

LOCAL IMPLEMENTATION PLAN

Transport Delivery 2019 - 22



EALING COUNCIL

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Foreword

Ealing Council wants to make all parts of the Borough a great place to live, work and spend time in. Good, sustainable transport is fundamental to achieving our priorities which include creating a healthy, great place.

This LIP and the Ealing Transport Strategy fully support the Mayor's Transport Strategy particularly with its ambition to improve health by implementing healthy streets, Vision Zero and reducing emissions from transport. We will work with TfL to reduce pollution from vehicles by encouraging active travel, particularly for short journeys plus helping people switch to low and zero emission vehicles. This is especially important given the introduction of the London Ultra Low Emission Zone (ULEZ) and its expansion into Ealing in October 2021. We will introduce over 120 on-street electric vehicle charge points in the first half of 2019. Future phases will increase this number further still. This will complement our revision to on-street parking permits to incentive lower emission vehicles.

We want to significantly grow cycling to be a viable transport option for more people, young and old, male and female and from all ethnic and social backgrounds. Our recent work made Ealing the first borough in London to introduce dockless cycle hire and we now have two operators, Mobike and Lime. We have also built segregated cycle facilities at The Mall/Uxbridge Road, Ealing Common plus at Ruislip Road East, Greenford. We want to create a legacy by building the Uxbridge Road walking and cycling corridor plus developing a borough-wide safe and direct cycling network.

Walking is really important as it is a part of every journey and we have projects such as the West Ealing Liveable Neighbourhood and Mini Liveable Neighbourhoods around schools to encourage and enable more short trips to be walked, improving people's health and their local neighbourhoods.

An important part of our work to realise Vision Zero and resolutely reduce road casualties, means that by spring 2021 all local residents will benefit from the Borough-wide 20mph speed limit.

Looking to the future, we want to re-invigorate car clubs, investigate a Demand-Responsive Bus Service plus create Liveable Neighbourhoods in Ealing Broadway and Southall to dramatically improve the environment in these areas.

We will build-in active travel for new homes to complement transport projects with no car and low car residential developments to provide badly needed homes throughout the Borough.

Cllr Mik Sabiers, Cabinet Member for Environment & Highways

Executive summary

Ealing Council shares the Mayor's ambitions for healthier people and streets, better public transport plus new homes and jobs. Good transport offers opportunities through access to work, education and leisure facilities, whilst active travel helps people stay healthy. The Council is legally required to produce a Local Implementation Plan (LIP) to state how it will implement the Mayor's Transport Strategy (MTS) 2018.

This is the third Ealing LIP and replaces the previous document covering the period 2014-17 and complements the Ealing Transport Strategy. This revised LIP consists of three main sections:

1. Introduction and LIP preparation – statutory duties, consultation and approvals
2. Borough Transport Objectives – MTS and local goals and policies
3. The Delivery Plan and Performance Management – a costed programme of projects plus targets

An extensive consultation was conducted on the draft LIP in November 2018 which included an online survey with an article in the Council magazine delivered to every household. The LIP has also been the subject of a Strategic Environmental Assessment and Equality Impact Assessment, which are legal requirements.

The Ealing LIP focuses on the period 2019-22 plus up to 2041. The document is consistent with Mayoral and Ealing strategies including the London Plan, London Environment Strategy, the Local Plan Corporate Plan. Following Mayoral and TfL approval the LIP will be effective from March 2019.

Ealing has three core objectives outlined in the Transport Strategy which are:

1. Mode Shift to more sustainable travel
2. Reducing the Environmental Footprint of Transport
3. Improving Road Safety

These three objectives are in turn underpinned by four main principles: improve health and well-being, improve air quality and the environment, provide a more efficient and safe transport network plus finally support good growth, and enhance the vibrancy and robustness of the Borough's economy

There are ten Policy Goals which detail how these objectives and principles will be implemented. The Ealing Transport Strategy and LIP also reflect MTS goals, which are to support Healthy Streets, better public transport and facilitate good growth.

The Delivery Plan is a revised, coordinated approach to active travel projects including significant projects such as:

- The Uxbridge Road Corridor
- West Ealing Liveable Neighbourhood

A comprehensive set of targets is included within the performance management plan. The targets include: sustainable travel mode share, road safety, physical activity, accessibility and transport pollution.

1. Introduction and LIP preparation

Introduction

The Transport Strategy and Local Implementation Plan (LIP) set the Council's transport priorities and programme for delivering the Mayor's Transport Strategy (MTS) within the London Borough of Ealing.

The LIP is a statutory document prepared under Section 145 of the Greater London Authority (GLA) Act and sets out how the Borough proposes to deliver the Mayor's Transport Strategy (MTS) in its area, as well as contributing to other local and sub-regional goals. It has been developed in accordance with the Revised Guidance for Borough Officers on Developing the Third Local Implementation Plan.

This document is the LIP for the London Borough of Ealing focusing on the 2019-22 period on detail plus covering the period up to 2041. It covers the same period as the MTS (published in March 2018) and it also takes account of the transport elements of the draft London Plan, and other relevant Mayoral and local policies. This document plus the Ealing Transport Strategy set out long terms goals and transport objectives for the London Borough of Ealing for the next 20 years, a three-year programme of investment starting in 2019/20, and includes delivery proposals for the period 2019/20 - 2021/22 and the targets and outcomes the Borough are seeking to achieve. A more detailed delivery plan is provided for the financial year 2019/20.

The Ealing Transport Strategy and LIP identify how the London Borough of Ealing will work towards achieving the three MTS goals of:

1. Healthy Streets and healthy people
2. A good public transport experience
3. New homes and jobs

The Council notes that the overarching aim of the strategy is for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041, compared to 63 percent today, and different targets have been set for central, inner and outer London. The LIP outlines how Ealing Council will set local priorities and targets to assist with achieving this aim.

This document also outlines how the Council will work with TfL to assist with delivering the outcomes, policies and proposals of the MTS.

Local approval process

The Ealing Transport Strategy and LIP 2019-22 have been prepared by the Council's Transport Planning Service with contributions from the Highways, Parking, Planning, Regeneration and Sustainability teams.

The draft Transport Strategy (including Borough Transport Objectives) was approved by the Ealing Council's Cabinet on 5 June 2018.

The Portfolio holders have been kept updated during the LIP preparation, consultation and adoption processes.

The Final LIP was approved by the Council Cabinet on 12 February 2019 and was submitted to TfL for final Mayoral approval on 15 February 2019.

Statutory and stakeholder consultation

In accordance with the GLA Act 1999, Ealing Council consulted the following stakeholder organisations on this LIP document:

- TfL
- The Metropolitan Police
- London Borough of Brent
- London Borough of Hammersmith & Fulham
- London Borough of Harrow
- London Borough of Hounslow
- London Borough of Hillingdon
- WestTrans
- Network Rail
- Great Western Railway
- Chiltern Railways
- Oak Old Park Royal Development Corporation
- Heathrow Airport Ltd

The Council undertook a public consultation exercise between 5 November and 7 December 2019. The consultation survey and plans were made available in an online survey on the Council's website for any member of the public to respond. This consultation was supported by an article included in the Council magazine which was delivered to every household in the Borough.

There were 467 responses to the outline consultation with most respondents strongly supporting or tend to support the three main objectives as follows:

- Encourage mode shift (to walking, cycling and public transport), 88.2%
- Reduce the environmental footprint of transport, 92.3%
- Improve road safety, 94.3%

Changes made from the initial draft LIP as a result of the consultation included:

- Explanation and glossary of technical terms
- Further details on the program of projects 2019-22, including a map
- Further details to clarify that road safety measures will benefit motorcyclists

The Council will provide a consultation report giving further details of these results.

Statutory duties

The Council has taken into account all the statutory duties and processes as set out in the requirements in the GLA Act in the preparation of this LIP.

A Strategic Environmental Assessment (SEA) and Equality Impact Assessment (EQIA) have been produced and a summary with relevant changes to the LIP are available on request.

The LIP helps the Council fulfil important statutory duties such as monitoring and reducing road casualties, the Network Management Duty for the Public Highway. There are also other responsibilities that the document touches on including planning, environmental, public health, equality plus crime and disorder responsibilities.

LIP approval

The LIP was formally approved by the Deputy Mayor for Transport on 10 June 2019.

2. Borough Transport Objectives

Introduction

This chapter sets out the local policy context for the LIP. It covers the Borough's detailed interpretation at a spatial level and the local policies and proposals which will help deliver the MTS. The chapter also considers the link between the LIP, Ealing's Transport Strategy plus other key frameworks against which the Borough plans and delivers local services.

The LIP and Transport Strategy firmly demonstrate that they are informed by evidence and analysis of local needs and issues and shaped by the wider context of the MTS vision, the MTS Healthy Streets Approach and the MTS policies, proposals and outcomes.

Local context

Location and geography

The London Borough of Ealing is situated in the centre of the six Greater London boroughs that make up west London, bordering the London Boroughs of Hillingdon, Harrow, Brent, Hammersmith and Fulham, and Hounslow.

The borough has the third largest population in Greater London, with 343,000 residents in 2015 (the highest in west London). It is also the 11th largest London borough in terms of area, covering 55 square kilometres, of which 8.4 square kilometres are parks and green spaces. The terrain of the Borough is predominantly flat creating good potential for increasing cycle trips.

The eastern and southern parts of the Borough reflect more inner-London characteristics thanks to their proximity to highly populated town centres and good public transport links into central London. Other parts of the Borough particularly to the north and west are more characteristic of outer London areas, with fewer public transport links. This is also true of density patterns in the Borough, with increased population density towards the east around East Acton and Ealing Broadway.

Ealing Broadway town centre is one of 12 Metropolitan town centres in London and is a significant employment and shopping location plus an important public transport interchange. However, whilst the Metropolitan Town Centre is also at the centre of a significant road network it also suffers from heavy traffic congestion. Moreover, orbital public transport and cycle links to other town centres in west London such as Wembley are also in need of improvement.

The Old Oak and Park Royal Development Corporation (OPDC) is developing a whole new suburb and community for west London. The OPDC will use the investment in rail infrastructure projects HS2 and the Elizabeth Line to create new opportunities for development within the Old Oak and Park Royal industrial areas. The OPDC area extends across the neighbouring boroughs of Brent, plus Hammersmith and Fulham as well as Ealing.

The Corporation was launched in 2015 and is the Local Planning Authority, master developer and regeneration agency for the 650-hectare site. As the Local Planning

Authority, OPDC has a duty to prepare a Local Plan, which sets out OPDC's strategy for development within its area and contains the policies that will be used to direct development and determine applications across the entire OPDC area.

Transport

Ealing has an extensive tube and train network. The Central, District and Piccadilly lines as well as TfL Rail (Elizabeth Line in future), Great Western Railway and London Overground all call at stations within the Borough. However, whilst there are strong east-west connections, there are limitations on north-south (orbital) connections through Ealing which are less frequent and slow. Ealing currently has 'Night Tube' services on the Central Line (Ealing Broadway branch only) plus the Piccadilly Line (Heathrow Branch only).

The Greenford Branch Line is a 4.4km Network Rail suburban railway line in LB Ealing. It runs from a junction with the Great Western Main Line at West Ealing to Greenford station (also London Underground Central line). The passenger service is provided by Great Western Railway forming a shuttle service connecting with TfL Rail (Elizabeth Line in future) but only with a service of two trains an hour and no Sunday service.

The introduction of Elizabeth Line services is expected to bring significant accessibility benefits to the five Elizabeth Line stations in the Borough. All of the stations (Acton Mainline, Ealing Broadway, West Ealing, Hanwell and Southall) will be step-free and the enhanced service pattern (up to ten trains per hour) alongside significantly improved journey times into London will raise the PTALS in many parts of the Borough. For example, the journey time from Southall to the West End will drop down to 19 minutes with no change required, compared to the previous 37 minutes with one required interchange.

The Borough is well connected by road, with the A40 Western Avenue, A406 North Circular Road and A312 TfL Road Network (TLRN) arterial routes linking with the national motorway network as well as a number of Transport for London's roads. The A4020 Uxbridge Road is a strategic, radial borough-controlled route and is a major bus corridor. Ealing has 580km of roads, of which 543km are under the control of the Borough and 37km are under the control of TfL.

The second longest length of canals in London (16km) within Ealing offer potential as a sustainable transport links for pedestrians and cycling, plus relieve road congestion.

The bus network with LB Ealing is mainly centred on Ealing Broadway and is also very comprehensive in the east of the Borough (Acton). Further to the west (Southall, Greenford and Northolt) the bus network is more dispersed due to the less built up and more suburban environment. In these areas there are also barriers to north-south movement such as rail lines and the A40 highway with a very limited number of crossing points (bridges) which can often be traffic congested.

There are around 38 bus routes serving 700 bus stops in the Borough. In partnership with TfL, the Council completed an extensive program to make all bus stops wheelchair accessible by 2017. Thirteen bus routes in the Borough operate 24 hours a day also offering a night service.

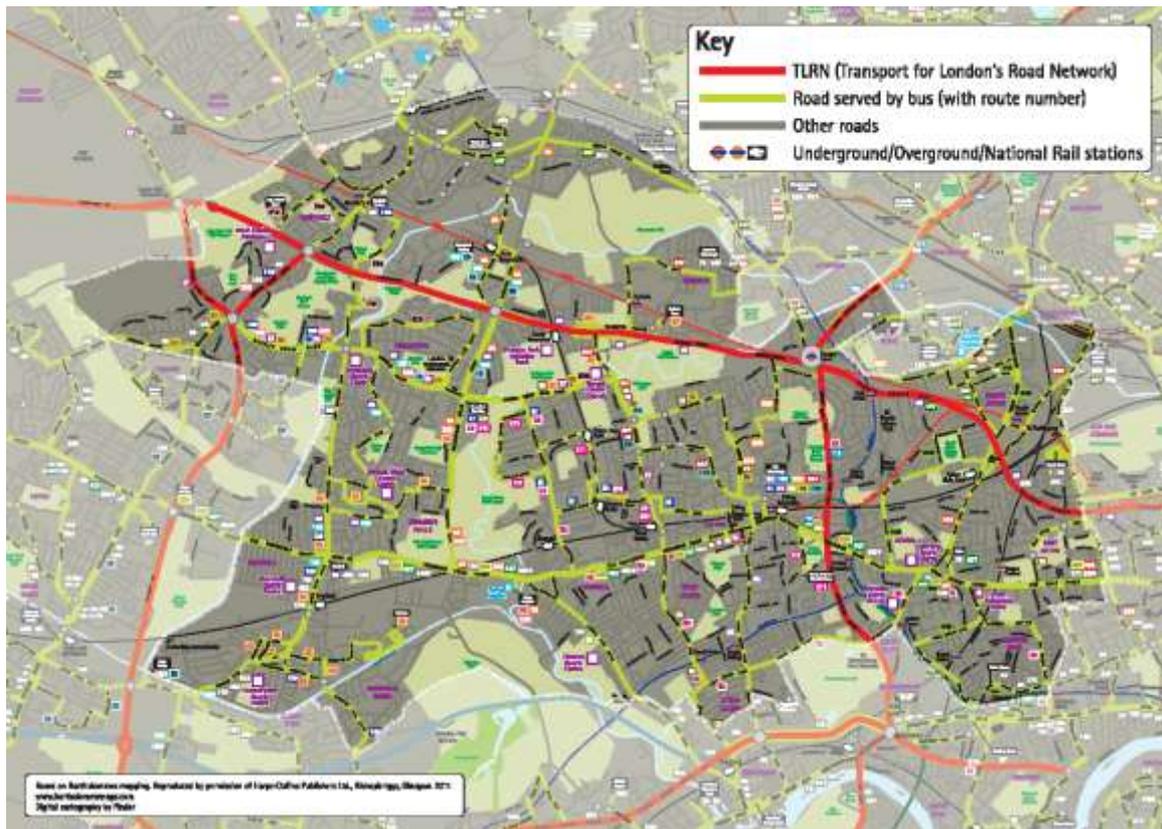
There are currently three car club operators within LB Ealing. Enterprise, Zipcar and Hertz On-Demand. All are based on having a dedicated bay for each vehicle. Ealing has been relatively successful in growing car club provision in the last decade and there are now 89 bays across the Borough.

