EALING COUNCIL TRANSPORT STRATEGY 2019

Ealing
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1. Portfolio Holder's Foreword

Ealing Council wants to make the Borough a great place to live, work and spend time in. Crucial to our priorities is creating a healthy, great place, of which good, sustainable transport is a fundamental part.

This Transport Strategy aims to build a positive legacy to enhance the environment and improve public health by focusing on 'active travel' (walking and cycling) plus public transport. Our priority projects, such as the Uxbridge Road Corridor and improving the pedestrian experience within our town centres, will create 'Healthy Streets' that seek to reduce pollution and increase physical activity rates by providing safe, convenient alternatives to short car journeys.

We particularly want to grow cycling by building more and safer infrastructure including segregated cycle lanes wherever we can. This will give many more people the confidence to cycle and expand the catchment areas of town centres, stations and schools that can be accessed without using motor vehicles.

For those residents and businesses who have to use a vehicle, we will help them to make the switch to cleaner vehicles by implementing a network of electric vehicle charge points across the Borough.

Whilst the Council faces significant financial challenges, we will seek to grow our way out of austerity and bring in additional investment whenever we can. We've been successful in bringing in over £15million by winning bids for the West Ealing Liveable Neighbourhood from TfL and the Let's Go Southall pilot from Sport England. We're also working with developers to ensure that sustainable/active travel is 'built into' new developments for instance Southall Waterside upgrading the adjacent canal towpath for pedestrians and cyclists.

We eagerly await the full opening of the Elizabeth Line which will make Ealing a Zone 1 borough for connectivity but with the quality of life benefits of an outer London borough. The Council is keen to get on and deliver the complementary station access works to integrate the help.

We will support the Mayor in his 'Vision Zero' road safety vision across London by introducing measures including the Borough-wide rollout of 20mph speed limits and targeting the most dangerous road junctions for improvement.

Cllr Julian Bell

Leader of Ealing Council and Cabinet Member for Regeneration & Transport

2. Executive Summary

This Transport Strategy sets out the transport priorities for Ealing Council in accordance with the Mayor's Transport Strategy 2018 (MTS) but focuses on the initial 2019-22 period. The Strategy has three core objectives which are as follows:

1. Mode Shift
2. Reducing the Environmental Footprint of Transport
3. Improving Road Safety

These three objectives are underpinned by four main transport principles:

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

The Strategy'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.

A new Local Implementation Plan (LIP) will follow this strategy, and it will be the statutory document to implement the MTS contains details including a delivery plan and performance indicators for transport projects and initiatives. Specific 'Mode Plans' for specific areas such as parking and cycling will also provide further details when they are published.

The Transport Strategy supports the work of the entire Council and has had significant input including from the Highways, Parking, Regeneration, Planning, Pollution, Public Health teams as well as the Transport Planning team.

3. Introduction

The purpose of this document is to update the Ealing Council's transport policies, objectives and targets focussing on the period 2019 to 2022, these are in conformity with the latest MTS looking forward up to 2041. It provides a strategy and policy update to the last Local Implementation Plan (LIP), which initially ran from 2014-2017, but was extended whilst the MTS was updated.

Ealing Council has a good record of delivering improvements and the key achievements from the LIP 2014-17 include:

- First London Borough to introduce Mobike dockless cycle hire
- Acton area-wide 20mph limit, co-ordinated introduction with LB Hammersmith & Fulham
- Playstreets resident-led initiative now with 25 monthly events
- Implementation of the Southall Broadway Boulevard public realm scheme
- Greenford Station lift, step-free access with a unique inclined lift
- Ealing Broadway Interchange enhancements
- Cycle Safety Shield, developed a Heavy Goods Vehicle (HGV) driver warning system
- Ealing Broadway BID Waste Consolidation, cut 9,000 diesel vehicle trips annually

The diagram in figure 1 shows how this strategy forms a suite of documents, which when combined provide the full range of transport policies, objectives and targets for the Borough.

Figure 1 Structure of the LIP and Transport Strategy

The Transport Strategy document itself provides the strategic policies, objectives and targets. Where there is a mode or area of transport that needs further detail, a mode plan can be produced to provide these specifics. Those planned include cycling and parking.

Within its scope the Transport Strategy includes public highways that are borough roads and footways, footpaths/bridleways, new developments (including new highways), Underground and railway stations, bus stops and facilities and other transport infrastructure such as canal towpaths within the London Borough of Ealing. Relevant stakeholders include local residents and businesses, plus people working and studying in the Borough. Organisations such as representative groups (for disabled people and minorities), TfL, neighbouring boroughs, Network Rail and transport operators are also important stakeholders. Certain high-trip generating uses outside the borough are also referred to when they impact on the boroughs streets, the main case being Heathrow Airport. Outside the scope of this document are the TfL Road Network (TLRN), activities on private land that do not impact on the street and leisure activities in parks and other open spaces when the main purpose is not travel.

The LIP is a statutory document prepared by each London borough to implement the MTS. This Transport Strategy sets the policies, objectives and targets that overlap with, and will be used for the LIP 2019-22. Transport for London (TfL) requires some further technical data which will be added as part of the LIP.

4. Policy context

There are many policy documents and strategies, at national, regional and local levels which have an impact on this Transport Strategy. In addition, there are other strategies being worked on which will influence this Strategy when they are complete. Figure 2 shows the key internal (rectangular) and external (oval) policy documents which have a significant influence on this Transport Strategy.

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.

London Plan

Local Plan

Borough Plan

Mayor's Transport Strategy

Borough Transport Strategy & LIP

London Environment Strategy

Air Quality Action Plan

Figure 2 Local and regional policies

4.1 Mayor's Transport Strategy

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 makes 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.

4.2 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.

TfL 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.

4.3 London Environment Strategy

The London Environment Strategy 2018, 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.

4.4 Borough Plan

The Borough Plan sets the strategic direction and vision for the Borough for the 2019-22 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 2019-22 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.

