastructure without contributing to further modification of waterbodies or increasing transport related pollution.

**Health and Health Inequalities**

Adults need at least 150 minutes a week of physical activity to stay healthy. In 2015, 57.8% of adults were achieving the recommended levels of physical activity a week, yet an estimated 28% were doing less than 30 minutes of physical activity per week.

London has a target that 70% of adults will be doing at least 150 minutes of physical activity per week by 2020.

London has the highest rate of childhood obesity in the country. Only 6 out of 10 children are a healthy weight when they start secondary school. 58% of men and 51% of women in London are either overweight or obese.

The difference between life expectancy between the most deprived and least deprived areas in London appears to have narrowed between the 2005-2009 period and the 2010-2014 period.

**Likely Significant Environmental Effects**

**Objectives-led Assessment**

The IIA has taken an objectives-led approach. This means that a set of IIA objectives has been developed against which to assess the content of the Consultation Draft MTS 3, in terms of whether it is beneficial or counterproductive in contributing to each objective.

The IIA used the criteria set out in Table 2 to assign the level of significance in the assessment. All effects which have been judged to be greater than neutral or uncertain are considered potentially significant and should be taken into account in decision-making on the strategy.

The assessment is largely based on a descriptive approach rather than quantified information, which reflects the strategic nature and the level of detail in the Consultation Draft MTS 3 itself.
The full assessment is in the IIA Report, which includes more detailed descriptions of the effects predicted.

**Spatial and Temporal Scope of the Assessment**

The assessment has considered effects on the environment and communities in Greater London since this reflects the scope of the Consultation Draft MTS 3.

The Consultation Draft MTS 3 covers the period to 2041 and therefore the IIA has considered effects over the same timeframe. Where possible, significant effects identified were categorised as short term (0-5 years) and medium to long-term effects – those effects that occur beyond five years of the adoption of the Strategy. This is included in the IIA Report which presents the full assessment.

**Table 2: Significance Ratings**

<table>
<thead>
<tr>
<th>Scale of effect</th>
<th>Definition</th>
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<tbody>
<tr>
<td>++</td>
<td>Moderate to Major positive effect MTS contributes greatly towards achieving the IIA objective</td>
</tr>
<tr>
<td>+</td>
<td>Minor to Moderate positive effect MTS contributes to achieving the IIA objective</td>
</tr>
<tr>
<td>0</td>
<td>Neutral or no effect MTS does not impact upon the achievement of the IIA objective</td>
</tr>
<tr>
<td>-</td>
<td>Minor to Moderate negative effect MTS conflicts with the IIA objective</td>
</tr>
<tr>
<td>--</td>
<td>Moderate to Major negative effect MTS greatly hinders or prevents the achievement of the IIA objective</td>
</tr>
<tr>
<td>?</td>
<td>Uncertain MTS can have positive or negative effects but the level of information available at a time of assessment does not allow to make a clear judgement</td>
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</tbody>
</table>

**Alternative Options**

Three strategic alternatives (Options) for the Draft Revised MTS 3 were developed and assessed as part of the IIA process. These Options were based on different combinations of transport packages (Table 3) that had been modelled by TfL. The three alternative options were:

**Option 1: ‘Do Minimum’**

Option 1 is based on current London Plan (March 2016) land use/development policies and employment growth, current MTS (2010) policies and proposals, and TfL’s investment plan as set out in the current business plan to 2021/22. It includes package A – the core reference case, representing 2041 funded commitments including HS2 and likely changes in London’s land use and economy.

This Option was later discarded as not addressing the likely transport needs of London over the period of the Draft Revised MTS 3. However, the Option was assessed as part of the IIA process to see how it performed against forecast population and economic trends, to provide an understanding of how the baseline would develop over time.

**Option 2: Option 1 with additional package of enhanced public transport investment**

Option 2 was based on land use / development policies and employment growth as set out in the recent GLA projection results, current London Plan (March 2016) policies, Draft Revised MTS 3 (2017) policies and proposals, and TfL’s investment plan as set out in the current business plan to 2021/22. This option included packages A, B, C and D. Option 2 included Draft Revised MTS 3 (2017) policies, excluding demand management and road pricing policies.