Heathrow Airport lies only 1.5km outside of LB Ealing and handles the most air passengers in Europe and the second highest globally with 78 million passengers in 2017. This is approximately double the number of passengers compared to in 1988. In addition, there are over 73,000 employees working on the airport site of which nearly 2,500 live in LB Ealing. There are also many people additionally employed in airport-related businesses off the airport site in areas such as airline catering in Southall.

Heathrow Airport also operates as a large hub for surface transport with railway, Underground and bus stations at the Terminals. The Piccadilly line, TfL Rail (Elizabeth Line in future) and three bus routes serve both LB Ealing and Heathrow Airport with the volume of air passengers impacting on peak time capacity on the Piccadilly line.

Ealing Council actively works with the WestTrans sub-regional partnership for transport planning in West London to trial innovative projects and work on cross-boundary projects. Ealing collaborates with its neighbouring Boroughs of Brent, Hammersmith & Fulham, Harrow, Hillingdon and Hounslow to deliver transport projects on the ground and to contribute to regional and London-wide policy.

Figure 1 Key Transport Links in LB Ealing



Health and social characteristics

The health of the population in Ealing is mixed compared with the England average. About 17% of children live in low income families. However, life expectancy for both men and women is higher than the England average. Life expectancy is 3.4 years lower for men and 2.8 years lower for women in the most deprived areas of Ealing than in the least deprived areas per 100,000 population. For children in Year 6 (aged 10 to 11 years old), some 23% are classified as obese, which is slightly worse than the average for England, but the prevalence of excess weight in adults is better than average. Estimated levels of adult regular physical activity are some of the worst in England average (53% of adults active in Ealing compared to 66% across England). Although rates of people killed and seriously injured on roads and early deaths from cancer are better than average¹.

¹ Ealing Local Authority Health Profile 2018, Public Health England

Air Quality

Air pollution in LB Ealing comes from a variety of sources. This includes pollution from sources outside of the Borough, and, in the case of particulate matter, a significant proportion of this comes from outside of London and even the UK. In terms of pollution created in the Borough the main sources of NO_x emissions are road transport and domestic and commercial gas sources. In relation to transport emissions, diesel vehicles account for a large portion of NO_x emissions; long-term exposure to these can aggravate respiratory diseases and is in some cases fatal. The main sources of particulate matter are road transport (internal combustion engine emissions and braking), resuspension², rail and Non-Road Mobile Machinery³.

Population

Understanding population projections will allow the Council to better prepare for new social and economic demands and transport implications. The overall population of Ealing has risen from 292,800 in 1996 to 343,000 in 2015. However, within this, there have been varying trends:

The population of 0-15-year-old children increased by 23.1% (from 59,700 to 73,500). In the same period, the number of children 0-15 years increased by 21.8% in London and by 5.1% across England. The working age population (16-64 years) rose by 7.7%, which is lower than the 22.3% increase seen across London. Nationally, the population of older people over 65 years rose by 24.4%, while Ealing's older population increased by 16.4% between 2001 and 2015.

The Borough population is estimated to reach 394,100 by 2036 according to Office of National Statistics (ONS) projections. Compared to the current population, this represents an average 0.64% annual increase over the next 20 years. Alongside this growing population, from 2016 to 2046, the number of households in Ealing is projected to grow by 36%. However, the population age group structure is expected to show significant changes in the same period; for example the number of residents aged 65 and over is predicted to increase by 55%. This massive increase in the older population has significant implications for transport especially in terms of accessible transport as people in this age group tend to suffer more from mobility issues.

At 63 persons per hectare, Ealing is the third most densely populated borough in Outer London (after Brent and Waltham Forest). However, despite varying trends in age groups, household car access in the Borough continues to be consistent. Ealing ranked 18 out of 33 London boroughs, with 54% of adults having household access to car.

² Human activity, including moving vehicles and cleaning, resuspends particles, regenerating airborne contaminants

³ LB Ealing Draft Air Quality Action Plan 2017

Ealing has a strong and dynamic economy and is the largest commercial borough in West London with over 11,000 businesses and the third highest rate of VAT registrations in London⁴. There are seven town centres in the Borough with good links to both central London and Heathrow Airport, tourism and creative industries have been key contributors to local economic productivity. Around 140,000 people work in the Borough including 33,000 who commute from outside the Borough⁵. A significant number of residents commute outside the Borough, including to Heathrow Airport and particularly into central London. Approximately, 1 in 50 Ealing residents work at Heathrow Airport directly with many more in related employment. There are few places in London with a comparable employment base so ensuring there is sufficient employment land and premises to sustain our businesses and encourage new companies to locate and grow here is a high priority.

⁴ Ealing Development Strategy 2026

⁵ Ealing Development Strategy 2026

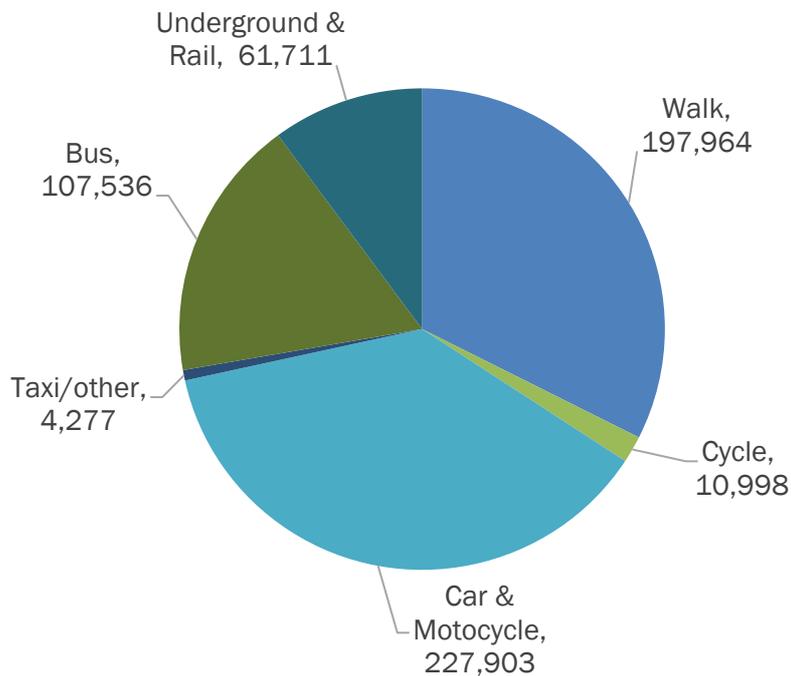
Changing the transport mix

Challenges and opportunities

In order to meet the Council's and Mayor's ambitions for healthier people and streets, better public transport plus new homes and jobs there will need to be a step-change in the transport mix. The challenges that will need to be overcome are outlined in detail in the following MTS Outcomes sections. Key local issues include better provision of orbital transport, road safety perception (especially for cycling) plus actual statistics (for motorcycles especially scooters), traffic congestion, air quality, new development, growth areas, Heathrow airport traffic, new transport infrastructure, changing economic and social trends (such as the ageing population and more children). Ealing's LIP transport objectives, principles and policies described below will manage travel demand to tackle these environmental, social and economic challenges.

Nevertheless, there are a number of opportunities to effect positive change including using traffic congestion to nudge people to sustainable travel, new technology including take up of cleaner vehicles, plus new developments allowing sustainable travel infrastructure and parking controls to be built in from the start.

Figure 2 Daily Trips by Mode LB Ealing



Borough Objectives

The Ealing Transport Strategy sets out the transport priorities for Ealing Council in alignment with the Mayor's Transport Strategy 2018 (MTS) but focuses on the initial 2018-22 period in detail.

The Transport Strategy and LIP Vision is:

'Within the context of good growth, to improve streets and transport infrastructure to reduce dependency on cars to prioritise active, efficient and sustainable travel modes, making Ealing a healthier, cleaner, safer and more accessible place for all'

The Transport Strategy and LIP have three core objectives which are as follows:

1. Mode Shift to more sustainable travel
2. Reducing the Environmental Footprint of Transport
3. Improving Road Safety

These three core objectives underpin the application of the MTS priorities and targets: Healthy Streets and Healthy People, A Good Public Transport Experience plus New Homes and Jobs, within the London Borough of Ealing.

These three objectives are underpinned by four main transport principles:

- A. Improve health and well-being
- B. Improve the Borough's air quality, and other environmental enhancements
- C. Provide a more efficient and safe transport network
- D. Support good growth, and enhance the vibrancy and robustness of the Borough's economy

The Transport Strategy's plus the LIP's objectives and principles will be implemented by ten specific transport policies covering encouraging active travel modes, improving accessibility, to implement Sustainable Urban Drainage Schemes (SuDS), reducing vehicle emissions, noise and congestion, enhancing public transport, improving road safety, to design streets for people and to ensure that economic growth and new developments contribute to increasing active travel. These ten specific transport policies will inform the scope of Council projects and interventions to ensure that they support the MTS and its priorities.

This LIP document is the statutory document to implement the MTS and contains details including a delivery plan and performance indicators for transport projects and initiatives. Specific 'Mode Plans' for specific areas such as parking, school travel and cycling will also provide further details when they are published by the Council.

The Transport Strategy and LIP support the work of the whole Council to provide quality of life improvements for residents and visitors. These documents have had significant input including from the Highways, Parking, Regeneration, Planning, Pollution, Public Health teams as well as the Transport Planning Service team.

Mayor's Transport Strategy outcomes

The mutually supportive links between Ealing's LIP objectives and Policy Goals and the MTS outcomes are shown below in Tables 1 and 2.

Table 1: Ealing Transport Strategy & LIP Objectives

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

Table 2: Ealing Transport Strategy & LIP Policy Goals

	1. London's streets will be healthy and more Londoners will travel actively	2. London's streets will be safe and secure	3. London's streets will be used more efficiently and have less traffic on them	4. London's streets will be clean and green	5. The public transport network will meet the needs of a growing London	6. Public transport will be safe, affordable and accessible to all	7. Journeys by public transport will be pleasant, fast and reliable	8. Active, efficient and sustainable travel will be the best option in new development	9. Transport investment will unlock the delivery of new homes and jobs
1. To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.	✓	✓	✓	✓	✓	✓	✓	✓	
2. To make the Borough accessible to those with a mobility impairment and reducing severance by removing the barriers to movement.	✓	✓		✓	✓	✓	✓		
3. To reduce and mitigate against the Borough's contribution to traffic-based air pollutants.	✓		✓	✓	✓	✓	✓		

4. To implement SuDS schemes to reduce flooding on the Highway and mitigate against transport-based pollutants getting to the Borough's water bodies.	✓			✓					✓
5. To reduce and mitigate against transport-based noise pollution.	✓		✓	✓	✓			✓	
6. To reduce traffic congestion on Borough Roads through the increase of active travel modes.	✓	✓	✓	✓	✓		✓	✓	✓
7. To lobby public transport operators to achieve a frequent, reliable, safe and affordable public transport system which links people to all key destinations and services.		✓	✓	✓	✓	✓	✓	✓	✓
8. To make the Borough's roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling.	✓	✓	✓	✓	✓	✓	✓	✓	✓

9. To design the Borough's streets for people not for vehicles to encourage active travel and benefit local economies.	✓	✓	✓	✓	✓			✓	✓
10. To ensure that economic growth and new developments contribute to increasing active travel and reduce the environmental impacts of transport through design	✓	✓	✓	✓	✓			✓	✓

Outcome 1: London's streets will be healthy and more Londoners will travel actively

Challenges and opportunities

There are many challenges in Ealing to the delivery of MTS Outcome 1, these are outlined below. MTS Outcome 1 and the London-wide sustainable mode share target will address many issues highlighted in the local context section above such as population and housing growth, traffic congestion, poor air quality and road safety.

The LIP and Transport Strategy are based on the Healthy Streets approach, which necessitates reshaping Ealing's streets and transport provision alongside ensuring that regeneration and future development of Ealing bring about 'good growth' which supports walking, cycling and public transport use. Collectively, this will bring about healthy streets and people, a good public transport experience, and new homes and jobs where people have a good quality of life.

The Healthy Streets Approach is the system of policies and strategies to help Londoners use cars less and walk, cycle and use public transport more

The purpose of the Healthy Streets Approach is to provide long term plan for improving people's experiences of our streets, helping everyone to be more active and enjoy the health benefits of being on our streets.

To deliver the Healthy Streets Approach, changes are required at three main levels of policy making and delivery:

- **Street level:** positive changes to the character and use of the city's streets which provide high-quality environments.
- **Network level:** how the city's streets are planned and used at a larger scale.
- **Strategic level:** policy and planning London's rapid growth means we will need to move people more efficiently to keep the city functioning and to maintain and improve the quality of life of its residents

The Healthy Streets Approach uses ten evidence-based indicators of what makes streets attractive places (figure 3).

Figure 3 The Healthy Streets Approach



Good performance against each of the ten Healthy Streets indicators will mean that individual streets are appealing places to walk, cycle and spend time. Improvements against all the indicators across the city’s streets will radically transform the day-to-day experience of living in Ealing.

Transport has a significant role to play in influencing these factors and consequently having the greatest impact on improving the people of Ealing.

Over 1 in 5 of adults (22.6%)⁶ in Ealing are physically inactive – doing less than 30 minutes’ activity a week. The recommended amount for health and well-being is 150

⁶ Public Health Outcomes Framework <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000042/pat/6/par/E1200007/ati/102/are/E0900009>

minutes a week. Physical inactivity is the fourth largest cause of disease and disability in the UK⁷.

If Ealing residents walked more, there would be significant health benefits which can translate into economic gains, for instance reduced sickness.

Many of the Ealing residents taking sufficient physical activity will be doing so simply thanks to their regular travel routine. In older people, physical activity improves muscle strength as well as cardiovascular health, reducing frailty and the risk of falls, often a marker for declining ability to live independently plus a host of other long-term conditions.

Active travel can, be a simple and regular way of exercising, cheaply, particularly for commuting and travelling to school. These trips occur at the busiest times on the road network and motorised journeys experience the biggest delay, largest impact on the environment and increased stress in comparison to active travel modes.

Significant health impacts can occur indirectly in the way that traffic infrastructure shapes design and character of neighbourhoods. In other words, community severance happens when the transport system limits people's mobility, instead of facilitating it. Railways, canals and main highways, create physical and psychological barriers that separate communities, with negative effects on walking and cycling and likely to effect individual health and social cohesion.

Social isolation has been described as dangerous to health as smoking 15 cigarettes a day⁸. This can be influenced by poor access or severance, where destinations are geographically close but cannot be reached easily due to physical barriers⁹. Those who have a strong social network and are connected in their communities are more resilient to 'stressors' which can otherwise trigger poor physical and mental health.

It is vital that the LIP and Transport Strategy prioritises reducing these health and movement inequalities, focusing on addressing the needs of the poorest. To do this, areas or streets which pose the greatest health threats (noise, air pollution and road danger) should be prioritised for action, as nearby communities are likely to be more socially deprived.

Travel can bring people and places together as well as enable a community to bond together socially. For instance, if people are out enjoying the street walking. Good travel

⁷ Murray et al (2013). UK health performance: findings of the Global Burden of Disease Study 2010. *The Lancet* 381: 997-1020

⁸ Holt-Lunstad J, TB, Layton JB. 2010. Social relationships and mortality risk: a meta-analytic review. *PLoS Medicine* 7 (7)
<http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000316>

⁹ Understanding community severance: views of practitioners and communities (2005) DfT.

access can enable people to get to work as well as schools, shops, parks and health and care services. If a place is accessible it means these services, amenities and social structures are easy to get to. This depends on affordability, ease of use and perceptions or acceptability of the type of transport required for the journey¹⁰. It is important that a place is accessible to everyone, and none of the protected groups outlined in the Equalities Act (2010) are excluded. Fear of injury and crime can be barriers to access, therefore, factors such as lighting, quality of the area and openness of the space are influencers of perceived and actual safety¹¹, and will influence whether a sustainable mode of travel is used or not.