4.5 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.

4.6 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:** this accounts 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;

5. Vision Statement

The purpose of the vision statement is to provide an aspirational description of what the Council would like to achieve in the mid-term to long-term future, at a time where the Borough is growing in housing and population. It is intended to serve as a clear guide for choosing current and future courses of action, as described in this Transport Strategy. The Vision for the Transport Strategy 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.

6. Strategy Objectives and Targets

6.1 The Borough's Strategic Context

The Council will support and sustainably grow the local economy to provide a range of locally available goods, services, homes and employment. The Borough's housing supply target, set out in the draft London Plan, has seen an increase of 116% from 1,297 to 2,807 net additional units per annum. In reality, the increase is even higher as this target now excludes the part of the borough covered by the OPDC, in particular North Acton. This equates to Ealing's population being forecast to rise by 25% by 2041 from around 350,000 people today to 425,000. Given that the transport network already struggles to cope, this population increase could have a damaging impact on the Borough's ability to move people and goods, with a corresponding disturbing impact on the Borough's environment, unless development and its transport impact are managed in a sustainable way. In addition, the Council is actively seeking to grow employment, and the Transport Strategy will also support economic development objectives.

A successful outcome for this Strategy is that new development is attracted to the Borough, although this, itself, is not a transport objective. Even so, the transport network can be a major determinant of the attractiveness of a location for development, as movement of people and goods is vital to sustaining a vibrant economy.

In addition, the majority of the population growth is people over 65 years; their numbers are predicted to more than double (102% growth) to 80,957 in the same period. This means that the transport network needs to adapt to the changing needs of the population and economic growth, where accessibility and connectivity will become even more important.

The strategic context of this Transport Strategy will therefore be to facilitate and sustain this significant growth, while ensuring that there is sufficient capacity in the transport
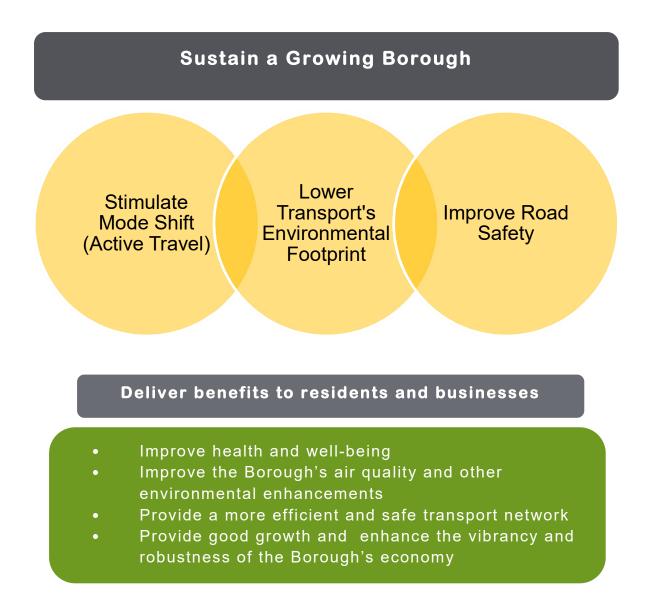
network to allow the Borough to reach the housing targets set by the Greater London Authority (GLA) and national Government.

6.2 Transport Objectives

To accomplish this strategic objective, there are three main transport objectives which will set the transport policies for the Borough:

1. **Mode Shift** – reducing the dependency on the motorised vehicle by moving trips, particularly the shorter ones, to active travel using more sustainable modes (walking, cycling and public transport) 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 and fuels.

3. **Improving road safety** – making the Borough roads as safe as possible, particularly for those modes perceived to be more vulnerable, i.e. walking and cycling.

There are significant overlaps between how these objectives can be delivered; for example, by walking or cycling, the environmental impact of a trip will be significantly lower; by providing segregated cycle lanes, cycling becomes safer, which is likely to increase the number of cyclists and thus provide mode shift. At the same time, it is recognised that not every trip can be made by sustainable modes, therefore it is important to significantly reduce pollution caused by essential motorised vehicle trips as well.

Figure 3 The Transport Strategy in a Nutshell

Sustain a Growing Borough

Stimulate Mode Shift (Active Travel)

Lower Transport's Environmental Footprint

Improve Road Safety

Deliver benefits to residents and businesses

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

6.3 Stimulating Mode Shift to Active Travel Modes

The mode share (or mode split) is the percentage of people or the number of trips using a particular type (mode) of transport. Mode share is therefore an important component in measuring and developing sustainable transport within the Borough.

Mode share is important because over-use of and dependency on motorised vehicles contribute to many health problems, reduce the quality of our air, reduce inclusiveness, create danger on the roads, and reduce the attractiveness of areas both for economic activity and as desirable places to live. These benefits of mode shift are explored in more detail in section 7.
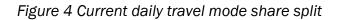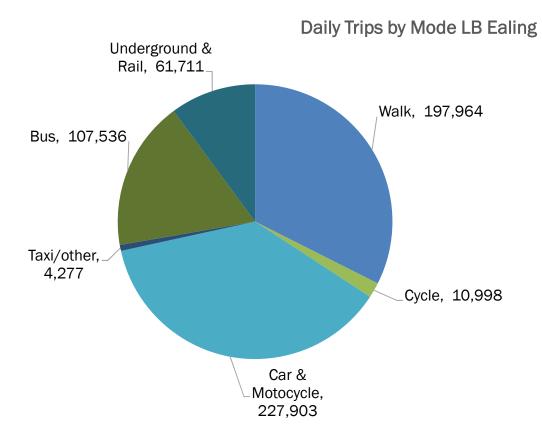
The central principle of this Transport Strategy matches the MTS and proposes a significant mode shift away from dependency on the car in favour of increased walking, cycling and public transport use, i.e. active travel. The MTS objective is that 80% of journeys are made by these modes by 2041.