**Option 3: Option 2 with additional levers to maximise mode shift to sustainable modes**

Option 3 included the combination of all proposals in Packages A-F. Option 3 incorporates all of the packages included in Option 2 plus the additional proposals in packages E and F described in Table 3.
Table 3: TfL’s Packages of Transport Measures

<table>
<thead>
<tr>
<th>Package</th>
<th>Title and Description</th>
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</table>
| A       | 2041 funded reference case/business plan  
Package A contains all those schemes outlined and funded within the TfL Business Plan 2016 |
| B       | Optimising the Network  
Package B contains schemes that aim to optimise the network through lower cost investment across public transport networks and further road space reallocation, and includes DLR/Overground/Elizabeth line frequency uplifts and a bus priority network plan |
| C       | Incremental Expansion  
Package C includes slightly higher investment schemes, including improving rail capacity on the existing network, deep Tube upgrades, full suburban rail metroisation and the Silvertown Tunnel |
| D       | New Connections  
Package D includes the construction of large scale investment projects including Crossrail 2 and the Bakerloo Line Extension and a population growth linked bus frequency uplift |
| E       | Demand Management  
Package E aims to use Demand Management measures to reduce car mode share, including increased parking charges and much more intense road space reallocation schemes |
| F       | Road Pricing  
In addition to the public transport, highway and demand management schemes included in Packages A to E, Package F includes road pricing measures in order to reach the 80% sustainable mode share target |

Assessment of Options and Reasons for Choosing the Preferred Option

The three Options (Options 1, 2 and 3) were assessed against the IIA framework. The assessment found that Option 1 performed least favourably, with adverse effects predicted for environmental, health impacts and community safety impacts.

The results of the assessment indicated that Option 3, in comparison to the other two Options, offered the greatest amount of sustainability benefits across the six elements of the IIA assessment, (EqIA, AEI, SEA, CSIA, HRA and HIA). The IIA assessment also provided a number of recommendations to TfL to improve the overall sustainability of Option 3, which allowed for a further refinement of Option 3.

Option 3 was selected by TfL as the Preferred Option due to its clearer strategic alignment with the wider suite of Mayoral Strategies; in particular the revised draft London Plan and draft revised London Environment Strategy. However, some refinements have been made to the Option, taking into account recommendations put forward through the IIA process, which are now included in the Consultation Draft MTS 3 for public consultation.

Preferred Option – Consultation Draft MTS 3
Assessment of Effects on Environmental IIA Objectives (Table 4)

The IIA included 11 assessment objectives that relate to environmental aspects of sustainability. The objectives are set out in Table 4 along with the assessment score of how the Consultation Draft MTS 3 impacted against these objectives.

In summary, the demand management measures contained in the Consultation Draft MTS 3 are predicted to help reduce volumes of traffic, and traffic congestion and support the achievement of an 80% share of transport by sustainable modes. This would contribute to the beneficial effects predicted against the objectives for air quality, climate change, energy use, historic environment, natural capital and noise (IIA objectives 1, 2, 3, 4, 7, 9, and 10). For example, air quality is likely to improve in general (with consequent beneficial effects on the historic and natural environment) and there are likely to be large energy savings and some reductions in greenhouse gas emissions.

The inclusion of measures to improve green infrastructure (the network of multi-functional greenspace) is predicted to beneficially affect IIA objectives 2, 4 and 9, for example, due to the cooling effect greening can have in an urban environment, and by improving habitat connectivity for wildlife.

It also identified that the Consultation Draft MTS 3 relies heavily on modal shift policies to reduce CO₂ emissions, whereas greater reductions are likely to be achieved through a focus on energy and fuel efficiency and/or fuel type used for vehicular transport.
### Table 4: Assessment against Environmental Focused Objectives