Within the Borough, infrastructure for cycling is currently significantly worse than it is for walking. This is not to say that both need to be improved, but whilst there are footways on virtually every road within the Borough, there are not the equivalent safe routes for cyclists. Consequently, this transport strategy and its associated action plan will give a slight precedence to cycling but will still seek to improve the quality of walking where possible. The Council will also give precedence to road safety particularly for cyclists over other considerations. This approach is supported by the MTS priority on healthy streets and healthy people and specifically MTS policy 2 (walking and cycling), policy 3 (road safety vision zero), MTS proposal 3 (cycle routes), proposal 7 (school travel walking and cycling) proposal 9 (road danger reduction) and proposal 10 (road safety vision zero).

Sustainable Drainage Systems (SuDS) can be used reduce surface water run-off reaching sewers. Although the design of SuDS varies, they usually include depressions for water to gather, planting and/or layers of aggregate for filtering. SuDS can protect development and provide amenity and biodiversity benefits. In certain locations, SuDS schemes can also contribute to traffic calming.

Transport emissions and air quality also have a role in creating healthy streets and these issues are covered in more detail under Outcome 4 section.

Ealing Council does not support permitting motorcycles in bus lanes because of adverse impacts of road safety, emissions and encouraging active travel modes. Therefore, we call on the Mayor, TfL and other boroughs to follow this approach across London.

Most car trips in the borough are very short (31% being under 2km)¹² and in many cases, could be cycled or walked. These patterns of vehicle use, together with through traffic

¹⁰ Mindell JS, Watkins SJ & Cohen JM, Health on the Move 2 (2011) Transport and Health Study group

¹¹ Mindell JS, Watkins SJ & Cohen JM, Health on the Move 2 (2011) Transport and Health Study group

¹² Travel in London 9/LTDS data 2013/14 to 2015/16, TfL

(including that rat-running through residential areas) creates considerable traffic congestion and pollution, which in turn tend to discourage active travel.

Levels of car ownership also has a role in creating healthy streets and these issues are covered in more detail under Outcome 3 section.

The canals in Ealing potentially offer a sustainable transport network that promotes walking and cycling, relieving road congestion, and being an important recreational resource in an urban setting.

However, despite their advantages canals, the river Brent and the railway lines do constrain the local highway network, resulting in frequent bottlenecks (e.g. at Iron Bridge) and traffic congestion. With the main road network at capacity, this results in heavy congestion and delays for road users, particularly at Uxbridge Road. This causes through traffic to divert through smaller streets, bringing with it impacts on the local environment and road safety. Many people have personal security concerns with using the canals, as they do not have lighting currently which does not make them appealing during hours of darkness.

Ealing Council and community partners have been successful in obtaining Sport England funding for a major behaviour change pilot project in the Southall area. 'Let's Go Southall' is a major project with around £8M funding aims to increase physical activity using a systems-wide approach in the community.

Although a vibrant and diverse area, Southall suffers from poorer health amongst its population due to concentrations of deprivation and high levels of physical inactivity. Issues include; high car use (especially for short trips), traffic congestion, concentrations of poor quality public realm, person security concerns and fragmented public transport. These issues limit the appeal of sustainable travel modes for many people currently.

The pilot intends to make Southall a better place to live over a period of three years (2018-2021), through making it easier for people to get active as part of their everyday lives which will both help them to become healthier but also improve community wellbeing and resilience. The programme seeks to embed physical activity throughout the community through a whole-systems change approach, recognising that change needs to take place at multiple levels to get people moving.

The opportunities to deliver Outcome 1 include:

Council Deliverables

- Uxbridge Road walking and cycling corridor
- Borough 20mph limit
- 'Let's Go Southall' physical activity pilot project
- Town and local centre enhancements
- SUDS schemes

- Liveable Neighbourhood schemes
- School travel programme
- Behaviour change programme
- Active travel infrastructure
- Controlled Parking Zones
- Electric Vehicle Chargepoints

Other Opportunities

- Introduction of the Ultra-Low Emission Zone (ULEZ)
- Active travel to/from stations particularly for new rail schemes
- New high-quality developments

Borough Objectives

The relevant Transport Objectives to deliver Outcome 1 are:

1. Mode Shift – reducing the dependency on the motorised vehicle by moving trips, particularly the shorter ones, to active travel using more sustainable modes through behaviour change.

2. Reducing the environmental footprint of transport – particularly improving the Borough’s air quality by encouraging the use of active travel modes and using the cleanest engines.

3. Improving road safety – making the Borough roads as safe as possible, particularly for those modes perceived to be more vulnerable

The relevant Transport Principles to deliver Outcome 1 are:

- A) Improve health and well-being
- B) Improve the Borough’s air quality, and other environmental enhancements
- C) Provide a more efficient and safe transport network
- D) Support good growth, and enhance the vibrancy and robustness of the Borough’s economy

The relevant Transport Policy Goals objectives to deliver Outcome 1 are:

1. To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.
2. To make the Borough accessible to those with a mobility impairment and reducing severance by removing the barriers (physical and motivational) to movement.
3. To reduce and mitigate against the Borough’s contribution to traffic-based air pollutants.

4. To implement SuDS schemes to reduce flooding on the Highway and mitigate against transport-based pollutants getting to the Borough's water bodies.
5. To reduce and mitigate against transport-based noise pollution.
6. To reduce traffic congestion on Borough Roads through the increase of active travel modes.
8. To make the Borough's roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling.
9. To design the Borough's streets for people not for vehicles to encourage active travel and benefit local economies
10. To ensure that economic growth and new developments contribute to increasing active travel and reduce the environmental impacts of transport through design, operation and contribution to the public realm and transport network.

Outcome 2: London's streets will be safe and secure

Challenges and opportunities

There are many challenges in Ealing to the delivery of Outcome 2, these are outlined below.

Road casualties and perceived road danger are significant concerns in Ealing and across London. The Council supports the Mayor's Vision Zero target of no deaths or serious injuries on the roads by 2041.

Deaths or serious injury can cause a significant psychological impact for the victim and/or their family. Pedestrians and cyclists are disproportionately affected by serious injury caused by road traffic collisions, relative to the proportion of daily journeys they make up. Fear of road traffic injury is a major barrier preventing people from walking or cycling, particularly amongst parents who consequently drive their children to school. However, this view overlooks the long-term illness and death caused by not keeping physically active.

Most serious road traffic collisions occur on roads with faster moving traffic¹³ because speed is normally the main determinant of the outcome of a collision¹⁴. Children are more vulnerable to road traffic injury, as they are not able to assess traffic scenarios accurately until they are in their teens¹⁵. Older people are often less mobile, frail, and may have sight or hearing impairments which making them less able to cope with busy roads, often resulting in social isolation¹⁶. Therefore, reducing the speed of traffic is a priority. There are high concentrations of collisions on the most highly trafficked roads including the TLRN A40, A406 and A312 plus the A4020 Uxbridge Road particularly within town centres, see figure 4 below.

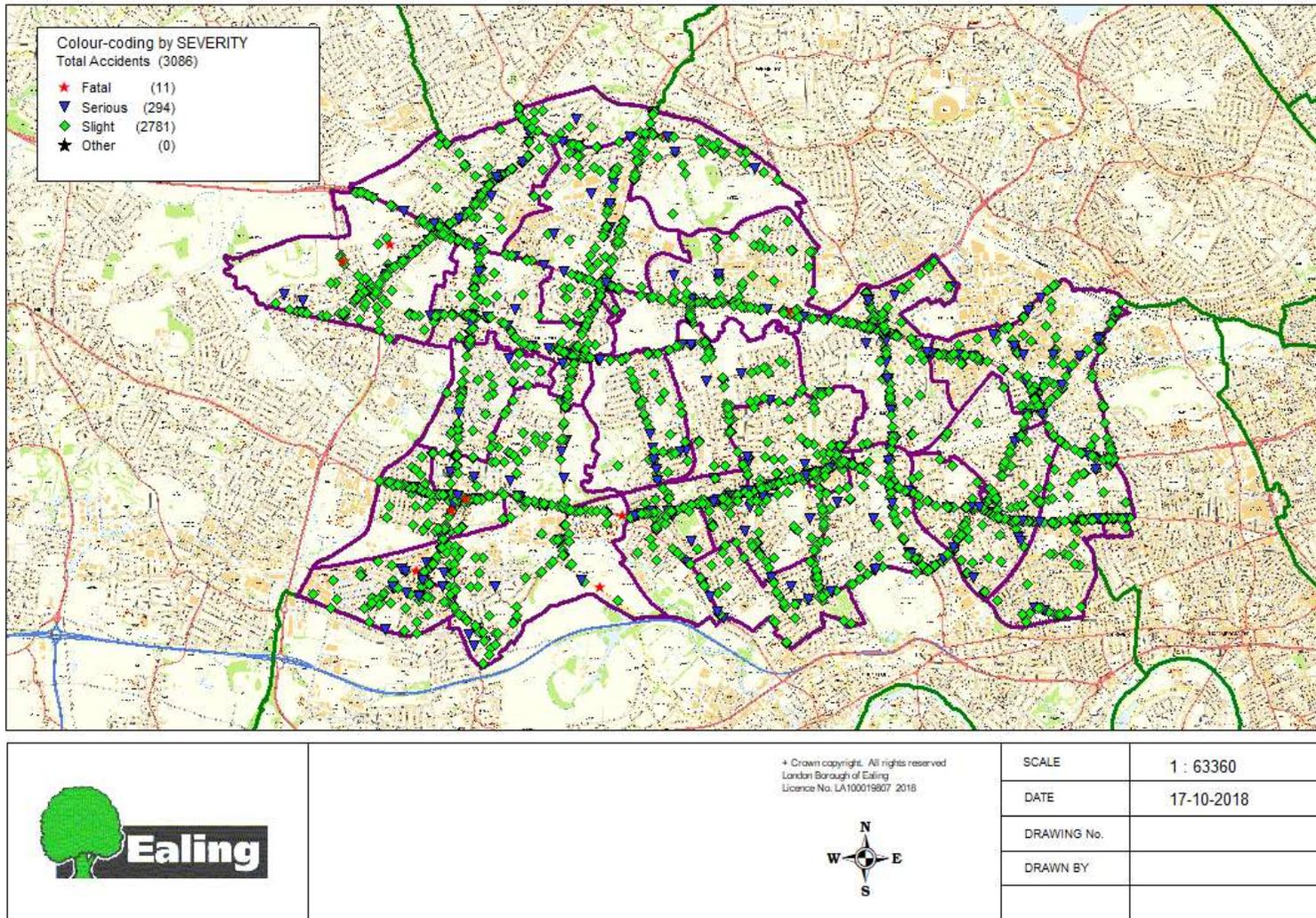
¹³ Roads Task Force Technical Note 19 (2013) TfL

¹⁴ Racioppi, F et al. Preventing Road Traffic Injury: A public health perspective for Europe (2004) WHO European Region

¹⁵ Racioppi, F et al. Preventing Road Traffic Injury: A public health perspective for Europe (2004) WHO European Region

¹⁶ Racioppi, F et al. Preventing Road Traffic Injury: A public health perspective for Europe (2004) WHO European Region

Figure 4 Road Casualty Locations in Ealing 2015, 2016, 2017



The Metropolitan Police Service (MPS) introduced a new collision reporting system in November 2016 - the Case Overview and Preparation Application (COPA). The City of London Police also moved to the Collision Reporting and Sharing (CRASH) system in October 2015. This has had a number of impacts on the data that is available to Transport for London (TfL), and the London Boroughs in the ACCSTATS database for collision investigation.

Under the new systems officers use an 'injury-based assessment' in line with DfT STATS 20 guidance and online self-reporting is available. Both of these changes are expected to provide a better assessment of injury occurrence and severity but have made data collected from November 2016 onwards difficult to compare with earlier data.

TfL commissioned the Transport Research Laboratory (TRL) to undertake a back-casting exercise to enable pre-November 2016 data to be compared with post November 2016 data. These initial back cast estimates include the number of people killed or seriously injured (KSI) for each borough between 2005 and 2017 and this data has been used to update borough targets to align with those contained in the Mayor's Transport Strategy, namely a 65 percent reduction in KSIs by 2022 against the 2005-09 baseline, a 70 percent reduction in KSIs by 2030 against the 2010-14 baseline and zero KSIs by 2041. The targets contained in this final version of the LIP have been set against Outcome 2 for Vision Zero to reflect the reporting changes. The level of ambition remains unchanged, despite these revised figures.'

In addition to reducing the speed of vehicles, reducing their volume on the road would also benefit road safety. Fewer vehicles means less opportunity for collisions to take place. In addition, fewer vehicles means less congestion, which also leads to better driver behaviour due to less stress and reduces the temptation to speed if the opportunity arises.

The design of roads is another determining factor and needs to be addressed. Many junctions have been improved by the Council over the last few years, although there are some clusters of collisions at some junctions which require further investigation. Some street furniture which was intended for one purpose has had unintended consequences. The main example being pedestrian guardrail, which limits road space for cyclists and has led to injuries as a result. Evidence reviews have identified a clear stated preference that creating safe cycle routes is likely to increase safe walking and cycling¹⁷.

Road safety will continue to be a focus of transport improvement schemes, although it is recognised that there is not always an engineering solution to every collision. The recent changes described above, changes with the way the Police report traffic collisions has led to the quality of the data dropping alarmingly, making valid analysis of individual collision hot spot locations almost impossible. However, TfL have committed to re-evaluate previous

¹⁷ National Propensity to Cycle Tool Project, DfT (2016)

data to create a new baseline and to make it comparable with the data processed using the new methodology.

Technology in vehicles is moving ahead quickly, and the interiors of motor vehicles are the safest to date, with vehicle manufacturers continuing to make more and more safety improvements. Whilst fully autonomous vehicles may still be a few years off, but semi-autonomous enhancements (e.g. automatic emergency breaking and speed control) are already being implemented and are welcomed by the Council. However, more needs to be done to protect other (especially vulnerable) road users. HGV collisions with cyclists are a concern, especially since there were two cyclists killed in the Borough in such collisions in 2016/17. HGVs have many blind spots due to their poor design¹⁸, therefore the Council will lobby for high visibility cabs and detection systems to become mandatory

Unfortunately motorcycle road casualties have remained stubbornly high, now accounting for around 20% of fatalities and 25% of seriously injured road casualties despite accounting for only 1% of all trips¹⁹.