The Borough's current travel mode share split is shown in figure 4 below, with sustainable modes in various shades of green, whilst car, motorcycle and taxi journeys are in red. This shows that significant mode shift is needed to deliver the MTS objective, as car trips currently account for around 40% of trips in Ealing and two-thirds of trips across London. However, cycling is a great alternative, with even a relaxed cycling pace around three times the speed of a brisk walk, meaning that a person can cycle significantly further than walking in 10-20 minutes.

Mode Shift Target:

80% of journeys in the Borough are made by walking cycling and public transport by 2041

Figure 4 Current daily travel mode share split

Daily Trips by Mode LB Ealing

Underground &
Rail, 61,711

Bus, 107,536

Taxi/other,
4,277

Walk, 197,964

Cycle, 10,998

Car &
Motocycle,
227,903

Source: TIL 10/LTDS data 2014/15 to 2016/17, TfL

Many people are currently choosing car travel for their journeys because of the real and perceived benefits from car travel in terms of time, cost, comfort, reliability and image. This Transport Strategy must therefore address these factors to encourage behaviour change to more efficient travel choices.

However, it is recognised this will not be easy, as despite the growing body of literature on the significant negative impacts of car dependency, progress to incorporate change has been slow mainly due to fear that public attitudes and behaviours will not tolerate anti-car measures. This is borne out by the number of people who choose to drive as part of their daily commute or school run, despite this being the most congested time on the roads; or in the results of public consultations on transport projects where the single biggest reason for objection to proposals is loss of car parking. However, the time has come for change, and this means that public policy also has to be stronger and better communicated.

Most car trips in the borough are very short and, in many cases, could be cycled or walked, as shown in table 1 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 1 Car trips originating in LB Ealing

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

Source: TIL 9/LTDS data 2013/14 to 2015/16, TfL

6.4 Reducing the Environmental Footprint of Transport

The environmental impact of transport is significant, because transport is a major user of energy, and burns most of the world's oil. This creates air pollution, including nitrous oxides and particulates (dust and smoke), and is a significant contributor to global warming through emission of carbon dioxide. Within the transport sector, road transport is the largest contributor to global warming.

Although each pollutant has many different sources, health effects and chemical behaviours, transport is a significant source of many of these pollutants, and therefore has a direct impact on air quality. 60% of small particles come from road transport, from tyre and brake wear and exhaust emissions[1]. Some 63% of nitrogen oxides are believed to come from 'ground-based transport', most of which is road transport[2].

European Union air quality standards are based on the best scientific knowledge available at the time, where there is an overall consensus, with the aim of minimising the harmful effects of air pollutants on human health. However, unlike the World Health

Organization's guidelines, which are based solely on health impacts, the EU limits allow for the feasibility of compliance, and the likely economic impacts. The EU limits are therefore often set at less rigorous levels than the equivalent WHO or other national guidelines.
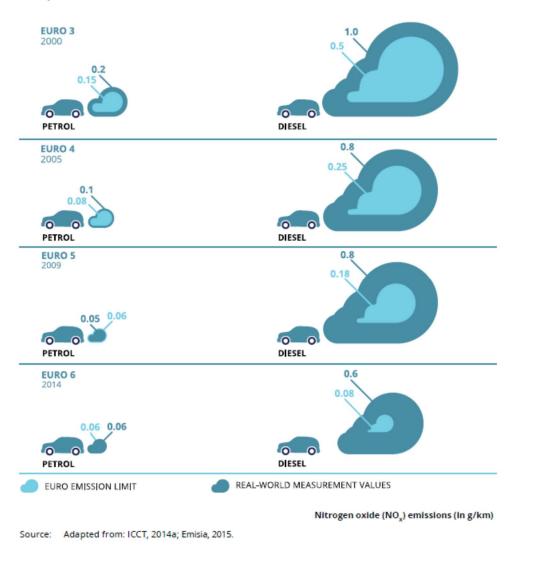
Research indicates that annually, up to 9,000 early deaths across Greater London[3] and 387 early deaths within LB Ealing[4] have been attributed to poor air quality.

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[1] Improving the Health of Londoners Transport Action Plan (2014) TfL
[2] Improving the Health of Londoners Transport Action Plan (2014) TfL
[3] London.gov.uk
[4] Ealing Air Quality Action Plan 2017-22 (Draft)

Comparison of NO$_x$ emissions and standards for different Euro classes

EURO 3
2000

0.2
0.15

PETROL

1.0
0.5

DIESEL

EURO 4
2005

0.1
0.08

PETROL

0.8
0.25

DIESEL

EURO 5
2009

0.05 0.06

PETROL

0.8
0.18

DIESEL

EURO 6
2014

0.06 0.06

PETROL

0.6
0.08

DIESEL

EURO EMISSION LIMIT   REAL-WORLD MEASUREMENT VALUES

Nitrogen oxide (NO$_x$) emissions (in g/km)

Source: Adapted from: ICCT, 2014a; Emisia, 2015.

Given that adverse health effects have been reported from levels of fine particles below the EU limit, EU pollution standards cannot be said to protect the public entirely from adverse health effects, but simply minimise risk. Therefore, not meeting the EU limits should be unacceptable, and the Council's target should be to comply with the more stringent WHO standards:

Table 2 EU and WHO recommended pollutant limits

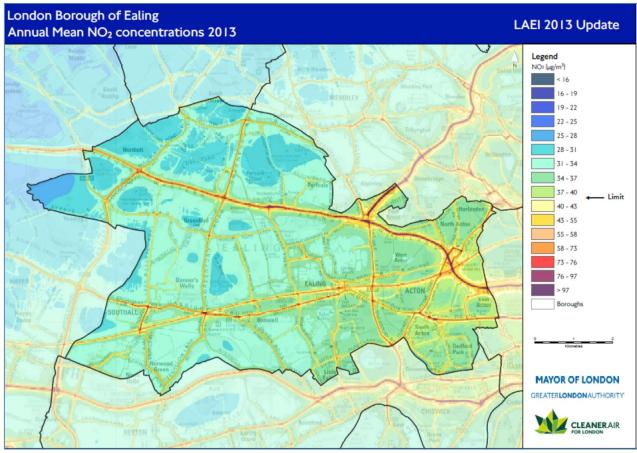| Pollutant	EU Limits	WHO Limits #
Nitrogen Dioxide (NO$_2$)	40 µg/m^3 annual mean	40 µg/m^3 annual mean
	200 µg/m^3 1-hour mean *	200 µg/m^3 1-hour mean
Particulate Matter (PM$_{10}$)	40 µg/m^3 annual mean	20 µg/m^3 annual mean
	50 µg/m^3 24-hour mean ^	50 µg/m^3 24-hour mean

Key

* 18 permitted exceedance occurrences per annum
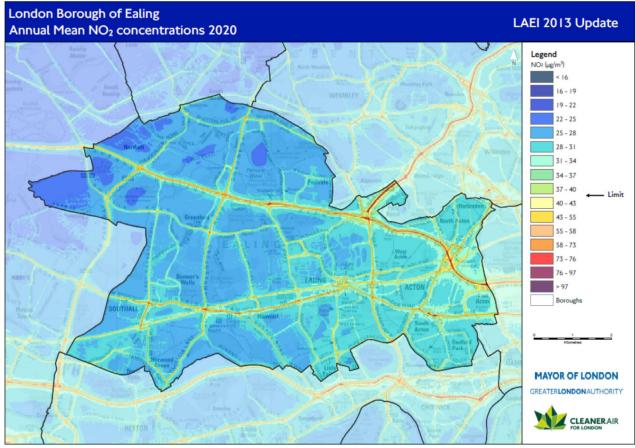^ 35 permitted exceedance occurrences per annum
0 (zero) permitted exceedance occurrences per annum

Maps 1 and 2 below show London Atmospheric Emissions Inventory for 2013 (latest data available) and modelled for 2020. The maps shown how roads are the most significant sources of emissions across London.

Map 1

London Borough of Ealing
Annual Mean NO₂ concentrations 2013

LAEI 2013 Update

Map 2

London Borough of Ealing
Annual Mean NO₂ concentrations 2020

LAEI 2013 Update

Emission reduction mitigation does not just involve large infrastructure projects, especially as increasing road capacity has been proven to divert new traffic onto it, including making new trips they would otherwise have not made. Induced traffic means that the predicted congestion benefits of a new road are often quickly eroded. Traffic levels on bypassed roads can also rise faster than expected due to this effect, which means the anticipated benefits of new roads can evaporate very quickly[5]. Mode shift to active travel is more beneficial for the environment, but for essential vehicle trips (e.g. goods deliveries), the motor should be cleaner, use more efficient fuels or hybrids to significantly cut pollutants and greenhouse gases and unnecessary idling needs to be reduced.

The main issue is that the Council cannot act unilaterally, as the origin or destination many of many vehicle trips are in other areas. The maps above show that the worst locations for air quality in LB Ealing are not on Borough roads, but on the A40 and A406 which are managed and operated by TfL.

Although the whole of the Borough has been declared as an AQMA, the Borough's AQAP uses data supplied by the GLA to identify eight focus areas:

- A40 North Acton Station/Gypsy Corner/Savoy Circus, Acton;
- Hanger Lane/Twyford Abbey Road, Acton;
- High Street/Gunnersbury Lane junction to Acton Park, Acton;
- Victoria Road/Portal Way/ Wales Farm Road, Acton;
- A40 Western Avenue Teignmouth Gardens to Alperton Lane, Perivale;
- The Broadway/Uxbridge Road and Haven Green, Ealing Broadway;
- King Street/The Green/Western Road/South Road, Southall; and
- Greenford Road, Rockware Avenue junction to Whitton Avenue West junction, Greenford

The AQAP also identifies numerous actions to be undertaken to help reduce emissions, which if followed will make a significant impact on air quality in these action areas.

Environmental Footprint Target:

To maintain Cleaner Air Borough Status by reducing the Borough's contribution to traffic-derived air pollutants, to comply with WHO standards as soon as possible

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[5] Induced Traffic again. And Again. And Again; Godwin (2012), Campaign for Better Transport

6.5   Improve Road Safety

Any collision on the Highway can have significant impacts. Most concerning is the impact on the health of those involved. Any injury is a significant matter, but serious injuries and deaths occur on the boroughs roads and these can have far reaching impacts beyond the individual, including the families, friends and place of work. It can cause local congestion whilst the collision is resolved and cleared, which can impact on the local economy. It can have a financial impact on the individuals involved, both in terms of time lost, and insurance claims.

Human error is the most significant cause of road accidents, but this manifest itself in many forms. Speeding is one example of these, as there is strong evidence which shows that speed will increase the severity of any collision. Vehicle and medical technology has made our roads safer, but until road casualties can be eliminated entirely, the Council needs to take measures that reduce speed, increase the safety of vulnerable modes of travel such as walking and cycling.

The impact of parked vehicles on road safety is greater than many presume, and the Council needs to consider this in street design. However, illegal and inconsiderate parking, particularly of larger vehicles has a particularly significant impact on sightlines and thus road safety. This means that parking enforcement and/or the suitability of goods vehicle parking need consideration as well.
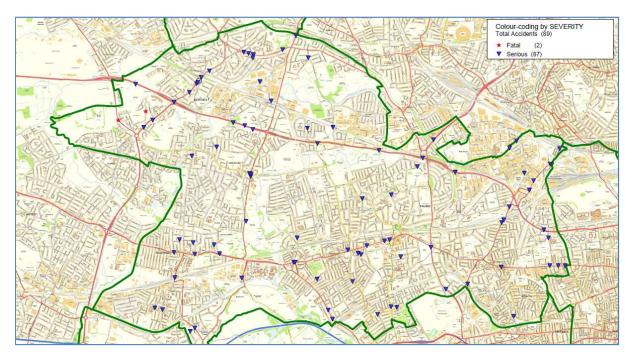

Safety concerns remain the key barrier to increased cycling, with significant perceptions that cycling in London (particularly busy roads) is dangerous[6]. The reality is that cycling in London is getting safer, despite the headlines generated when there is, regrettably, a fatality. In 2008 there were 15 cyclist fatalities in Greater London and this has fallen to eight fatalities by 2016, despite an increase in cycling of almost 20% the same period[7].