<table>
<thead>
<tr>
<th>IIA Objective</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td><strong>Air Quality</strong></td>
<td></td>
</tr>
<tr>
<td>1. To reduce emissions and concentrations of harmful atmospheric pollutants, particularly in areas of poorest air quality and reduce exposure</td>
<td>++ Moderate to Major positive effect</td>
</tr>
<tr>
<td><strong>Climate change adaptation and mitigation</strong></td>
<td></td>
</tr>
<tr>
<td>2. 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</td>
<td>0/+ Neutral/ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>3. To help tackle climate change through reducing greenhouse gas emissions and moving towards a zero carbon London by 2050</td>
<td>+/- Minor to Moderate positive effect</td>
</tr>
<tr>
<td><strong>Energy use and supply</strong></td>
<td></td>
</tr>
<tr>
<td>4. 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.</td>
<td>+/? Minor to Moderate positive effect / Uncertain</td>
</tr>
<tr>
<td><strong>Flood risk</strong></td>
<td></td>
</tr>
<tr>
<td>5. To manage the risk of flooding from all sources and improve the resilience of people, property and infrastructure to flooding</td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td><strong>Geology and soils</strong></td>
<td></td>
</tr>
<tr>
<td>6. To conserve London’s geodiversity and protect soils from development and over intensive use</td>
<td>0 Neutral</td>
</tr>
<tr>
<td><strong>Historic Environment</strong></td>
<td></td>
</tr>
<tr>
<td>7. 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.</td>
<td>+/-? Minor to Moderate positive effect / Uncertain</td>
</tr>
<tr>
<td><strong>Materials and waste</strong></td>
<td></td>
</tr>
<tr>
<td>8. To keep materials at their highest value and use for as long as possible. To significantly reduce waste</td>
<td>+ Minor to Moderate positive</td>
</tr>
<tr>
<td><strong>Natural Capital and Natural Environment</strong></td>
<td></td>
</tr>
<tr>
<td>9. 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</td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td><strong>Noise and vibration</strong></td>
<td></td>
</tr>
<tr>
<td>10. To minimise noise and vibration levels and disruption to people and communities across London and reduce inequalities across London</td>
<td>+/-? Minor to Moderate positive effect / Uncertain</td>
</tr>
<tr>
<td><strong>Water resources and quality</strong></td>
<td></td>
</tr>
<tr>
<td>11. To protect and enhance London’s water bodies by ensuring that London has a sustainable water supply, drainage and sewers system</td>
<td>0 Neutral</td>
</tr>
</tbody>
</table>

### Assessment of Effects on Economic IIA Objectives (Table 5)

The Consultation Draft MTS 3 seeks to reduce traffic congestion and peak period crowding on public transport, improving journey reliability and network resilience, features particularly sought by the business community. The inclusion of Crossrail 2, the Bakerloo extension and other capacity improvements in public transport in the draft transport strategy is seen as beneficial to meeting IIA objectives for infrastructure, economic competitiveness and housing through providing jobs and supporting housing growth (IIA objectives 13, 14 and 16).

Reduced car use could potentially free up more space for development (with beneficial effects on IIA objective 16, for housing), however, it is uncertain how proposals for new transport infrastructure may affect nature conservation sites, including European designated sites, if deemed required for reasons of overriding public interest.

The demand management and road pricing measures proposed in the Consultation Draft MTS 3 are likely to lead to a reduction in vehicle kilometres and to further reductions in the economic costs of poor air quality. It is likely that the costs to business of demand management will be offset by more...
reliable journey times. However, sectors where road transport represents a high proportion of their operating costs are likely to experience short-term adverse effects where they are unable to pass these costs onto their customers.

Table 5: Assessment against Economic Focused IIA Objectives

<table>
<thead>
<tr>
<th>IIA Objective</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Connectivity</strong></td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>12. To enhance and improve connectivity for all to and from and within and around London and increase the proportion of journeys made by sustainable and active transport modes</td>
<td></td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>++ Moderate to Major positive effect</td>
</tr>
<tr>
<td>13. To ensure that provision of environmental, social and physical infrastructure is managed and delivered to meet population and demographic change in line with sustainable development and to support economic competitiveness</td>
<td></td>
</tr>
<tr>
<td><strong>Economic competitiveness and employment</strong></td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>14. To maintain and strengthen London’s position as a leading, connected, knowledge based global city and to support a strong, diverse and resilient economy providing opportunities for all</td>
<td></td>
</tr>
<tr>
<td><strong>Sustainable Land Use</strong></td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>15. Make the best and most efficient use of land so as to support sustainable patterns and forms of development?</td>
<td></td>
</tr>
<tr>
<td><strong>Housing Supply, Quality, Choice and Affordability</strong></td>
<td>++ Moderate to Major positive effect</td>
</tr>
<tr>
<td>16. To provide a quantum, type, quality and tenure of housing (including specialist and affordable provision) to better meet demographic change and household demand</td>
<td></td>
</tr>
<tr>
<td><strong>Culture</strong></td>
<td>+/-? Minor to Moderate positive effect /</td>
</tr>
<tr>
<td>17. To safeguard and enhance the Capital’s rich cultural offer, infrastructure, heritage, natural environment and talent to benefit all</td>
<td></td>
</tr>
</tbody>
</table>