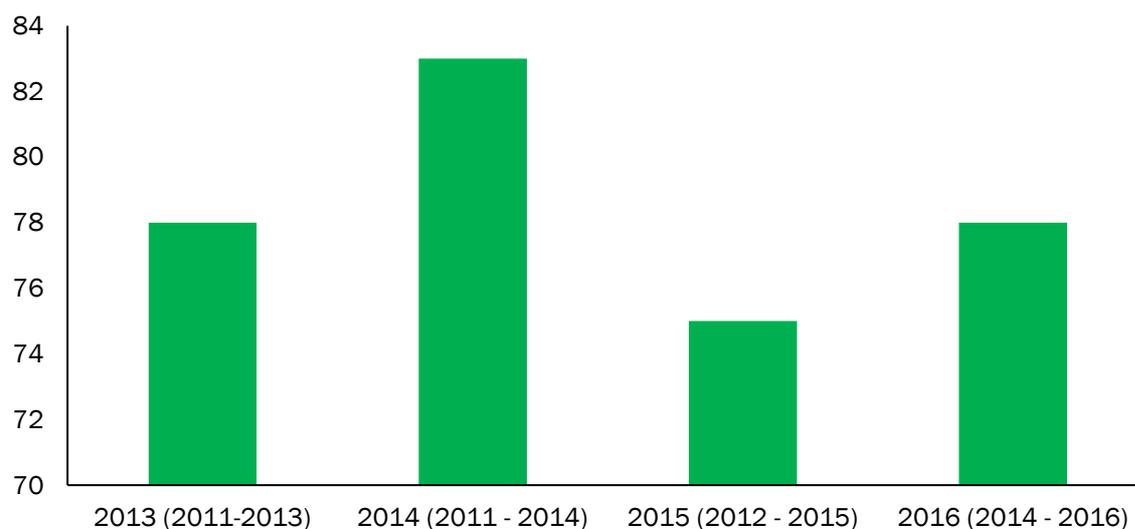
The Council wants to improve motorcycle safety, however, any measures introduced should not to the detriment of sustainable modes. Ealing Council has previously conducted its own experiment to allow motorcycles in bus lanes, however the benefits of this measure were unclear, and in fact both motorcycle and cycle casualties increased²⁰. Consequently, Ealing Council does not support permitting motorcycles in bus lanes because of adverse impacts of road safety, emissions and encouraging active travel modes. Therefore, we call on the Mayor, TfL and other boroughs to follow this approach across London. Ealing will look to work with TfL and WestTrans neighbouring boroughs to improve motorcycle safety across west London.

¹⁸ Summerskill and Marshall. Understanding Direct and indirect Driver Vision from Heavy Goods Vehicles (2016). Loughborough University/TfL

¹⁹ STATS 19 Road Casualty Data, TfL

²⁰ Bus Lane Experiments: Changes to hours of operation & Motorcycles in bus lanes, Cabinet Report (21/12/10) Ealing Council

Figure 5 Killed/Seriously Injured Road Casualty Performance



Personal safety is another issue which effects travel choices. Providing safe locations to wait with consistent lighting levels, as well as adopting a “safe last mile home” agenda, particularly for those travelling in the hours of darkness is important. For this reason, the Council is pleased that black cabs are 100% accessible, which all mini-cab offices must offer, and that Elizabeth Line stations will be staffed from first train to last.

The opportunities to deliver Outcome 2 include:

Council Deliverables

- Uxbridge Road walking and cycling corridor
- Borough 20mph limit
- Liveable Neighbourhood schemes
- School travel programme
- Behaviour change programme
- Active travel infrastructure
- Controlled Parking Zones

Other Opportunities

- New high-quality developments
- Autonomous vehicles

Borough Objectives

The relevant Transport Objectives to deliver Outcome 2 are:

1. Mode Shift – reducing the dependency on the motorised vehicle by moving trips, particularly the shorter ones, to active travel using more sustainable modes through behaviour change.

3. Improving road safety – making the Borough roads as safe as possible, particularly for those modes perceived to be more vulnerable

The relevant Transport Principles to deliver Outcome 2 are:

- A) Improve health and well-being
- C) Provide a more efficient and safe transport network

The relevant Transport Policy Goals to deliver Outcome 2 are:

1. To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.
2. To make the Borough accessible to those with a mobility impairment and reducing severance by removing the barriers (physical and motivational) to movement.
6. To reduce traffic congestion on Borough Roads through the increase of active travel modes.
7. To lobby public transport operators to achieve a frequent, reliable, safe and affordable public transport system which links people to all key destinations and services in the Borough, whilst providing improved interchange, particularly with active travel modes.
8. To make the Borough's roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling.
9. To design the Borough's streets for people not for vehicles to encourage active travel and benefit local economies
10. To ensure that economic growth and new developments contribute to increasing active travel and reduce the environmental impacts of transport through design, operation and contribution to the public realm and transport network.

Outcome 3: London’s streets will be used more efficiently and have less traffic on them

Challenges and opportunities

There are many challenges in Ealing to the delivery of Outcome 3, these are outlined below.

In terms of vehicle ownership, the 2011 census shows that 64.7% of Ealing’s households own at least one car. This was lower than the UK average of 72%, but higher than the London average of 58.4%²¹. Ealing was ranked 6th highest out of all London boroughs for total vehicle ownership (127,000)²² and 39% of all trips are by car. The number of vehicles registered in Ealing has grown in recent years and this trend will need to be reversed to meet the objectives of the MTS. This figure is owing to Ealing being an outer London borough, inner London boroughs tend to have lower car ownership.

Many car trips are very short and, in many cases, could be cycled or walked, as shown in table 3 for car trips originating in LB Ealing. A 1km (two thirds of a mile) trip can be walked in 13 minutes, whilst a 3km (2 mile) trip can be cycled in the same time at a leisurely pace.

Table 3 Car Trip Length in LB Ealing²³

Car trips	Under 1km	1-2km	2-5km	5-10km	Over 10km
Proportion	11%	20%	34%	22%	13%

Increasing numbers of freight and delivery vehicles is a concern and needs addressing. It is recognised that deliveries are essential, but with van traffic growing at 5% per year between 2012 and 2015²⁴, and on-line shopping growing at 10-12% per annum over the same period, delivery vehicles are not only increasingly contributing to traffic congestion, both through its existence and through delivery parking. Loading and delivery vehicles frequent flout parking controls and cause road safety problems, including barriers to walking and cycling. This needs to be stopped.

²¹ ONS

²² London Datastore (DfT)

²³ Travel in London 9/LTDS data 2013/14 to 2015/16, TfL

²⁴ All Change: The Future of Travel Demand and the implications for Policy and Planning (2018) The Demand Centre

There are some roads in the Borough that the Council does not manage and maintain. These other roads are part of the Transport for London Route Network (TLRN). The TLRN in the Borough consists of:

- A40
- A406 North Circular
- A312 (part – from White Hart Roundabout south to borough boundary with L.B. Hillingdon)

On Borough roads, the Council needs to provide a safe and well-maintained walking and cycling network, as well as providing bus priority where the benefits are clear, so that active travel modes are not disadvantaged. Where parking and loading provide barriers to movement, particularly to active travel modes, this needs to be reviewed and if necessary removed. Any parking which presents a road safety hazard will definitely be removed.

Peak hour trips are the most inefficient as delays and therefore emissions increase exponentially with higher volumes of traffic when the network gets overloaded²⁵. It simply is not feasible to build additional road capacity owing to cost and/or the lack of land available. Evidence suggests that building additional capacity does not actually improve congestion, instead it increases the propensity for people to drive, filling up the new capacity in a short period. Most signal timings in the Borough have been reviewed over recent years, although there will still be part of the transport programme. New or emerging demand management technologies may help to some extent, and the Council will monitor developments and adopt appropriate solutions if cost-effective.

To encourage behavioural change, the Council will review its parking charges both on street and off street. The provision and use of car clubs will be promoted to provide a realistic alternative for essential car journeys.

People and organisations also need to take responsibility for their travel actions as the Council cannot be the only body to take action. Where the Council can help is to provide a consistent message of the benefits of active travel and the issues with excessive car journeys. A communications/marketing plan has already been developed for the Council's "Get moving" campaign, and this transport messaging will piggy back on that.

Also, the physical size of cars has grown (especially their width) in recent years and this is causing problems for parking and traffic congestion in narrow streets particularly resident areas. The growing popularity of 4x4s and SUV/crossover cars is also an issue and these vehicles in particular are not slowed as much by speed humps and can be intimidating to pedestrians and cyclists owing to their size. Research shows the most popular British cars have increased in width by around 16 per cent in the past 40 years. The Ford Escort,

²⁵ Action for Roads. A Network for the 21st Century (2013) DfT

was just 1.57m wide when it was launched in 1968, then growing to 1.64m by 1985. Its modern counterpart, the Ford Focus, now stands at 1.85m across, nearly 0.3m wider.

Some of the major headline pressures stem from nationally significant projects that impact on the Borough. The construction and operation of the High Speed 2 railway (HS2) with its interchange station at Old Oak Common and the proposed expansion of Heathrow Airport. These both come against a background of an increasing population, increased financial pressures and an increasingly congested road network.

The need to meet future travel demand remains a London-wide challenge. The HS2 project will deliver substantive benefits which will include:

- A reduction in travel time between London, Birmingham and the North of England
- The release of huge capacity on the existing network, not achievable by upgrading the existing network alone
- Up to 2,000 operational and maintenance jobs
- Reduced carbon of up to a million tonnes a year by 2055

A key recent social trend has been fewer young adult drivers generally as they delay learning to drive and therefore delay owning a car. Suggested reasons include increased driving costs, use of social media/mobile phones to socialise, plus an increased proportion attending university and entering the workforce later, therefore being able to live without a vehicle.

The number of car club vehicles have recently plateaued in the Borough and certain areas such as Southall, Greenford and Northolt have very low provision as operators are reluctant to move into areas with lower income and/or high car ownership. A new approach is needed to provide vehicles in these areas of low provision.

Also, until recently car club operators have been reluctant to acquire EVs or hybrid models, but fortunately this does appear to be changing.

The Heathrow expansion proposals comprising of a Third Runway, additional supporting terminal and cargo facilities plus airspace changes in order to cater for a doubling of passenger numbers to 150 million per year by 2040. As part of the proposals Heathrow Airport has committed to no net increase in road traffic (i.e. no additional vehicle trips), a 55% public transport mode share by passengers and a 50% cut in staff car trips all by 2040.

Current enhancements in the pipeline including Elizabeth Line/Crossrail (at six trains per hour) and the Piccadilly Line upgrade are designed to serve the airport with two runways and capped at 90 million passengers per year only.

Ealing Council's position is that it opposes expansion at Heathrow. However, the decision to progress with the Heathrow expansion proposal was taken at a National Level, despite this opposition the Council is working to obtain the best possible mitigation measures for residents and the local environment should the expansion continue towards

implementation. Mitigation measures have to tackle the significant local road congestion and resulting air pollution by providing vastly improved alternatives such as significantly more and better public transport and safe cycling facilities for airport workers. Ealing Council wants Heathrow to remain a world class airport and as a part of this there should be world class compensation provided to local communities to match this ambition. There would be significant congestion, air quality and noise impacts on local communities created by an expanded Heathrow Airport. There are areas of significant social disadvantage surrounding Heathrow, such as Southall, which need to share in the benefits of a better airport.

The opportunities to deliver Outcome 3 include:

Council Deliverables

- Uxbridge Road walking and cycling corridor
- Borough 20mph limit
- 'Let's Go Southall' physical activity pilot project
- Town and local centre enhancements
- Liveable Neighbourhood schemes
- School travel programme
- Behaviour change programme
- Active travel infrastructure
- Controlled Parking Zones
- Car Clubs
- Electric Vehicle Chargepoints

Other Opportunities

- Active travel to/from stations particularly for new rail schemes
- Autonomous vehicles

Borough Objectives

The relevant Transport Objectives to deliver Outcome 3 are:

1. Mode Shift – reducing the dependency on the motorised vehicle by moving trips, particularly the shorter ones, to active travel using more sustainable modes through behaviour change.

3. Improving road safety – making the Borough roads as safe as possible, particularly for those modes perceived to be more vulnerable.

The relevant Transport Principles to deliver Outcome 3 are:

C) Provide a more efficient and safe transport network

D) Support good growth, and enhance the vibrancy and robustness of the Borough's economy

The relevant Transport Policy Goals to deliver Outcome 3 are:

1. To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.

3. To reduce and mitigate against the Borough's contribution to traffic-based air pollutants.

5. To reduce and mitigate against transport-based noise pollution.

6. To reduce traffic congestion on Borough Roads through the increase of active travel modes.

7. To lobby public transport operators to achieve a frequent, reliable, safe and affordable public transport system which links people to all key destinations and services in the Borough, whilst providing improved interchange, particularly with active travel modes.

8. To make the Borough's roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling.

9. To design the Borough's streets for people not for vehicles to encourage active travel and benefit local economies

10. To ensure that economic growth and new developments contribute to increasing active travel and reduce the environmental impacts of transport through design, operation and contribution to the public realm and transport network.

Outcome 4: London's streets will be clean and green

Challenges and opportunities

There are many challenges in Ealing to the delivery of Outcome 4, these are outlined below.

Air pollution is associated with many adverse health impacts including respiratory diseases and it is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas^{26,27}. Research indicates that annually, up to 9,000 early deaths across Greater London²⁸ and 387 early deaths within LB Ealing²⁹ have been attributed to poor air quality.

The London Borough of Ealing is meeting all of the national Air Quality Strategy objectives other than those for nitrogen dioxide (NO₂). The London Borough of Ealing is currently meeting the objectives for Particulate Matter (PM₁₀ and PM_{2.5}) but as this pollutant is damaging to health even at low concentrations, this remains a pollutant of concern. There have been concerns, and historical breaches of the air quality objectives, over a number of years regarding PM₁₀.

In Ealing an Air Quality Management Area (AQMA) has been declared covering the whole borough. The AQMA has been declared for nitrogen dioxide (NO₂; annual mean objective) and Particulate Matter (PM₁₀; 24-Hour mean objective), as both pollutants failed to meet the relevant air quality objectives. For PM₁₀, air quality objectives are now largely being achieved, but there are still widespread exceedances of NO₂, particularly along busy and congested roads. The London Borough of Ealing also has a formal responsibility to work towards reductions of PM_{2.5}, which is a fraction of PM₁₀, although the objective for this pollutant is a national rather than a local requirement.

An Air Quality Focus Area is a location that has been identified by the GLA as having high levels of pollution and human exposure. There are currently eight focus areas in the Borough. These predominantly cover the A40 and A4020 Uxbridge Road corridors which

²⁶ Environmental equity, air quality, socioeconomic status and respiratory health, 2010. Abstract available at <https://www.ncbi.nlm.nih.gov/pubmed/16234422>

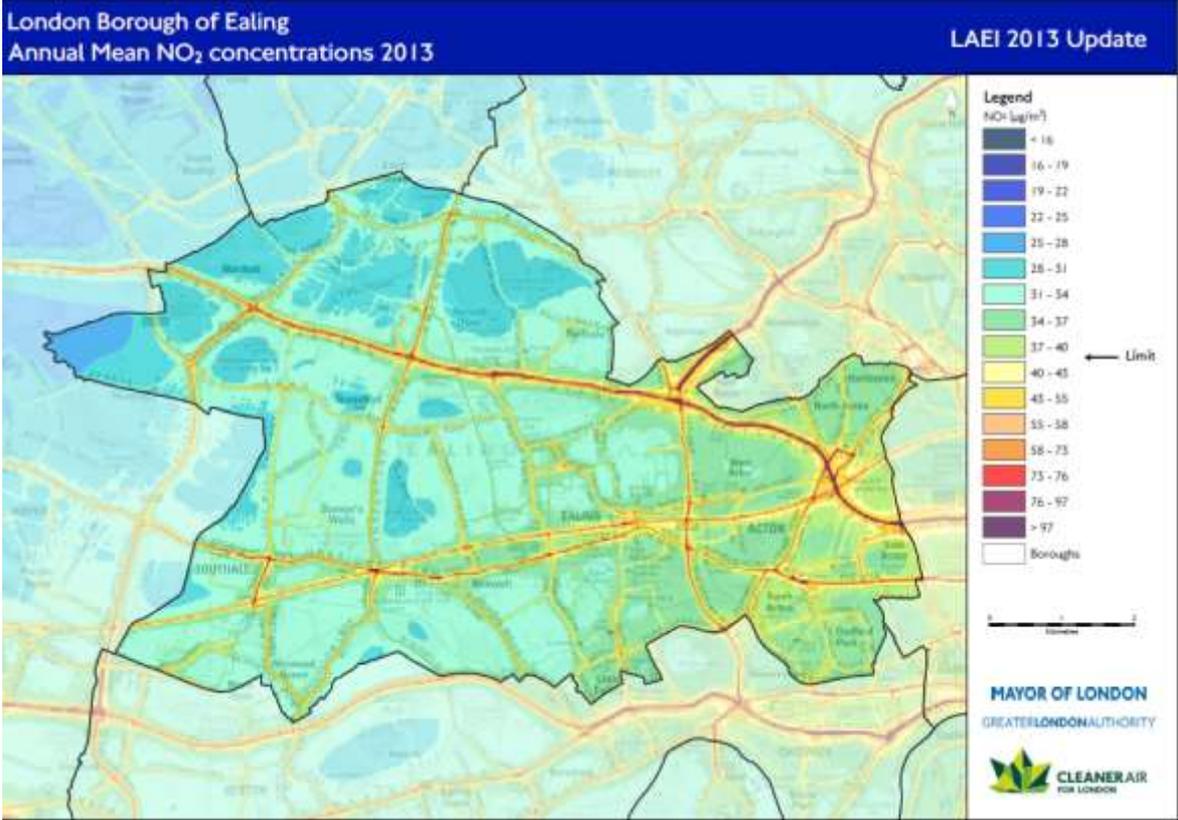
²⁷ Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006. Available at https://ukair.defra.gov.uk/assets/documents/reports/cat09/0701110944_AQinequalitiesFNL_AEAT_0506.pdf

²⁸ London.gov.uk

²⁹ Ealing Air Quality Action Plan 2017-22 (Draft)

carry high traffic flows. The east of the Borough tends to suffer most from poor air quality mainly due to the density of the road network combined with high traffic flows. However, there are hotspots of poor air quality across the Borough particularly in town centres, see Figure 6 below.