However, whilst the Mayor's Vision Zero target (no one killed or seriously injured on London's roads) by 2041 is an admirable target, which the Council wishes to pursue, it is accepted that this will be very difficult, but the Council will use its best endeavours to achieve it.
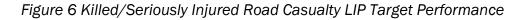
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[6] Attitudes towards Cycling, TfL (2014)
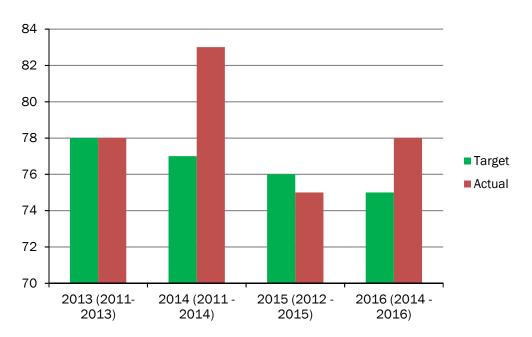[7] LTDS and STATS 19 Road Casualty Data, TfL

Figure 5 Road Casualties, Killed or Seriously Injured 2016

Source: STATS19

Whilst road casualties have decreased from the year 2000 in the Borough, particularly for killed or seriously injured casualties, numbers within the last five years have fluctuated or even increased in some cases (figures 6 and 7). One reason for this could be that the severities have decreased with improved vehicle design. However, these increases need to be halted and reversed now to meet Vision Zero and motorcycle casualties remain stubbornly high.
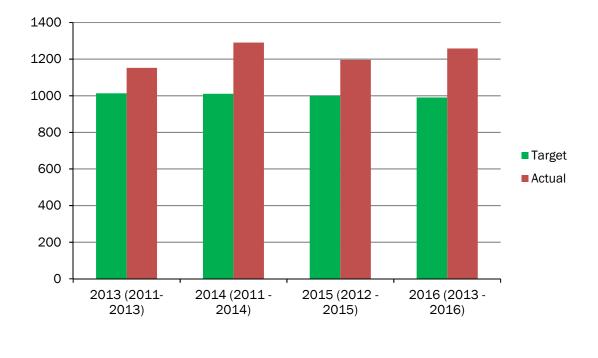
Figure 6 Killed/Seriously Injured Road Casualty LIP Target Performance

Figure 7 All Road Casualties LIP Target Performance

Road Safety Target:

To reduce the severity and volume of road collision injuries to comply with the MTS Vision Zero by 2041

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7. Benefits Delivered

The targets set out in section 6 are long term targets. However, unless significant actions are taken promptly, they will not be realised. This is because changing behaviour is difficult unless it is associated with cultural change as well. Given the level of intervention required, the policy framework needs to be set now, even if not all impacts will be delivered in the short-term.

Having said this, there are four main benefits through which transport can achieve these objectives described in the above chapter are shown in table 3 below:

Table 3

Benefits	Reduced health impacts[8]	Other reduced impacts
Improving health and well being	Obesity, Heart Disease, Stroke, Depression, Type 2 diabetes, Mental health, personal resilience, Stress, social isolation	Reduced traffic congestion, economic vitality, air quality
Improve the Borough's environment	Physical Activity, Cardiovascular Disease, Respiratory Disease, wellbeing, Blood Pressure, Stress child development	Air quality, noise, the built and natural environment, maintenance costs, flooding and surface run off
Provide a more efficient and safe transport network	Physical injuries, premature death, psychological trauma, Stress, social isolation	Traffic congestion, social equity, access for mobility impaired, air quality, maintenance costs, deprivation
Support good growth and enhance the vibrancy and robustness of the Borough's economy	Social isolation, child development, absence of long-term illness	Economic vitality, traffic congestion, social equity, deprivation

It is recognised that these mechanisms overlap and support each other both in terms of the benefits they bring, and the actions required to improve conditions or mitigate against them. Each of the four principles are supported by policies as a basis for interventions (including projects) to realise the vision plus to meet the core objectives and targets of the Strategy.

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[8] Improving the Health of Londoners Transport Action Plan (2014) TfL

7.1 Improving the Health and Well Being of Residents

By Increasing physical activity

Changes to transport in Ealing have the potential to transform health of those living and working in the borough by encouraging the physical activities walking and cycling.

Surprisingly, however, evidence shows that healthcare is a less important factor in determining health and well-being, compared to social, environmental and economic conditions in local communities. 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%)[9] in Ealing are physically inactive – doing less than 30 minutes' activity a week. The recommended amount for health and well-being is 150 minutes a week. Physical inactivity is the fourth largest cause of disease and disability in the UK[10]. Conversely, adults who are physically active have 20-35% reduced risk of early death, and up to 50% reduced risk of developing the major chronic diseases such as heart disease, diabetes, cancers and dementia, shown in figure 8.

Figure 8 Reduction in risk of disease and death associated with physical activity

Health condition	Reduced risk from being physically active[1]
Coronary heart disease and stroke	20–35%
Type 2 diabetes	35–50%
Colon cancer	30–50%
Breast cancer	20%
Hip fracture	36–68%
Depression	20–30%
Death	20–35%
Alzheimer's disease	40–45%

Source: Improving the Health of Londoners

Those living in the most deprived communities in Ealing are the least likely to be active, as demonstrated by the map below.