**Assessment of Effects on Social and Health IIA Objectives (Table 6)**

The Consultation Draft MTS 3 includes measures to increase accessibility to all public transport modes such as increases in step-free access. This has been assessed as positive for the accessibility objective (IIA objective 18). The strategy commits to ongoing support for other services to help alleviate obstacles to physical accessibility (e.g. Dial-a-Ride which is a free door-to-door service for disabled and older passengers). The barrier of high fares has been addressed through freezing prices, and all concessions for older and disabled people are protected for the Mayor’s term. These measures are seen as beneficial for the objective for social integration (IIA objective 22).

The Consultation Draft MTS 3 does not explicitly include measures to address non-physical barriers for people with cognitive or sensory impairment. However, it does prioritise issues that disproportionately affect some groups, for example dealing with unwanted sexual behaviour and hate crime. This is assessed as positive against objectives for accessibility and crime, safety and security (IIA objectives 18 and 19).

In terms of health it is now well understood that transport is a major determinant of health, providing access to services, health care, education, social and employment opportunities, all of which are themselves determinants of health.

Increasing levels of physical activity has direct benefits, in terms of reducing obesity and the incidence of related diseases. The Consultation Draft MTS 3 has specific measures designed to increase physical activity, notable through the encouragement of walking and cycling as modes of transport.

Transport can also have impact on health through the severance of communities, the effect of levels of noise and airborne pollutants and by causing injury in collisions. The draft transport strategy has specific measures and proposals that will reduce these adverse impacts of transport.

For these reasons the Consultation Draft MTS 3 has been assessed as beneficial for the IIA objective to improve health and reduce health inequalities (IIA objective 22).
Table 6: Assessment against Social and Health Focused IIA Objectives

<table>
<thead>
<tr>
<th>IIA Objective</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>18. To maximise accessibility for all in and around London</td>
<td></td>
</tr>
<tr>
<td>Crime, safety and security</td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>19. To contribute to safety and security and the perceptions of safety</td>
<td></td>
</tr>
<tr>
<td>Health and health Inequalities</td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>20. To improve the mental and physical health and wellbeing of Londoners and to reduce health inequalities across the City and between communities</td>
<td></td>
</tr>
<tr>
<td>Equality and Inclusion</td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>21. 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</td>
<td></td>
</tr>
<tr>
<td>Social integration</td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>22. To ensure London has socially integrated communities which are strong, resilient and free of prejudice</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>+ Minor to Moderate positive effect</td>
</tr>
<tr>
<td>23. 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 motorized transport</td>
<td></td>
</tr>
</tbody>
</table>

Assessment of Cumulative Effects

The SEA Directive requires that the assessment of effects include secondary and cumulative effects where practicable. Cumulative effects are the effects from multiple activities which may combine to cause a significant effect on a particular environmental aspect. Often, effects may result from the accumulation of multiple small and often indirect effects rather than few large obvious ones.

The IIA has considered the potential for cumulative effects from the Consultation Draft MTS 3 in combination with the current London Plan, (March 2016), and the draft revised London Environment Strategy.

There are expected to be positive cumulative effects from wider strategic delivery on air quality across strategies with the London Environment Strategy specifically including specific proposals to tackle in the short-term hotspots of pollution near to schools, hospitals and other sensitive locations which, together with measures proposed in the Consultation Draft MTS 3, are likely to offer greater sustainability benefits for human health and inequalities.

Collectively, there is expected to be significant cumulative effect from the promotion elements of the Consultation Draft MTS 3 where people will be encouraged to choose more sustainable patterns of activity and travel modes – to live and travel smarter.

There are likely to be positive effects from wider strategic delivery on reduction of the CO₂ emissions, enhancing the natural environment through achieving a net biodiversity gain, promotion of renewable energy sources and the delivery of affordable housing in London.