Figure 6



The opportunities to deliver Outcome 4 include:

Council Deliverables

- Uxbridge Road walking and cycling corridor
- Borough 20mph limit
- Liveable Neighbourhood schemes
- School travel programme
- Behaviour change programme
- Active travel infrastructure
- Controlled Parking Zones
- Electric Vehicle Chargepoints

Other Opportunities

- New high-quality developments
- ULEZ

Borough Objectives

The relevant Transport Objectives to deliver Outcome 4 are:

- 1. Mode Shift** – reducing the dependency on the motorised vehicle by moving trips, particularly the shorter ones, to active travel using more sustainable modes through behaviour change.
- 2. Reducing the environmental footprint of transport** – particularly improving the Borough’s air quality by encouraging the use of active travel modes and using the cleanest engines.

The relevant Transport Principles to deliver Outcome 4 are:

- A) Improve health and well-being
- B) Improve the Borough’s air quality, and other environmental enhancements
- C) Provide a more efficient and safe transport network
- D) Support good growth, and enhance the vibrancy and robustness of the Borough’s economy

The relevant Transport Policy Goals to deliver Outcome 4 are:

1. To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.
2. To make the Borough accessible to those with a mobility impairment and reducing severance by removing the barriers (physical and motivational) to movement.
3. To reduce and mitigate against the Borough’s contribution to traffic-based air pollutants.
4. To implement SuDS schemes to reduce flooding on the Highway and mitigate against transport-based pollutants getting to the Borough’s water bodies.
5. To reduce and mitigate against transport-based noise pollution.
6. To reduce traffic congestion on Borough Roads through the increase of active travel modes.
7. To lobby public transport operators to achieve a frequent, reliable, safe and affordable public transport system which links people to all key destinations and services in the Borough, whilst providing improved interchange, particularly with active travel modes.
8. To make the Borough’s roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling.
9. To design the Borough’s streets for people not for vehicles to encourage active travel and benefit local economies
10. To ensure that economic growth and new developments contribute to increasing active travel and reduce the environmental impacts of transport through design, operation and contribution to the public realm and transport network.

Outcome 5: The public transport network will meet the needs of a growing London

Outcome 6: Public transport will be safe, affordable and accessible to all

Outcome 7: Journeys by public transport will be pleasant, fast and reliable

Challenges and opportunities

There are many challenges in Ealing to the delivery of Outcomes 5, 6 and 7 these are outlined below.

Good public transport is crucial to the liveability of any city, and these modes account for around 169,000 daily trips by Ealing residents. However, the social, economic and environmental benefits extend beyond those who use it regularly;

- Travel is cheaper than owning and operating a car.
- Encourages people to have a more active healthy lifestyle, particularly as they will walk or cycle to their station or stop.
- Cuts traffic and reduces injuries and fatalities caused by traffic collisions.
- Provides accessible transport for people regardless of factors such as income or age.
- Helps foster a sense of community by greater social interaction.
- Is less stressful, rather than driving in traffic or wasting time looking for parking, public transport passengers can do other activities.
- Reduces the need for building car parks on valuable land that could have otherwise been used as highly needed and valuable development space.
- Reduces reliance on fossil fuels.
- Reduces emissions and road congestion.

Within the Borough, public transport connectivity is variable as shown in the Public Transport Accessibility Level (PTAL) map in figure 7, with Ealing Broadway having very high accessibility, level 6b. However, Park Royal, Norwood Green and parts of Greenford, Northolt, Perivale and Southall have very low accessibility levels of 1a or 1b and with a lot of scope for improvement. This is mainly due to their distance from rail/underground and/or high-frequency bus services, although 91% of Ealing Residents are within five minutes' walk of a bus service and 99% are within seven minutes (both at average walking speed). Cycling can significantly increase the catchment of public transport as more people can access stations within a given time.

Within the Borough, there are several public transport options, however these are managed and operated by other organisations:

- National Rail – (Operated by TfL Rail) Elizabeth Line/Crossrail), Great Western Railway), Chiltern and London Overground
- Underground – Operated by TfL (London Underground Ltd.). Central, District and Piccadilly lines including night services on Central (Ealing Broadway branch) and Piccadilly lines (Heathrow branch)

- Buses – many services operated by private companies contracted to TfL (TfL Buses).

Taxis and private hire vehicles can also supplement the public transport network, particularly at night for the ‘last mile’ home to complete a journey.

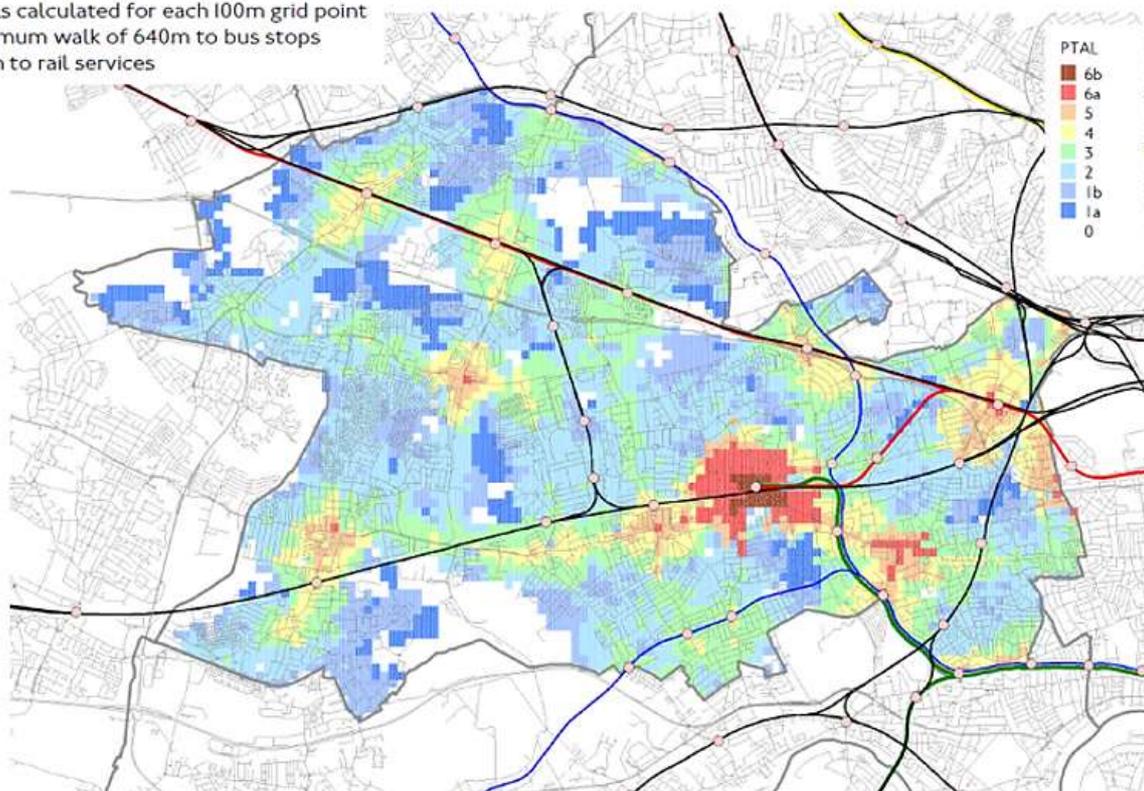
Ealing Council welcomes the London Underground modernisation which is sorely needed on the Piccadilly and District Lines because the infrastructure is life-expired. However, we have strong concerns over the Piccadilly Line proposed extension to Ealing Broadway in place of the District Line and would like to see evidence that this best serves the network as a whole.

The need to meet future travel demand remains a London-wide challenge. Some of the major headline pressures are the construction and operation of the High Speed 2 railway (HS2) with its interchange station at Old Oak Common and the proposed expansion of Heathrow Airport. These both come against a background of an increasing population, increased financial pressures and an increasingly congested road network.

Figure 7 Ealing - standard PTAL map

Ealing – standard PTAL map

PTALs calculated for each 100m grid point
 Maximum walk of 640m to bus stops
 960m to rail services



The opportunities to deliver Outcomes 5, 6 and 7 include:

Council Deliverables

- Uxbridge Road walking and cycling corridor
- Liveable Neighbourhood schemes
- School travel programme
- Behaviour change programme
- Active travel infrastructure
- Controlled Parking Zones
- Station access schemes
- Station access (public realm) enhancements
- Bus stop accessibility

The Council mainly has a lobbying and influencing role, which it will continue to do and will focus of its lobbying will be to ensure that:

- The bus network is continued to be developed by (including night services) TfL with priority given to those locations where PTAL are low.
- To monitor and assess the impacts of the two major railway improvement projects (HS2 and the Elizabeth Line) to ensure they deliver the benefits which have been committed and that the construction does not adversely impact on residents without appropriate mitigation measures.
- To seek improvements to the London Overground network in terms of frequencies and destinations.
- To seek improvements to the Greenford Line, including frequency, Sunday service, reliability and through trains to other destinations
- To ensure that London Underground delivers the proposed signalling improvements to the Piccadilly Line without further delay and rolls out the 'Night Tube' on remaining Underground Lines.

Other Opportunities

- New high-quality developments
- public transport upgrade programmes
- New public transport infrastructure

Borough Objectives

The relevant Transport Objectives to deliver Outcomes 5, 6 and 7 are:

- 1. Mode Shift** – reducing the dependency on the motorised vehicle by moving trips, particularly the shorter ones, to active travel using more sustainable modes through behaviour change.
- 2. Reducing the environmental footprint of transport** – particularly improving the Borough's air quality by encouraging the use of active travel modes and using the cleanest engines.
- 3. Improving road safety** – making the Borough roads as safe as possible, particularly for those modes perceived to be more vulnerable

The relevant Transport Principles to deliver Outcomes 5, 6 and 7 are:

- A) Improve health and well-being
- B) Improve the Borough's air quality, and other environmental enhancements
- C) Provide a more efficient and safe transport network
- D) Support good growth, and enhance the vibrancy and robustness of the Borough's economy

The relevant Transport Policy Goals to deliver Outcomes 5, 6 and 7 are:

1. To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.
2. To make the Borough accessible to those with a mobility impairment and reducing severance by removing the barriers (physical and motivational) to movement.
3. To reduce and mitigate against the Borough's contribution to traffic-based air pollutants.
5. To reduce and mitigate against transport-based noise pollution.
6. To reduce traffic congestion on Borough Roads through the increase of active travel modes.
7. To lobby public transport operators to achieve a frequent, reliable, safe and affordable public transport system which links people to all key destinations and services in the Borough, whilst providing improved interchange, particularly with active travel modes.
8. To make the Borough's roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling.
9. To design the Borough's streets for people not for vehicles to encourage active travel and benefit local economies
10. To ensure that economic growth and new developments contribute to increasing active travel and reduce the environmental impacts of transport through design, operation and contribution to the public realm and transport network.

Outcome 8: Active, efficient and sustainable travel will be the best option in new developments

Challenges and opportunities

There are many challenges in Ealing to the delivery of Outcome 8, these are outlined below.

The Ealing Council wants to support and grow the local economy to provide a range of goods, services and local employment within the Borough. However, economic growth should deliver benefits for local people (including housing) and be environmentally sustainable particularly in terms of reducing the need to travel and with minimal traffic growth. Active travel will be encouraged by placemaking and good street design which minimising reliance and use of vehicles.

The Council's approach emphasises the need for achieving good growth across the Borough in the face of several challenges. The approach is growth focused and recognises the doubling of housing targets (with affordable homes) and economic growth and considers how this can be accommodated, plus considers what other demands will be generated, for example in terms of need for green space, transport, education and health provision.

The Council is well placed to play an active role through our work with engaging with local businesses through the Ealing Business Partnership (EBP) and through Business Improvement Districts (BIDs) (Ealing Broadway, West Ealing and Acton) to encourage businesses to change their perception that fewer car parking spaces or limited parking availability equals loss of revenue. In fact, research into travel habits and shopping in Southall demonstrated that customers who travelled on foot spent more on local shopping as opposed to those using cars³⁰. These initiatives and projects also demonstrate that from an economic point of view, the benefits of revenue generated for local businesses by increased footfall through street events and road closures and which contribute to placemaking.

The Regeneration Team have delivered a number of public realm improvements in partnership with Highways and Transport colleagues with external funding from the GLA's High street fund and New Homes Bonus to deliver events across the Borough- Examples include Churchfield Road, Acton improvements works and the Bond Street Make it Sunday street events (road closures).

³⁰ Southall Town Centre, Travel Habits and Spend (2012) Accent Research

The MTS sets out seven transport principles to enable good growth, which the Council will adopt. The principles are that development should:

- Have good access to public transport
- Be high density, mixed use developments
- Enable people to walk and cycle
- Be car free or low-car developments
- Incorporate inclusive, accessible design
- Enable carbon free transport
- Enable efficient deliveries/loading

The Borough has significant housing and school building targets to achieve and many significant developments sites, and these are detailed in the Local Plan. It is vital that new developments do not cause transport problems and the transport provision is self-sufficient. It is unfair that the Council should retrospectively pay for poorly provided transport infrastructure and services instead of the profit-making developers. If, for some reason the developer is unable to provide the schemes and services which make up the above principles, then the developer should be compensating the Council or the service provider accordingly.

The Local Plan sets out parking standards for car and cycles, and these should be adhered to. All car parking bays should be as a minimum passively provide (e.g. ducting) for Electric vehicle charging points (EVCPs).

It is recognised that parking has a large impact on scheme design and is a very emotive subject for some, but parking takes up a lot of road space and cars are parked stationary for 95% of the time on average. The Council will, therefore, seek to reduce parking at new developments and seek to remove parking where it is a barrier to movement, particularly active travel routes.

Development at Old Oak Common will come under the Development Corporation (OPDC), but it is expected that their transport strategy and planning will follow this strategy.

The Heathrow Airport proposed expansion will also have a significant impact given its proximity to the Borough and the number of employees who live in the Borough. As part of the initial planning consultation, it has been claimed that there will be no additional vehicular trips because of the expansion. The Council intend to keep Heathrow to this target. For this to happen, there will need to be significant investment in active travel modes, particularly public transport. Given that the airport is open 24 hours a day every day of the year, the only realistic solution is to provide a high frequency, good-quality public transport service at all times of the day and night.