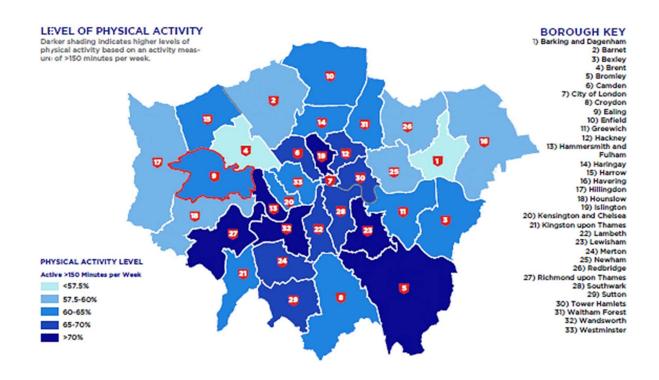[9] Public Health Outcomes Framework
https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000042/pat/6/par/E12000007/ati/102/are/E09000009

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

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Figure 9 Level of Physical Activity

LEVEL OF PHYSICAL ACTIVITY
Darker shading indicates higher levels of physical activity based on an activity measure of >150 minutes per week.

BOROUGH KEY
1) Barking and Dagenham
2) Barnet
3) Bexley
4) Brent
5) Bromley
6) Camden
7) City of London
8) Croydon
9) Ealing
10) Enfield
11) Greewich
12) Hackney
13) Hammersmith and Fulham
14) Haringay
15) Harrow
16) Havering
17) Hillingdon
18) Hounslow
19) Islington
20) Kensington and Chelsea
21) Kingston upon Thames
22) Lambeth
23) Lewisham
24) Merton
25) Newham
26) Redbridge
27) Richmond upon Thames
28) Southwark
29) Sutton
30) Tower Hamlets
31) Waltham Forest
32) Wandsworth
33) Westminster

PHYSICAL ACTIVITY LEVEL
Active >150 Minutes per Week
- <57.5%
- 57.5-60%
- 60-65%
- 65-70%
- >70%

Source: London Sport

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

Many of the 61.5% of Ealing residents taking sufficient physical activity will be doing so simply thanks to their regular travel routine. In London, nearly a third of 15-29 year olds and 16% of those over 80 years old achieve recommended physical activity levels by active travel alone[11]. 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.

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[11] Transport and Health in London: The Main Impacts of London Road Transport on Health (2014) GLA.

Active travel can, therefore, 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.

Policy Goal 1: Increasing Physical Activity

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

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By improving access and reducing severance

According to the World Health Organisation (WHO)[12], transport impacts on health by providing access not just to health services, but also to employment, education and recreational opportunities. 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, motorways, and highly trafficked or fast roads, 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 day[13]. This can be influenced by poor access or severance, where destinations are geographically close but cannot be reached easily due to physical barriers[14]. 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.
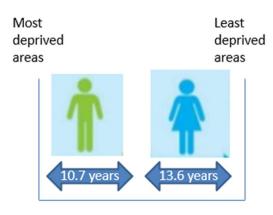
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[12] Urban Transport and Health - Sustainable Transport: A Sourcebook for Policy Makers in Developing Cities (2011) WHO
[13] Holt-Lunstad J, TB, Layton JB. 2010. Social relationships and mortality risk: a meta-analytic review. *PLoS Medicine* 7 (7) http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000316
[14] Understanding community severance: views of practitioners and communities (2005) DfT.

There is a considerable element of creating a fairer and more just borough through this Transport Strategy. Figure 10 shows that health can be determined by where someone lives. For women in Ealing there is a 13.6-year difference in 'healthy life expectancy' between the most deprived areas compared with the least deprived areas. For men, the equivalent figure is a 10.7-year gap in healthy life expectancy. Healthy life expectancy is the age to which you can expect to be disability-free. This is 20 or so years below life expectancy for women in Ealing, demonstrating that people are increasingly living with long-term illness as they age. People living in deprived circumstances are more likely to suffer premature death and likely to live more of their years in ill-health.

Figure 10 Inequality in healthy life expectancy

It is vital that this Transport Strategy prioritises reducing these 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 – if people are out enjoying the street walking, for example. Good travel 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 journey[15]. 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

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

the space are influencers of perceived and actual safety[16], and will influence whether a sustainable mode of travel is used or not.

The Council currently spends around £19,000,000 every year on supporting concessionary fares for school children, the elderly and those people with a mobility impairment. Free parking is provided to those with a blue badge in any parking bay, on single yellow lines and through dedicated disabled persons parking bays. Every new Highways scheme needs to accommodate disabled access as a result of various legislative requirements. Much of the transport infrastructure, particularly rail and Underground pre-dates the legislation and needs modernisation. However, The Elizabeth Line (Crossrail) will provide step free access to all five stations and a turn up and go service for wheelchair users in the Borough meaning no need to book ahead.

Currently only four out of the 25 Underground and Rail stations within the Borough have step-free access from street to platform. These stations are Acton Central, South Acton, Acton Town and Greenford, and only the first two of these stations have manual ramps to allow step-free access from platform to train. TfL have committed to four more stations in the Borough (Hangar Lane, North Ealing, Northolt and Park Royal) to be made step free by 2021. A feasibility study to upgrade North Acton has also begun, although an implementation is yet to be confirmed.

An aging population will also bring about changes in the requirement for the transport network beyond the physical access measures. For example, making a place friendlier for those with dementia. Solutions do not require radical new thinking or even that much money, but rather the implementation of existing guidelines, which is heavily based on colour contrasts between surfaces for different uses and consistency.

The benefits are not limited to those with a permanent physical or mental impairment, as good access, such as an improved interchange at stations between modes can give benefits such as time savings to all.
Personal safety is another issue which effects everyone, meaning that 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 Crossrail stations will be staffed from first train to last.