Overall sustainability performance of the Consultation Draft MTS 3

The IIA identified the central strengths of the Consultation Draft MTS 3, compared to the previous MTS (2010), as progressively addressing sustainability goals such as enhancing health and wellbeing, facilitating more sustainable forms of transport and enhancing opportunities for all. The assessment has also highlighted a significant challenge for the Mayor in terms of improving air quality and the role which transport assumes within this.

The Consultation Draft MTS 3 provides a clear strategic approach to delivering improved air quality in London and meeting European limit levels - being targeted at reducing emissions of pollutants arising from transport activities. The Consultation Draft MTS 3 includes proposals that will significantly reduce harmful emissions and, in conjunction with the emerging draft LES which targets local action to radically improve air quality, promotes and facilitates the accelerated uptake of vehicles into the fleet that have reduced emissions per vehicle as well as the facilitation of the introduction of electric vehicles.

The combined role of the forthcoming Mayoral strategies, in particular the Draft LES, will provide a strong overarching strategic approach, where appropriate mitigation and adaptation is provided for.
Mitigation and Enhancement Recommendations for the Consultation Draft MTS 3

The IIA has not identified any significant adverse effects from the Consultation Draft MTS 3. However, the IIA process provided some recommendations to improve sustainability outcomes of the draft transport strategy when a review of Options was undertaken. Following the assessment of the Consultation Draft MTS 3, recommendations have been identified which have yet to be addressed by TfL and which could enhance further the sustainability outcomes of the final Revised MTS 3.

Integrated Delivery

The Consultation Draft MTS 3 set out a transport strategy delivery process to ensure a joint up approach across the Mayoral strategies. The combined role of the forthcoming Mayoral strategies and, in particular, the draft LES, will provide a strong overarching strategic approach where appropriate mitigation and adaptation is provided for.

Recommendation 1: The Mayor should continue using all opportunities for integrated delivery including ongoing review of where synergies between strategies and their policies can be exploited.

CO₂ Reductions

Hydrogen fuelled transport technologies attract significant research and development funds but they are not a CO₂ abatement policy option for the short or medium term. Hydrogen has to be produced using non fossil fuels (nuclear electricity, biomass or other renewable power) if it is to achieve CO₂ abatement. As with biofuels, abatement is maximised when these energy sources are employed directly and displace fossil fuelled electricity generation. Availability of hydrogen refuelling infrastructure can be a potential obstacle to the take-up of hydrogen fuel cell electric vehicles.

Recommendation 2: The Mayor of London should continue providing support to give interested parties the confidence to continue to invest in this new emerging technology, to help to achieve the ambition for almost all new cars and vans to be zero emission by 2050.

Accessibility

The Consultation Draft MTS 3 includes a package of measures that are likely to improve accessibility for all to historic and cultural environments including embedding accessibility and inclusivity in planning and design, as well as trialling innovative methods to improve wayfinding, such as ‘Wayfinder’ systems for people with sensory disabilities. However, it does not explicitly address non-physical barriers for people with sensory or cognitive impairments in its proposals.

Recommendation 3: The Consultation Draft MTS 3 should include proposals to address non-physical barriers for people with sensory or cognitive impairments in the Consultation Draft MTS 3.

Natural Environment

To deliver Policy 7, the Mayor will work with stakeholders to establish and regularly monitor a baseline of ecological data in order to demonstrate changes in biodiversity.

Recommendation 4: Appropriate indicators for ecological data monitoring would need to be included in the TfL monitoring framework to monitor / report regularly to demonstrate positive changes in biodiversity.

Monitoring Measures

An SEA requires monitoring to be undertaken of the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action.

TfL already undertakes substantial monitoring and reporting of transport system performance and has included further proposals for monitoring outcomes in its Consultation Draft MTS 3. The IIA has proposed a series of indicators to be included within the draft strategy monitoring framework, some of which are already monitored by the TfL.

Progress against goals and challenges identified in the Consultation Draft MTS 3 will be measured through a wide ranging programme of monitoring and evaluation, reported annually in TfL’s Travel in London statistical report of transport trends and outcomes.