The opportunities to deliver Outcome 8 include:

Council Deliverables

- Uxbridge Road walking and cycling corridor
- Borough 20mph limit
- 'Town and local centre' enhancements
- SUDS schemes
- Liveable Neighbourhood schemes
- School travel programme
- Behaviour change programme
- Active travel infrastructure
- Controlled Parking Zones
- Electric Vehicle Chargepoints
- Station access (public realm) enhancements

Other Opportunities

- Active travel to/from stations particularly for new rail schemes
- New high-quality developments

Borough Objectives

The relevant Transport Objectives to deliver Outcome 8 are:

- 1. Mode Shift** – reducing the dependency on the motorised vehicle by moving trips, particularly the shorter ones, to active travel using more sustainable modes through behaviour change.
- 2. Reducing the environmental footprint of transport** – particularly improving the Borough's air quality by encouraging the use of active travel modes and using the cleanest engines.
- 3. Improving road safety** – making the Borough roads as safe as possible, particularly for those modes perceived to be more vulnerable.

The relevant Transport Principles to deliver Outcome 8 are:

- A) Improve health and well-being
- B) Improve the Borough's air quality, and other environmental enhancements
- C) Provide a more efficient and safe transport network
- D) Support good growth, and enhance the vibrancy and robustness of the Borough's economy

The relevant Transport Policy Goals to deliver Outcome 8 are:

1. To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.
2. To make the Borough accessible to those with a mobility impairment and reducing severance by removing the barriers (physical and motivational) to movement.
3. To reduce and mitigate against the Borough's contribution to traffic-based air pollutants.
5. To reduce and mitigate against transport-based noise pollution.
6. To reduce traffic congestion on Borough Roads through the increase of active travel modes.
7. To lobby public transport operators to achieve a frequent, reliable, safe and affordable public transport system which links people to all key destinations and services in the Borough, whilst providing improved interchange, particularly with active travel modes.
8. To make the Borough's roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling.
9. To design the Borough's streets for people not for vehicles to encourage active travel and benefit local economies
10. To ensure that economic growth and new developments contribute to increasing active travel and reduce the environmental impacts of transport through design, operation and contribution to the public realm and transport network.

Outcome 9: Transport investment will unlock the delivery of new homes and jobs'

Challenges and opportunities

There are many challenges in Ealing to the delivery of Outcome 9, these are outlined below.

Ealing faces significant development pressure and associated challenges and has been given a target to build 34,000 homes in the next ten years in the draft London Plan (incorporating the Old Oak Park Royal Opportunity Area). Such growth is likely to compound many existing issues (see local context section) particularly traffic congestion, road safety and air quality. In order to meet these challenges, development will have to build in sustainable travel from the outset including being no car or low car parking provision, have high quality cycle storage and minimise the need to travel by having basic services provided locally. Significant new infrastructure, such as new bridges, will also be required in certain locations to facilitate good growth.

There are a number of transport investment proposals that can unlock new development in Ealing. These include:

- Elizabeth Line
- HS2 Old Oak Common Station
- West London Orbital Railway
- Brentford – Southall Rail Link
- Greenford Line enhancement
- London Underground Upgrades
- Canal towpath enhancements
- Potential Bus Rapid Transit (BRT) and Demand Responsive Bus Services (DRBS)
- Active travel infrastructure

For new rail and bus schemes the Council will work with its partner organisations to ensure that the stations and stops are well-integrated into the areas they serve. Provision of high-quality public realm, pedestrian and cycle infrastructure is crucial.

The proposed Heathrow Airport expansion offers both challenges and opportunities for Ealing. Challenges include providing freight consolidation and preventing significant traffic growth, particularly at night. However, there could also be opportunities to enhance the transport network. For instance, enhancements to the Elizabeth Line, local bus services and active travel infrastructure. However, the Council wants to see appropriate mitigation of the transport and environmental impacts. Further details are provided in the sections above.

The opportunities to deliver Outcome 9 include:

Council Deliverables

- Station access (public realm) enhancements
- Behaviour change programme

- Active travel infrastructure
- Controlled Parking Zones
- Electric Vehicle Chargepoints

Other Opportunities

- Active travel to/from stations particularly for new rail schemes
- New high-quality developments
- Integration of new public transport schemes into local areas

Borough Objectives

The relevant Transport Objectives to deliver Outcome 9 are:

- 1. Mode Shift** – reducing the dependency on the motorised vehicle by moving trips, particularly the shorter ones, to active travel using more sustainable modes through behaviour change.
- 2. Reducing the environmental footprint of transport** – particularly improving the Borough’s air quality by encouraging the use of active travel modes and using the cleanest engines.
- 3. Improving road safety** – making the Borough roads as safe as possible, particularly for those modes perceived to be more vulnerable.

The relevant Transport Principles to deliver Outcome 9 are:

- A) Improve health and well-being
- B) Improve the Borough’s air quality, and other environmental enhancements
- C) Provide a more efficient and safe transport network
- D) Support good growth, and enhance the vibrancy and robustness of the Borough’s economy

The relevant Transport Policy Goals to deliver Outcome 9 are:

1. To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.
4. To implement SuDS schemes to reduce flooding on the Highway and mitigate against transport-based pollutants getting to the Borough’s water bodies.
6. To reduce traffic congestion on Borough Roads through the increase of active travel modes.
7. To lobby public transport operators to achieve a frequent, reliable, safe and affordable public transport system which links people to all key destinations and services in the Borough, whilst providing improved interchange, particularly with active travel modes.

8. To make the Borough's roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling.
9. To design the Borough's streets for people not for vehicles to encourage active travel and benefit local economies
10. To ensure that economic growth and new developments contribute to increasing active travel and reduce the environmental impacts of transport through design, operation and contribution to the public realm and transport network.

Relevant strategy documents

There are many policy documents and strategies, at national, regional and local levels which have an impact on the LIP and Transport Strategy. In addition, there are other strategies being worked on which will influence this Strategy when they are complete.

The new MTS clearly sets out the new Mayoral priorities including Healthy Streets, better public transport and supporting good growth. Areas such as provision for pedestrians and air quality have been given a new emphasis. The Transport Strategy also promotes the priorities of the Ealing Council's new administration including a focus on high-quality, safe provision to grow cycling, enhanced public transport and promoting sustainable and good growth.

Mayor's Transport Strategy

This is the key relevant strategy document for the LIP as it sets the context for all content whilst also providing an excellent source of background data and reasoning for policies

The Mayor of London's main objective for transport, as set out in the Mayor's Transport Strategy 2018 (MTS), is for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041. The strategy uses the Healthy Streets Approach to make health and personal experience the priority. The Healthy Streets Approach will be applied to the whole transport system to help create:

- Healthy Streets and healthy people: including schemes that introduce and expand the Ultra- Low Emission Zone, eliminate deaths and serious injuries on London's streets and develop a London-wide network of cycle routes;
- A good public transport experience; including upgrading and extending the Tube network, creating more bus priority, and making stations and vehicles more accessible
- New homes and jobs, including building new homes on TfL land and making London a better place to live and work.

The MTS also highlights the Old Oak Park Royal Development Corporation (OPDC) area in North Acton extending into LB Brent and LB Hammersmith & Fulham as the largest growth area in London. Schemes including the West London Orbital (WLO) passenger rail link plus express bus services on the A312 and A406 corridors serving LB Ealing are also identified.

London Plan (draft)

The Mayor of London is required to publish a Spatial Development Strategy and keep it under review. This is the London Plan and a draft, new version was published in December 2017, with a final version expected in winter 2019. It is the strategic plan for London, and sets out an integrated economic, environmental, transport and social framework for the development of London over the next 25 years.

It shares and references policies in the MTS, but also sets maximum car and minimum cycle parking space standards, with which boroughs and developers are expected to comply. Boroughs are also required to produce a Local Plan which sets out the Borough's spatial development policies at a more local level.

London Environment Strategy (draft)

The London Environment Strategy (currently in draft form) ties together the Mayor's Environmental policies, including those in the MTS and draft London Plan. This strategy includes measures and targets for air quality, green infrastructure, climate change mitigation and energy, plus ambient noise. The strategy identifies poor air quality as a serious public health issue, as it causes early deaths for up to 9,000 people annually in London. The target for London to be a zero emission and zero carbon city by 2050 is also stated in the document.

Other Regional Documents

In addition to the above, other documents published by TfL and the GLA, which influenced the production of the LIP include:

- Economic Development Strategy, 2017-18
- Vision Zero for London, 2017
- Healthy Streets for London, 2017
- Better Environment, Better Health, 2013
- Mayor's Climate Change Adaption Strategy, Managing risks and increasing resilience, 2011

Borough Plan

The Borough Plan sets the strategic direction and vision for the Borough for the 2018-22 period. The Ealing Local Strategic Partnership is responsible for assuring how partners collectively achieve across the Outcome Targets and for influencing their organisations to deliver its priorities. The Outcome Targets provide the direction of travel for each outcome in terms of performance management and where the Borough needs to improve.

The Corporate Plan outlines the Council's priorities for improvement for 2018-22 through its Transformation Targets and the key Activities that will help achieve these targets. These activities are reviewed every year to ensure it always reflects the most important priorities for improvement.

Local Plan

The Local Plan sets out the Council's vision and a planning framework for the future development for the Borough, addressing needs and opportunities in relation to housing, the economy, community facilities and infrastructure. It also acts as a basis for safeguarding the environment, adapting to climate change and securing good design. It is

a critical tool in guiding decisions about individual development proposals. It (together with any neighbourhood plans that have been brought into force) is the starting-point for considering whether applications can be approved.

Air Quality Action Plan 2017-22 (draft)

Ealing Council declared its whole borough an Air Quality Management Area (AQMA) for the most harmful pollutants of Particulate matter (PM10 24 hour mean objective) and nitrogen dioxide (NO2 annual mean objective) in the year 2000. The Air Quality Action Plan (AQAP) contains proposals to improve air quality in Ealing with the aim of achieving the National Air Quality Objectives. The actions included within the AQAP are:

- Cleaner transport: road transport contributes to around half of air pollution in London. We need to incentivise a change to more walking, cycling, public transport and ultra-low emission vehicles (such as electric).
- Public health and awareness raising: increasing awareness can drive behavioural change to lower emissions as well as to reduce exposure to air pollution;
- Delivery servicing and freight: light and heavy goods vehicles (usually diesel-fuelled), vehicles with high NO2 emissions;
- Council fleet actions: cleaning our own fleet of light and heavy goods vehicles, usually diesel-fuelled vehicles with high NO2 emissions to lead by example.
- Cutting emissions from developments and buildings: these account for about 15% of the nitrogen oxides (NOX) emissions; and
- Localised solutions: these seek to improve the environment of neighbourhoods through a combination of measures

The Ealing Air Quality Action Plan is currently in draft form awaiting formal approval.

3. The Delivery Plan and Performance Management

Introduction

This chapter sets out the Council's Delivery Plan for achieving the objectives of this LIP. It includes:

- Linkages to Mayor's Transport Strategy priorities
- A list of potential funding sources for the period 2019/20 to 2021/22;
- Long-term interventions beyond 2022
- A three-year indicative Programme of Investment for period 2019/20 to 2021/22
- A detailed annual programme for 2019/20

Outline descriptions of transport projects and initiatives are shown in Table 4 and figure 8 in this section.

Links to the Mayor's Transport Strategy priorities

The Delivery Plan was developed to align the Borough's projects and programmes with the policy framework of the Mayor's Transport Strategy, the overarching mode share aim, each of the nine outcomes, and the relevant policies and proposals.

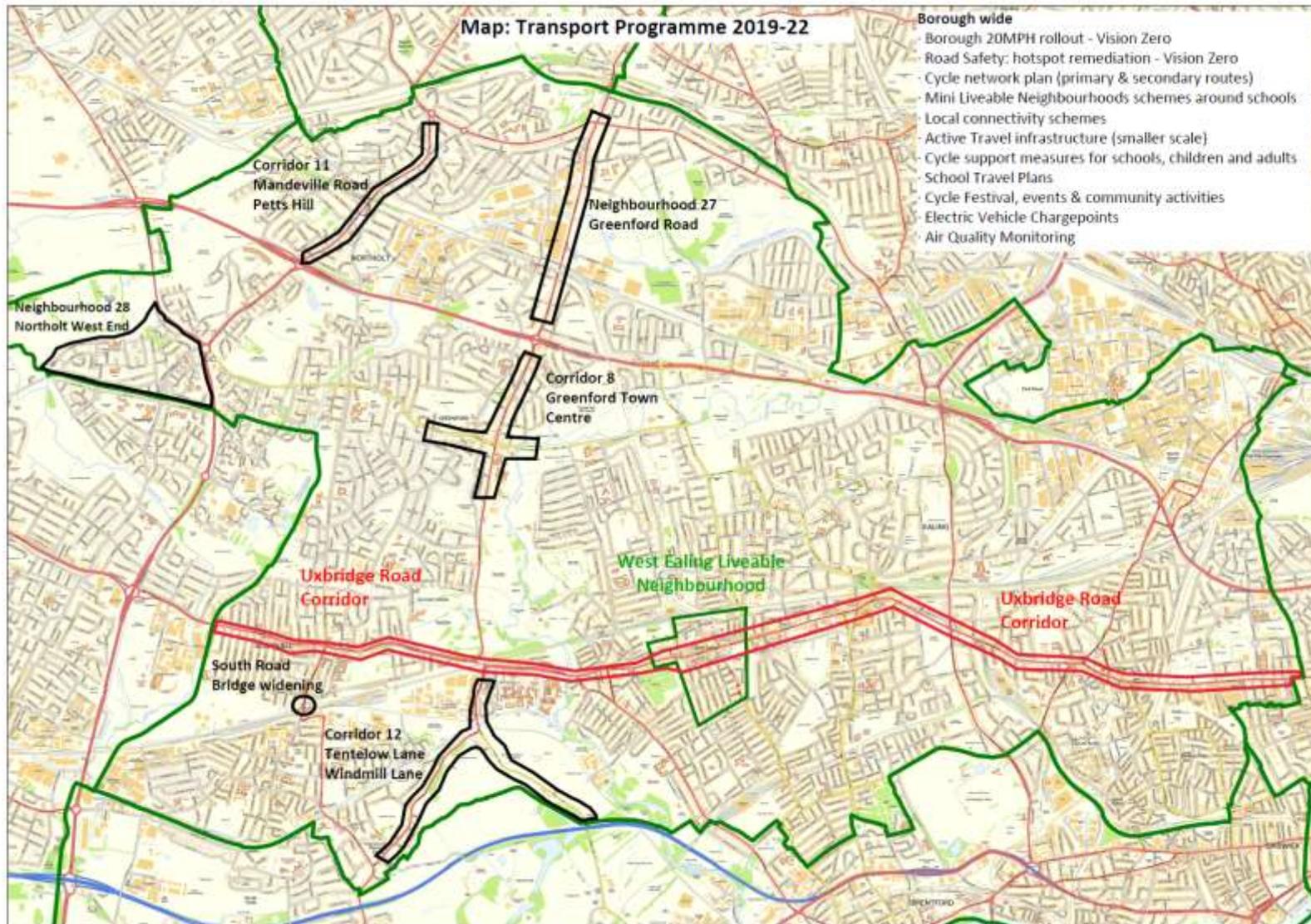
TABLE 4 - Linkages between LIP projects and programmes and the Mayor's Transport Strategy outcomes