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[16] [16] Mindell JS, Watkins SJ & Cohen JM, Health on the Move 2 (2011) Transport and Health Study group

However, it is also important to remember that schemes can create barriers to movement and access; for example, large scale infrastructure like railways, large roads and canals can be an issue to cross, but at a lesser scale, the introduction of dock-less cycle hire has given cheap and easy access to cycling to thousands of residents, but it is important that the bicycles are parked responsibly to avoid creating obstructions or nuisance, especially to the visually impaired.

Policy Goal 2: Improving Access to Services and Reducing Severance

To make the Borough accessible to those with a mobility impairment and reducing severance by removing the barriers (physical and motivational) to movement.

7.2 Improve the Borough's Environmental Footprint

By improving air quality

Air pollution, or emissions, is the release of particles and noxious gases into the atmosphere. The main pollutants of concern in London are small particles (PM10 and PM2.5) and nitrogen oxides (NOx)[17].

Key groups affected by air pollution are children, older people and people living with a chronic condition such as diabetes, asthma, lung disease or heart disease. Deprived communities are disproportionately affected by the adverse consequences of air pollution, as people there are more likely to have underlying cardiovascular and respiratory diseases[18].

Car occupants are typically exposed to higher levels of air pollution than cyclists or

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[17] Improving the Health of Londoners Transport Action Plan (2014) TfL
[18] Securing the future: Delivering UK sustainable development Strategy (2005) HMSO.

pedestrians[19]. Exposure to air pollution causes deaths from heart and lung disease[20]. In the short term, it can increase hospital admissions and GP visits, as it worsens existing asthma and may even bring on asthma in susceptible individuals[21]. Pre-natal exposure is associated with problems in pregnancy such as low birth weight and increased risk of chronic disease later in life[22]. Fumes from diesel engines can cause lung cancer and possibly some tumours[23].

People may be affected by poor air quality even if they never experience any noticeable pollution—related health effects such as breathing problems. Studies show that children exposed to air pollution can have lifelong health consequences, and it worsens existing disease in the elderly.

The equation is simple, to improve air quality and reduce the health impact, we need to reduce traffic volumes, and all essential vehicles (e.g. freight and deliveries) should be the cleanest available.

Policy Goal 3: Improving Air Quality

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

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By improving surface water run-off and drainage

Where flooding or ponding takes place, it becomes a barrier to active travel modes or even a road safety issue if cyclists have to swerve to avoid puddles. Rainfall on buildings and hard surfaces cannot infiltrate into the ground, so artificial drainage is needed. The traditional method of draining surface water is to pipe it away from developments and discharge it into sewerage systems or watercourses, but this has implications for the environment, and makes it difficult to comply with water quality legislation. Increasing the quantity of impermeable surfaces and climate change will exacerbate flooding which is a problem as sewer systems are increasingly overloaded.

Motorised vehicles contribute to numerous pollutants and contaminants (principally oil and particulates) that can cause pollution and can be washed into sewers (and

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[19] Taylor D and Fergusson M, Road user exposure to air pollution – a literature review by the Institute for European Environmental Policy (1997) Environmental Transport Association.
[20] Health Effects of Air Pollution (2013) COMEAP www.comeap.org.uk
[21] Asthma and Air Pollution (2013) COMEAP www.comeap.org.uk
[22] Air Pollution and Children's Health/Birth Outcomes (2013) COMEAP www.comeap.org.uk
[23] IARC Diesel Engine Exhaust Carcinogenic: press release no: 213 (2013) WHO.

eventually watercourses) in surface water runoff. Reducing the volume of motorised vehicles is one way of reducing these pollutants.

Alternatively, Sustainable Drainage Systems (SuDS) can be used to mimic natural drainage processes to reduce surface water run-off reaching traditional piped drainage and can provide water quality improvement through settlement or biological breakdown of pollutants. 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.

| Reduce run off and storm flow | Reduce pollutants getting into water bodies | Improve water quality |

The National Planning Policy Guideline (NPPG) on Planning and Flooding, states that the susceptibility of land to flooding is a material consideration in deciding planning applications. For new developments that increase the areas of hard surface, 100% runoff should be assumed for drainage design purposes unless permeable surfaces, or if SuDS are included as integral design features.

However, an additional concern is the concreting over of front gardens to provide off-street parking. Planning permission is required for surfaces of more than five square metres for laying impermeable driveways without water runoff into a permeable area. Whilst the Council is aware that some uncontrolled impermeable surfacing is taking place, this is very difficult to monitor and thus enforce.

The Council has recently introduced SUDs as part of a traffic scheme at the junction of Northfield Avenue/Windmill Road, Northfields and wants to roll such measures out across the borough.

Policy Goal 4: Reducing Surface Water Run-off into Water Bodies

To implement SuDS schemes to reduce flooding on the Highway and mitigate against transport-based pollutants getting to the Borough's water bodies.

By Reducing Noise

Noise from road traffic comes from road/tyres, engine, exhaust, transmission and brakes. Noise can cause sleep disturbance, high blood pressure, stress and anxiety, poor mental health as well as reduced performance and cognitive impairment in children[24]. Long-term effects include cardiovascular disease, the risk of which increases significantly when noise levels exceed 60 decibels[25]. Lower socio-economic groups are more likely to be affected, as they are more likely to live near busy roads[26] and may also be more likely to have existing physical or mental health problems which makes them more likely to be sensitive to traffic noise[27].

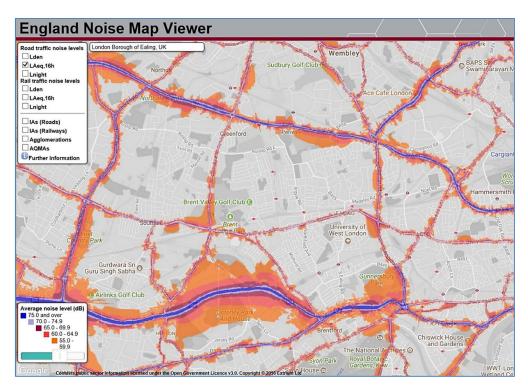There are other sources of transport noise other than traffic.