Limitations of the IIA

IIA is a strategic level assessment by nature and is based on broad assumptions and judgements and, therefore, some uncertainty over the assessment may exist. Qualitative rather than quantitative assessments need to be made and there is some degree of subjectivity which is typical of the IIA process. The assessment has been undertaken by independent consultants with specialist knowledge across a range of sustainability topics. The
monitoring plan will assist in providing more clarity for the duration of the strategy and will enable the uncertainties identified in the IIA to be addressed.

Where the Consultation Draft MTS 3 makes reference to a collective set of actions rather than specific details of individual schemes an assumption about the predicted effects has been made based on the nature of the collective actions. The assessment has assumed that all actions listed in the draft strategy under each transport policy narrative and objective will be implemented.

**How has the IIA process influenced the development of the Consultation Draft MTS 3 to-date?**

From the outset, the IIA process has sought to actively influence the drafting of the Consultation Draft MTS 3, with the objective being to enhance the sustainability outcomes. To facilitate this, there has been close and ongoing interaction between the TfL strategy drafting and IIA teams, with the aim being to provide continuing review and advice on the sustainability of the Consultation Draft MTS 3 policies and proposals in preparation. This required ongoing communication between the MTS and IIA teams regarding the content of the strategy and the potential impacts arising from its implementation with respect to the promotion of sustainability and related policy objectives identified in the assessment process.

Since the early stages of the MTS development, the IIA process has been carried out in an iterative way to ensure its meaningful contribution to the MTS formulation. These include:

- In September 2016, the IIA team provided a number of recommendations on the draft MTS objectives that have since been taken into account by TfL in subsequent stages of the MTS policy development.

- In November 2016, an assessment was undertaken of the modelling outputs of TfL’s core reference case and six ‘illustrative interventions’ to identify their likely sustainability outcomes. The findings informed the development of the Preferred Option for the strategy. Economic, Equality, Social, Environmental and Health Effects were identified to inform the TfL policy makers on the likely effects of each specific intervention, and were considered in isolation from other proposals in order to evaluate their sustainability benefits and effects on their own merits. TfL took the findings of this assessment on board when formulating the draft transport strategy, thus ensuring that the development of the strategy was carried out in an informed way and took account of the different perspectives and sustainability effects.

- In January 2017, a High Level Assessment was carried out on the first draft of the MTS using the IIA framework set out in the IIA Scoping Report. The purpose of the assessment was to appraise the proposed vision, priorities, policies and proposals at the earliest appropriate stage ensuring the MTS decision-making process takes account of a broad range of perspectives, objectives and constraints. The results of the assessment were presented as key findings with specific recommendations.

- In March 2017, an IIA assessment of the Draft Revised MTS 3 strategic Options was undertaken to inform the selection of the Preferred Option for the Consultation Draft MTS 3. An IIA assessment was undertaken on the three MTS strategic Options, including a ‘do minimum’ option, and further recommendations for sustainability enhancement were provided by the IIA team. An IIA Summary Paper was prepared for the TfL Board and any subsequent changes to the MTS were logged into the IIA Tracker.

Detail of how the IIA has been integrated with the preparation of the Consultation Draft MTS 3 and influenced its content will be provided within the IIA Post Adoption Statement which will accompany the completion and publication of the Revised MTS 3.
Conclusions

The IIA process has not identified any significant adverse effects against sustainability objectives from implementation of the Consultation Draft MTS 3. However, it has identified a number of recommendations to further improve the Consultation Draft MTS 3 and to monitor the effects of implementation of the strategy.

Next Steps

This IIA Non-Technical Summary and the IIA Report are open for a consultation period of twelve weeks alongside the Consultation Draft MTS 3. Upon completion of this period, the consultation responses will be considered. The findings will be used where appropriate in the finalisation of the Revised MTS 3.

The way in which consultation responses have been addressed in finalising the Revised MTS 3 will be set out in a document known as the IIA Post Adoption Statement. The purpose of the IIA Post Adoption Statement is to record how the IIA was carried out and how the IIA process has informed the development of the MTS.

Comments and Feedback

Comments and feedback should be sent to the postal address below or by email to consultations@tfl.gov.uk.

The postal address is:
FREEPOST TFL CONSULTATIONS

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1 European Directive 2001/42/EC (the SEA Directive) transposed into English law via the Environmental

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