Project / Programme	MTS mode share	MTS outcomes							
	Improving active, efficient and sustainable mode share	No 1:-Active	No 2:- Safe	No 3:-Efficient	No 4:- Clean & Green	No 5:- Connected	No 6:- Accessible	No 7:- Quality	Nos 8 & 9 Sustainable Growth/Unlocking
Corridors and Neighbourhoods									
Uxbridge Road Corridor Design & implementation of walking & cycling infrastructure on Uxbridge Road, includes improvements for Acton, Ealing Broadway, West Ealing, Hanwell & Southall town centres	✓	✓	✓	✓	✓	✓	✓	✓	✓
South Road Bridge Widening Enhancements including active travel & new developments provision	✓		✓	✓	✓	✓	✓	✓	✓
Borough 20mph -Vision Zero Rollout of 20mph across the Borough	✓	✓	✓	✓	✓		✓		
Road Safety: Hotspots Remediation -Vison Zero Investigation & implementation of targeted road safety measures	✓	✓	✓	✓	✓		✓		
Cycle network plan Measures to create a borough-wide safe & direct cycling network	✓	✓	✓	✓	✓				✓
Mini Liveable Neighbourhoods schemes around schools Local school-based programmes of walking, cycling, traffic reduction & air quality improvements	✓	✓	✓	✓	✓		✓		✓
Local connectivity schemes Measures to create local safe and direct walking & cycling links	✓	✓	✓	✓	✓				✓

Future Feasibility, Monitoring & data collection Preparation work for future projects, including data & analysis, studies & monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓
Residual Corridor & Neighbourhood schemes Completion of remaining CANs schemes including: streetscape/placemaking measures to support walking, cycling, road safety and buses Locations: Corridor 8 Greenford Town Centre Corridor 11 Mandeville Road, Northolt Corridor 12 Tentelow Lane & Windmill Lane, Southall Neighbourhood 27 Greenford Ave, Hanwell Neighbourhood 28 Northolt West End	✓	✓	✓	✓	✓	✓	✓	✓	
Active Travel Infrastructure Small-scale walking & cycling improvements	✓	✓	✓	✓	✓				✓
Cycle Support Measures Activities to encourage & support cycling including within schools	✓	✓	✓	✓	✓				✓
Core Supporting Measures									
School Travel Plans & Road Safety	✓	✓	✓	✓	✓	✓	✓		✓
Communications, Travel Awareness, Events	✓	✓	✓	✓	✓	✓	✓	✓	✓

Other Supporting Measures									
Electric Vehicles support	✓	✓		✓	✓				✓
Air Quality Monitoring	✓	✓		✓	✓				✓
WestTrans contribution & Ealing Council Travel Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓
West Ealing Liveable Neighbourhood Area-wide programme of walking, cycling, placemaking & air quality improvements	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cycle Quietway Completion of the Ealing to Greenford Cycle Quietway	✓	✓	✓	✓	✓				✓
Crossrail Complementary Measures Capacity & access improvements to five Elizabeth Line/Crossrail stations (Southall, Hanwell, West Ealing, Ealing Broadway & Acton Main Line) including placemaking & cycle parking	✓	✓	✓	✓	✓	✓	✓	✓	✓

Figure 8



TfL Business Plan

In developing and preparing the Council's work programme (outlined in the Delivery Plan), the Borough has considered the Mayor's aspiration to deliver the major projects in TfL's Business Plan and the milestones associated with these projects, including major infrastructure associated with Growth Areas and Opportunity Areas.

The following TfL projects have implications for the Borough of Ealing.

Elizabeth Line/Crossrail

The Elizabeth line will further enhance West-East journeys in London and beyond. For Ealing, five of its stations will be served by the Elizabeth line, which will enable better and more efficient journeys both within and to/from the Borough. Along with a greater train frequency, station improvements such as step-free access, lifts, and multi-modal interchange enhancements are being delivered.

Healthy streets: more walking and cycling

Liveable Neighbourhoods

In 2017, Ealing Council successfully bid for a Liveable Neighbourhood project in West Ealing. This aims to improve quality of life across a significant area by reducing traffic and encouraging walking, cycling and the use of public transport. This includes comprehensive improvements along the Broadway and to parallel quieter routes, public realm improvements, reducing rat-running in the adjoining residential areas and providing new walking and cycling routes, including links to the Elizabeth line station.

The Council also wants to implement these types of measures on a smaller scale based on key school sites to encourage children to walk and cycle and reduce traffic to benefit local residents in areas across the Borough.

Vision Zero

The Council is actively working to reduce accidents involving killed or seriously injured drivers and passengers. As a step towards Vision Zero, most of Ealing now has a 20mph limit and the programme will be implemented across the whole of the Borough by 2021. This will help reduce the number and severity of traffic collisions. The Borough will also seek to make improvements to collision hot spots where engineering solutions will help reduce the number and severity of collisions.

Improving Air Quality

In early 2019, the Council will roll out EVCPs across the Borough. Initially these will comprise of lamp column charging points and on-street fast charging points are part of the Source London network. The Council are also working with TfL to provide Rapid EVCPs at key locations. It is planned to install more charge points in future phases to further grow this network. Where possible the Council will seek to ensure operators of EVCPs use renewable energy.

The Council is working with TfL on proposed low/zero emission bus corridors on Uxbridge Road and is seeking to make significant and large-scale improvements to the cycle network across the Borough.

A good public transport experience

In addition to capacity and step-free access improvements on the Elizabeth Line, four underground stations within the Borough are due to be upgraded in the next few years, and plans are being made to make a significant improvement to North Acton Station. All bus stops in the Borough comply with TfL's accessibility guidance, although some hail and ride sections need upgrading to permanent accessible stops.

TfL's four-line modernisation project will deliver a 33% capacity increase across all four lines. For Ealing, only the District line runs into the Borough (Ealing Broadway branch) out of the four lines. While increased capacity is welcome, this needs to be done alongside accessibility improvements in stations; we welcome TfL's programme of investment from TfL to improve accessibility at Tube stations across the network, making 40 percent of Tube stations step-free by 2022.

Additionally, as part of the Deep Tube Upgrade Programme, of the three stations serviced by the District line (Acton Town, Ealing Common, Ealing Broadway), Ealing Broadway could potentially lose its District line service, which will be replaced by a Piccadilly line service. This could potentially impact the commute of Chiswick Business Park workers who live in Ealing and start their commute at Ealing Broadway.

The Council will monitor TfL's plans to convert the District Line into Ealing Broadway to the Piccadilly Line due to concerns about frequency and the time of travel to some destinations as a result.

New homes and jobs

The Old Oak and Park Royal Development Corporation (OPDC) is developing a whole new suburb and community for west London. The Council and the OPDC are working closely to ensure that the investment in rail infrastructure projects HS2 and the Elizabeth line will be used to create new opportunities for development within the Old Oak and Park Royal industrial areas.

Crossrail has significantly increased the development opportunities surrounding the stations served, particularly in Southall where developments are expected to provide up to 6,000 new homes.

The proposed West London orbital could also provide opportunity for additional infill sites close to the route as well as providing interchange to HS2 via the proposed new Old Oak Common Lane station.

Sources of funding

Table 5 below identifies potential funding sources for implementation of our LIP, including LIP funding allocation from TfL, contributions from the Council's own funds, and funding from other sources.

The key source of funding is the Borough's LIP allocation. Figures provide by TfL indicate that the Borough will receive £8.211M over the 2019-22 period.

In addition to the above, the Council will receive £7.888M from TfL between 2019 and 2022 in response the successful West Ealing Liveable Neighbourhood bid:

The Council plans to submit the following bids to TfL for additional funding to deliver the MTS in LB Ealing:

- a. Ealing Broadway Liveable Neighbourhood
- b. The Green, Southall Liveable Neighbourhood

The Council also uses its own resources and resources from developers to pursue local objectives and ensure that the non-principal road network remains in a safe and serviceable condition.

The funds available from developers from section 106 planning agreements are projected to be £1.2M over the 2019-22 period.

TABLE 5 - Funding for LIP delivery				
Funding source	2019/20	2020/21	2021/22	Total
	£M	£M	£M	£M
TfL/GLA funding				
LIP Formula funding – Corridors & Supporting Measures	2.637	2.637	2.637	7.911
Local Transport Fund	0.100	0.100	0.100	0.300
Discretionary funding				
Liveable Neighbourhoods	4.063	3.825	TBC	7.888
Mayor’s Air Quality Fund	TBC	TBC	TBC	TBC
Strategic funding				
Crossrail Complementary Measures#	5.000	0	0	5.000
Cycle Quietway	0.160	0.015	TBC	0.175
Bus Priority/Low Emission Bus Zone	0.400	0.400	0.400	1.200
GLA funding (Housing)	2.000	4.500	4.500	11.000
Principal Road Renewal	1.000	1.000	1.000	3.000
Sub-total	15.360	12.4776	8.637	36.474
Borough funding				
Capital funding (High Streets)	0.050	0.050	0.050	0.150
Parking revenue	0.917	0.917	0.917	2.751
Sub-total	0.967	0.967	0.967	2.901
Other sources of funding				
S106*	0.400	0.400	0.400	1.200
HS2 Road Safety Fund	0.366	0.366	0.368	1.100
Sport England (Let’s Go Southall)	TBC	TBC	TBC	TBC
Heathrow Area Travel Forum	TBC	TBC	TBC	TBC
Sub-total	0.766	0.766	0.768	2.300
Total	17.093	14.210	10.372	41.675

*Projected base funding level

#Subject to station build programme and TfL design review

Long-Term interventions to 2041

In the medium to long-term the Council believes that a number of significant, but currently unfunded, investments will be required to ensure the economic and social vitality of the Borough. These are shown in Tables 6 and 7 below with indicative funding and indicative but uncommitted timescales.

TABLE 6 - Long-term Borough interventions up to 2041				
Project	Approx. date(s)	Indicative cost £M	Likely funding source	Comments
Uxbridge Road Corridor (walking & Cycling)	2018-2026	£12	LB Ealing, TfL & developer contributions	Multi-stage, medium term, Borough project to give active travel provision step change on key movement corridor including red route parking control.
Liveable Neighbourhood Scheme in Ealing Broadway	2021-2024	£10+	LB Ealing, TfL & developer contributions	Healthy Streets based project for Metropolitan town centre needing public realm enhancement
Liveable Neighbourhood Scheme in The Green, Southall	2023-2026	£7+	LB Ealing, TfL & developer contributions (including HAL)	Healthy Streets based project for congested local centre needing public realm enhancement
Heathrow Mitigation (Southall based)	2020 onwards	Up to £75	LB Ealing, developer contributions (including HAL)	Mitigate traffic, emissions, noise & other impacts for local community. Public transport & active travel enhancements.
Implement business parking zones on industrial estates	2020 onwards	£5+	LB Ealing & developer contributions	Effectively manage roadscape including reallocation to active travel
Investigate workplace parking levies (WPPL) in business locations	2020 onwards	TBC	LB Ealing, LB Brent, OPDC, TfL & developer contributions	Prepare scheme feasibility, survey work & consultation programme

Investigate Demand-Responsive Bus Service (DRBS) in Park Royal area.	2020 onwards	TBC	WPPL income, LB Ealing, LB Brent, OPDC, TfL & developer contributions	Prepare scheme feasibility, survey work & consultation
Replacement cycle & pedestrian bridge Merrick Road, Southall.	2020	£6	LB Ealing & developer contributions	Replace condemned structure & reinstate traffic-free active travel link corridors across mainline railway
Canal towpath enhancement - Canal & River Trust	2019 onwards	TBC	TfL Quietways Funded, Sport England & Canal & River Trust Funded	To create traffic-free active travel corridors. Includes personal security improvements.
Borough-wide cycle network	2041	Estimated £100	LB Ealing, TfL & developer contributions (including HAL)	Cycle network on all classified roads, segregated cycle lanes where possible

TABLE 7 – Other long-term interventions up to 2041

Project	Approx. date(s)	Indicative cost £M	Likely funding source	Comments
Elizabeth Line	Current-TBC	£16,000 Total	DfT/TfL	Completion date TBC
HS2 Railway	2020-2026	£56,000 Total	DfT	Includes Old Oak Common interchange station
Proposed Heathrow Airport Expansion	2020-2026	£14,000 Total	HAL	Proposed airport expansion, including public transport enhancements
West London Orbital Railway (WLO)	2025-2030	Estimated: £250	DfT, West London Boroughs, TfL & developer contributions	New passenger rail link for West/North London growth areas/centres. Project currently at GRIP stage 1.
Old Oak Common Lane Station	2025-2030	TBC	OPDC, TfL & developer contributions	New Station on London Overground (& potentially WLO) for interchange with HS2 Old Oak station. Currently at GRIP stage 3.
North Acton station enhancement	2021	£30	OPDC, TfL & developer contributions	Station expansion including step-free access.
Brentford - Southall (Elizabeth Line) Passenger Rail Link	Approx. 2022	Estimated: £40-60	DfT & developer contributions	New link to Brentford growth area. Project currently at GRIP stage 4. GRIP stage 5 (detailed design) mid 2019.
Four Line Modernisation (4LM) Sub-Surface Underground Lines	2023	£5,400 Total	TfL	Modernisation for District, Hammersmith & City, Metropolitan, Circle, lines, adding 33% more capacity.

Deep Tube upgrade programme, Piccadilly & Central Lines London Underground	Piccadilly 2026 Central 2030	£1,500 Total	TfL	Piccadilly Line: New trains & additional trains plus line re-signalling for higher service frequency Central Line: Re-signalling and new trains
Station Accessibility improvements	2041	TBC	TfL/Network Rail/DfT	Create step-free access for all Underground & rail stations
London Bus fleet modernisation	2020	TBC	TfL	Retro-fitting/replacement of existing vehicles to create cleaner vehicles
Heathrow Mitigation (wider-area)	2020 onwards	TBC	DfT, developer contributions (including HAL)	Mitigate traffic, emissions, noise & other impacts for communities. Public transport & active travel enhancements.
Bus Rapid Transit in West London	2020 onwards	TBC	DfT, West London Boroughs, TfL, HAL & developer contributions	Step-change public transport links for outer London centres especially on orbital routes.

Indicative Programme of Investment 2019-22

The three-year indicative Programme of Investment has been completed in the table 8 below.

TABLE 8 - Three-year indicative programme of investment for 2019/20 to 2021/22			
The table summarises, at a programme level, the borough's proposals for the use of TfL borough funding in the period 2019/20 – 2021/22.			
London Borough of Ealing TfL BOROUGH FUNDING 2019/20 TO 2021/22	Programme budget		
	Allocated 2019/20 £M	Indicative 2020/21 £M	Indicative 2021/22 £M
TfL Formula Funding			
CORRIDOR, NEIGHBOURHOODS & SUPPORTING MEASURES*	2.637	2.637	2.637
Local Transport Fund	0.100	0.100	0.100
DISCRETIONARY FUNDING			
Liveable Neighbourhoods	4.063	3.825	TBC
Mayor's Air Quality Fund	TBC	TBC	TBC
STRATEGIC FUNDING			
Bus Priority/Low Emission Bus Zone	0.400	0.400	1.200
Cycle Quietway	0.160	0.150	TBC
Crossrail Complementary Measures#	5.000	0	0
Principal Road Renewal	1.000	1.000	1.000
GLA (Housing)	2.000	4.500	4.500
South Road Bridge Widening			
Total All TfL borough funding	15.360	12.612	9.437

*Projects match funded with Council and other funding sources see Proforma A for full details.

#Subject to station build programme and TfL design review

Supporting commentary for the Programme of Investment 2019-22

The Council has to carefully budget and prioritise its transport programmes in order to deliver those projects that are supported by clear evidence, represent value for money, are achievable within the lifetime of the LIP, and are best placed to achieve the council's policy objectives.

In order to identify new schemes to be added to the programme 2019-22, a variety of data sources were interrogated. These sources included road collision casualty statistics, complaints and requests from residents, congestion hotspots, political priorities, growth areas, plus officers' local knowledge of transport issues. This data was analysed to identify clusters of problems where investment in transport solutions could be expected to achieve significant improvements and deliver the council's and Mayor's transport objectives.

The analysis identified a list of schemes and projects that focussed on tackling strategic transport issues within identified transport Corridors. The list of proposed schemes was subsequently circulated to council senior management, officers of other relevant disciplines and councillors for comment. Comments and suggestions from this process have been incorporated into the analysis.

Relevant stakeholders have also been invited to contribute to the LIP. These included partner organisations such as neighbouring boroughs, TfL, the Metropolitan Police, Network Rail, Great Western Railway and the local Ward Forums.

Officers have worked closely with colleagues in the Regeneration, Planning, Parking and Highways Teams during production of the draft LIP to ensure that it will be consistent with other council programmes. This is in accordance with best practice, (including TfL guidance) as corporate priorities will inevitably bridge these disciplines.

The key schemes will be subject to further detailed design and approval by Transport Planning in conjunction with other teams, including Highways and Parking Services.

Specific schemes developed through this programme would be subject to additional councillor and public consultation during their detailed development and prior to any approved implementation.

Delivery risks for the Programme of Investment 2019-22

Table 9 below shows the principal risks associated with delivery of the LIP together with possible mitigation actions for the three-year programme. The risk register summarises the strategic risks identified that could impact on the three-year programme of schemes/initiatives.

TABLE 9 - LIP Risk Assessment for three-year programme 2019/20-2021/22

Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
Financial					
Funding cuts from TfL to LIP allocation		✓		Schemes will either be scaled down or deferred until full funding can be found.	Long-term delays/full cancellation of some schemes until funding can be found. Targets will have to be readjusted.
TfL support for long term scheme funding	✓			Some schemes may not be able to proceed if funding is no longer provided. Fund reallocation could be one mitigation measure, but the Council will most likely have to re-bid.	Some schemes may not be able to proceed if funding is no longer provided.
Estimated scheme costs are inaccurate		✓		Re-evaluate scope and schedule. Base estimated costs on previous schemes but allow for an error margin/variability margin.	Schemes will have to be readjusted. Inaccurate estimated costs will have increased impact combined with potential funding cuts from TfL to LIP allocation.
Slow development/growth leads to reduction in S106s and community infrastructure levy		✓		No mitigation required if no development.	Not applicable

Variation in costs		✓		Project costs and spend will need to be reviewed on a monthly basis so that any variation is accounted for and addressed at an early stage. Reallocation of funds between projects should issues be identified. This will ensure highest priority projects are completed in time while staying within overall budget.	Delays in scheme progress; time will be needed to figure out how to address varying costs. Without an action plan, a backlog will effectively emerge which the Council will have to resolve while keeping within timescale if possible.
Increase in unforeseen costs due to environmental factors			✓	Contingency funding will need to be implemented into all schemes and budgets.	Schemes might be delayed, and costs will go up in order to adapt to new environmental factors.
Prohibitively expensive utility works			✓	Full utility searches undertaken on all projects and problems to be value engineered.	Schemes may be delayed or aborted due to cost over-runs.
Statutory / Legal					
Contract breach from third parties			✓		High impact. The Council will have to find an alternative contractor or find a working solution with contractors in breach. Both solutions take time and resources from other schemes.
TfL rejects the LIP programme			✓	Develop a LIP that is in conformity with the MTS working with TfL. Section 144 of the GLA Act 1999 requires that in exercising any function, London local authorities must implement the MTS locally.	High impact. TfL can impose an alternative LIP on the LBE.

Legal action from local residents			✓	Consult with local residents early on in scheme development.	Schemes may be delayed.
Third Party					
Lack of support and cooperation with partner suppliers and infrastructure owners			✓	Discussions will need to be held with all interested parties and approval obtained before the work is commissioned on site. Schemes will be amended or an alternative proposal will be pursued if required.	Project delays and costs will be driven up.
Shortages of materials or labour due to lack of access to the European Single Market (Brexit effect)			✓	Programme work well in advance. Use multiple suppliers as appropriate.	Sourcing of materials could be impacted; delays in contracted work if material suppliers are EU-based.
Public / Political					
Loss of stakeholder contribution			✓	Early consultation will need to be undertaken in advance of detailed design. This will ensure that any design issues are addressed as early as possible. Further consultation will need to take place during detailed design stage.	Adverse impact on scheme delivery and targets.
Insufficient local support			✓	All schemes will involve consultation with business, residents and members. Only schemes with a positive balance of benefits and dis-benefits will be taken forward. Any changes in support after this will be monitored. Widespread consultation on LIP will help to increase early awareness of schemes	Ealing Council has a duty to its residents and local communities to inform them of potential changes taking place in the Borough. If a scheme lacks local support, it will be crucial to understand why and how it can be improved to bring about more

				and allow the community to provide comments on proposed interventions at an early stage.	benefits to residents and local communities.
Internal funding pressures			✓	TfL and the Council to work collaboratively to prioritise schemes.	This could potentially impact the delivery of all schemes and targets.
Residents and/or councillors request schemes/projects that do not contribute towards achieving LIP targets		✓		Clarification will need to be given that all schemes/projects must contribute towards the borough's transport objectives and the MTS goals.	Feedback/suggestions received will not all be relevant to the Borough's transport objectives and targets. A filtering process will have to be added. This will increase the time needed for consultations.
Programme & Delivery					
Local consultation results could change scheme scope or deliverables			✓	Schemes may need to be redesigned to address issues raised by local residents.	Schemes faced with strong opposition may not proceed.

Annual programme of schemes and initiatives

The annual programme of schemes has been completed in the Proforma A separate format and submitted to TfL via the Borough Portal. The programme of schemes will be updated annually.

Risk assessment for the annual programme

Table 10 below shows the principal risks associated with delivery of the LIP together with possible mitigation actions for the annual programme. The risk register summarises the strategic risks identified that could impact on the annual programme of schemes / initiatives.

TABLE 10 - LIP Risk Assessment for annual programme - 2019/20

Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
Financial					
Slow development/growth leads to reduction in S106s and community infrastructure levy		✓		No mitigation required if no development.	Not applicable
Statutory / Legal					
Work programme needs to be completed within agreed timescales			✓	Reopen programme for discussion and revise programme if necessary.	Some schemes may be delayed.
Third Party					
Consultation results do not support schemes			✓	Individual schemes may need to be redesigned accordingly.	This could impact the delivery of schemes and targets.
Shortages of materials or labour due to lack of access to the European Single Market (Brexit effect)			✓	Programme work well in advance. Use multiple suppliers as appropriate.	Sourcing of materials could be impacted; delays in contracted work if material suppliers are EU-based.

Public / Political					
Internal funding pressure			✓	TfL and the Council to work collaboratively to prioritise schemes.	This could potentially impact the delivery of all schemes and targets.
Insufficient local support			✓	<p>All schemes will involve consultation with business, residents and members. Only schemes with a positive balance of benefits and disbenefits will be taken forward. Any changes in support after this will be monitored.</p> <p>Widespread consultation on LIP will help to increase early awareness of schemes and allow the community to provide comments on proposed interventions at an early stage.</p>	Ealing Council has a duty to its residents and local communities to inform them of potential changes taking place in the borough. If a scheme lacks local support, it will be crucial to the reasons and how it can be amended to demonstrate the benefits to residents and local communities.
Residents and/or councillors request schemes/projects that do not contribute towards achieving LIP targets		✓		Clarification will need to be provided that all schemes/projects must contribute towards the borough's transport objectives and the MTS goals.	Feedback/suggestions received will not all be relevant to the Borough's transport objectives and targets. A filtering process will have to be added. This will increase the time needed for consultations.

Change in political support			✓	The Council will need to brief relevant stakeholders and possibly discuss options to redesign schemes accordingly.	Delivery of schemes may be disrupted.
Programme & Delivery					
Local consultation results could change scheme scope or deliverables			✓	Schemes may need to be redesigned to address issues raised by local residents.	Schemes faced with strong opposition may not proceed.

Monitoring delivery of the Mayor's Transport Strategy outcomes

Overarching mode-share aim and outcome Indicators and Local targets ³¹

Table 11 shows the borough outcome indicator targets. Delivering these targets will be challenging for the borough and will be dependent on the funding available to implement appropriate schemes and the ability to deliver behavioural changes.

Delivery targets and indicators ³²

The Council will monitor and record the delivery indicators and report to TfL annually in June using Proforma C.

³¹ Requirement R23: Boroughs are required to set targets against the overarching mode share aim and the nine outcomes using their respective outcome indicators.

³² Requirement R24: Boroughs are required to collect this information and submit it to TfL using Proforma C on at least an annual basis.

TABLE 11 - Borough outcome indicator targets

Objective	Metric	Borough target	Target year	Additional commentary
Overarching mode share aim – changing the transport mix				
Londoners’ trips to be on foot, by cycle or by public transport	Active, efficient and sustainable (walking, cycling and public transport) mode share by borough resident for average daily trips.	63% 76%	2021 2041	To follow MTS trajectory on base period figure: 63% 2014/15 – 2016/17 Source TfL LIP3 Outcomes data pack.
Healthy Streets and healthy people				
Outcome 1: London’s streets will be healthy and more Londoners will travel actively				
Londoners to do at least 20 minutes of active travel daily to stay healthy	Proportion of London residents doing at least 2x10 minutes of active travel a day (or a single block of 20 minutes or more).	38% 70%	2021 2041	Base figure: 30% 2014/15 – 2016/17 Source TfL LIP3 Outcomes data pack.
Londoners have access to a safe and pleasant cycle network	Proportion of Londoners living within 400m of the London-wide strategic cycle network.	16% 69%	2021 2041	Base figure: 0% Source TfL LIP3 Outcomes data pack.
Outcome 2: London's streets will be safe and secure				
Deaths and serious injuries from all road collisions to be	Deaths and serious injuries (KSIs) from road collisions	82 casualties	2022	Base figure: 162 casualties 2017 Source TfL LIP3 Outcomes data pack.

Objective	Metric	Borough target	Target year	Additional commentary
eliminated from our streets	Deaths and serious injuries (KSIs) from road collisions	49 casualties	2030	Source TfL LIP3 Outcomes data pack.
	Deaths and serious injuries (KSIs) from road collisions	0 casualties	2041	Source TfL LIP3 Outcomes data pack. To follow MTS Vision Zero target.
Outcome 3: London's streets will be used more efficiently and have less traffic on them				
Reduce the volume of traffic in London.	Vehicle million kms travelled annually. Reduce overall traffic levels by 10-15 per cent by 2041.	1,224M km	2021	To follow MTS trajectory on base year figure of 1,224M km in 2015 Source TfL LIP3 Outcomes data pack.
		1,101M km	2041	
Reduce the number of freight trips in the central London morning peak.	A 10% reduction in number of freight vehicles crossing into central London in the morning peak period (07:00am - 10:00am) by 2026.	N/A	N/A	N/A
Reduce car ownership in London.	Total cars owned and car ownership per household, borough residents, 250,000 fewer cars owned in London by 2041	122,000 vehicles	2021	To follow MTS trajectory on base period figure: 123,426 vehicles in 2016. Source TfL LIP3 Outcomes data pack.
		114,800 vehicles	2041	

Outcome 4: London's streets will be clean and green				
Reduced CO ₂ emissions.	CO ₂ emissions (in tonnes) from road transport within the Borough.	251,800 Tonnes	2021	To follow LAEI trajectory on base figure: 277,100 tonnes in 2013 Source TfL LIP3 Outcomes data pack.
		74,700 Tonnes	2041	
Reduced NO _x emissions.	NO _x emissions (in tonnes) from road transport within the Borough.	390 tonnes	2021	To follow LAEI trajectory on base year figure: 990 tonnes in 2013 Source TfL LIP3 Outcomes data pack.
		50 tonnes	2041	
Reduced particulate emissions.	PM ₁₀ and PM _{2.5} emissions (in tonnes) from road transport within the Borough.	82 tonnes PM10 39 tonnes PM2.5	2021	To follow LAEI trajectory on base year figure: 98 tonnes PM10 and 55 tonnes PM2.5 in 2013 Source TfL LIP3 Outcomes data pack.
		53 tonnes PM10 26 tonnes	2041	
A good public transport experience				
Outcome 5: The public transport network will meet the needs of a growing London				
More trips by public transport - 14-15 million trips made by public transport daily 2041.	Trips per day by trip origin. Reported as a 3-year rolling average	241,000 trips	2021	To follow MTS trajectory on base period figure of 157,500 trips for 2014/15 – 2016/17. Source TfL LIP3 Outcomes data pack.
		340,000 trips	2041	

Outcome 6: Public transport will be safe, affordable and accessible to all				
Everyone will be able to travel spontaneously and independently.	Reduce the difference between total public transport network journey time and total step-free public transport network	13 stations	2021	Base figure of stations with step-free access four (25 total) in 2018 (source TfL) Includes Elizabeth Line & committed Underground stations by 2021 & 100% accessible by 2041 in partnership with TfL & Network.
		25 stations	2041	
Everyone will be able to travel spontaneously and independently.	Proportion of bus stops which are step-free (wheelchair accessible)	100%	2021	Already achieved 100% bus stop accessibility for existing bus stops. Infrastructure to be checked and reviewed periodically. Conversion of existing 'Hail & Ride' routes to accessible, fixed stops.
		100%	2041	
Step-free average journey time	Time difference on public transport between quickest route and step-free route	4 mins	2041	Base figure observed in 2015 14 mins. Source TfL LIP3 Outcomes data pack
Outcome 7: Journeys by public transport will be pleasant, fast and reliable				
Bus journeys will be quick and reliable, an attractive alternative to the car	Annualised average bus speeds. Bus speeds to improve 5% to 15% across London by 2041.	9.9mph	2021	Base year figure: 9.8mph in 2015 Source TfL LIP3 Outcomes data pack. Improvement of 5% by 2041 due to population growth.
		10.3mph	2041	

New homes and jobs				
Outcome 8: Active, efficient and sustainable travel will be the best options in new developments				
Outcome 9: Transport investment will unlock the delivery of new homes and jobs				
All developments to mitigate their impact on the transport system and contribute to the objectives of the MTS	All developments compliant with London Plan standards for EVCP and cycle parking provision	100%	2021	Base TBC
		100%	2041	
	Amount of transport s106 collected annually	£0.4M	2021	
		£0.6M	2041	

Glossary

AQAP Air Quality Action Plan
AQMA Air Quality Management Area
CAB Cleaner Air Borough
DfT Department for Transport (government)
DPH Director of Public Health
EV Electric Vehicle
EVCP Electric Vehicle Chargepoint
FORS Fleet Operator Recognition Scheme
GLA Greater London Authority
GRIP Governance for Railway Investment Projects
HS2 High Speed 2 Railway (London to Birmingham, Manchester and Leeds)
HAL Heathrow Airport Ltd
JSNA Joint Strategic Needs Assessment
LAEI London Atmospheric Emissions Inventory
LAQN London Air Quality Network
LAQM Local Air Quality Management
LB London Borough
Liveable Neighbourhood, area-wide scheme to improve quality of life across a significant area by reducing traffic and encouraging walking, cycling and the use of public transport
LIP Local Implementation Plan
LLAQM London Local Air Quality Management
Local Connectivity Schemes, measures to create safe, convenient and direct walking and cycling routes
MAQS Mayors Air Quality Strategy
MTS Mayors Transport Strategy
NOX Nitrous Oxides
NO2 Nitrogen Dioxide
OLEV Office for Low Emission Vehicles
OPDC Old Oak and Park Royal Development Corporation
PM10 Particulate matter (dust, smoke etc) less than 10 micron in diameter
PM2.5 Particulate matter (dust, smoke etc) less than 2.5 micron in diameter
PTAL Public Transport Accessibility Level
SPG Supplementary Planning Guidance
STARS Sustainable Travel: Active, Responsible, Safe
SuDS Sustainable Drainage Systems
TfL Transport for London
ULEZ Ultra-Low Emission Zone
WestTrans West London Sub-Regional Transport Partnership
WLO West London Orbital railway
WLSRTP West London Sub-Regional Transport Plan