- The Borough has many railway and Underground lines, and noise from the operation and maintenance of these lines should be kept to a minimum, particularly at night. Whilst the operation of the Night Tube is welcomed, it is important that London Underground monitors the impact on local residents and mitigates against negative impacts.
- Flight paths for Heathrow airport pass directly over parts of the Borough. The proposals for the expansion at Heathrow could increase this number of flights and change flightpaths. It is recognised that new aircraft technology reduces noise emitted, but noise remains a concern to the Council and will be monitored.

Green infrastructure can help reduce noise impacts as well as having other positive effects for air quality and the neighbourhood environment. Where there are significant noise sources, e.g. busy roads or railway line, then new developments should include more significant noise barriers such as acoustic fencing. Where Borough roads are the source of the excess noise, the road surface will be investigated and where necessary will be re-laid with noise reducing surfacing.

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[24] Environmental Noise and Health in the UK. Report by the Ad Hoc Expert Group on Noise and Health (2010). Health Protection Agency
[25] Babisch W, Road Traffic Noise and cardiovascular disease (2008). Noise Health.
[26] Environmental Health Inequalities in Europe Assessment Report (2012) WHO
[27] Stansfield SA and Haines M, 'Environmental noise and health: a review of non-auditory effect', IEH report on the non-auditory effects of noise (1997), Institute for Environment and Health.

Figure 11 Noise Pollution mapped across Ealing

Source: Defra

Policy Goal 5: Reducing Noise

To reduce and mitigate against transport-based noise pollution

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7.3 Provide a More Efficient and Safe Transport Network

By Reducing Traffic Congestion

Over most of the last few decades, the approach to increasing vehicle ownership, which has led to increasing traffic congestion was to try and build more capacity including; new roads, junction capacity enhancements, traffic light timings. However, the result of this so-called improvements is that traffic congestion is still increasing and in Boroughs like Ealing, there isn't the space or budget to build any more roads. Put simply, the car culture which has been built up during this time must change.

However, it is acknowledged that this is easier said than done. Car ownership is still seen as a status symbol, provides travel freedom, and the pro-car (and sometimes anti public transport and/or cycling) lobby has significant backing, including from politicians and some elements of the media, resulting in the expression "the war on cars".

Despite this, the benefits of reducing traffic congestion are very clear, and reasonably understood; air quality benefits, reducing greenhouse gases, reduced stress and time savings, whilst the health and cost benefits of active travel are also clear. Nevertheless, some people seem to be making an illogical decision or argue against these benefits with poor or misleading information. For example, a common argument is that providing cycle lanes will increase traffic congestion, but this fails to recognise that if cycling were made safer it would appeal to more people and more journeys could be made by bicycle, thus relieving congestion. Additionally, much of the highway is devoted to car parking, which is more constraining than a cycle lane and more likely to create traffic congestion.

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 2015[28], and online 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.

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 Western Avenue
- A406 North Circular Road/Hangar Lane/Gunnersbury Avenue
- A312 Church Road (from Target Roundabout south to borough boundary with L.B. Hillingdon)
- A4180 West End Road/Ruislip Road

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

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

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 overloaded[29]. 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. The building of the M25 is an obvious example of this trend. 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. Given that the average car is parked 95% of the time[30], it is not necessary to have a car, and the use of car clubs will be promoted to provide a realistic alternative for essential journeys.

People and organisations also need to take responsibility for their travel actions as the Council cannot be the only body to take on 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.

Policy Goal 6: Reducing Traffic Congestion

To reduce traffic congestion on Borough Roads through an increase of active travel modes

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[29] Action for Roads. A Network for the 21st Century (2013) DfT
[30] https://www.parkflyrent.com/blog/50/cars-are-idle-95-of-time-where-does-this-number-come-from

By Providing a Better Public Transport Network and Experience

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. For example, people travelling together are more likely to feel a community connection than those travelling in cars in isolation.
- Is less stressful, rather than driving in traffic or wasting time looking for parking, public transport passengers can relax and listen to music, play computer games or read a book.
- Reduces the need for building vast car parks on valuable land that could have otherwise been used as highly valuable residential, office or retail space.
- Reduces reliance on rapidly decreasing oil supplies.
- Reduces pollution and road congestion, more people travelling by train or bus, equals fewer cars on the road.

Within the Borough, public transport connectivity is variable as shown in the Public Transport Accessibility Level (PTAL) map in figure 12, 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 and this is shown in figure 13.

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).

Therefore, the Council mainly has a lobbying and influencing role, which it will continue to do. The focus of this 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 existing railway improvement projects (HS2 and the Elizabeth Line/Crossrail) 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 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.

Where the Council has a more direct influence is the interchange between modes. The Council aims to provide high-quality interchange, particularly between active modes and public transport. Waiting facilities should be accessible to all, safe and simple. Additionally, bus priority will be considered where necessary to help buses move quicker and avoid traffic congestion, although this is reliant on there being sufficient road space.

The Council welcomes the introduction of the Night Tube on the Ealing Broadway branch of the Central Line and the Heathrow branch of the Piccadilly Line. In due course, the Council would like this to be extended to all lines to assist with night time workers commuting as well as assisting the night time economy of London; the Council will lobby London Underground for this. However, it is also important that the use of night services is safe and that there is a safe means of travelling the "last mile home" from the station or bus stop without fear of crime or excessive cost. Whilst it is acknowledged that taxis or private hire vehicles (PHVs) can assist with this, other more affordable options should also be provided.

The Council considers taxis and PHVs a useful part of the public transport network, although the Council does not accept that there should be competition between the two providers, particularly where road space is constrained. New or additional taxi ranks will not be permitted on Borough roads where there is an established minicab office and vice versa. Additionally, where taxi ranks are not being used, the Council will lobby TfL for their removal.

Unfortunately motorcycle road casualties have remained stubbornly high, now accounting for around a quarter of killed or seriously injured road casualties[31].

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 increased[32].

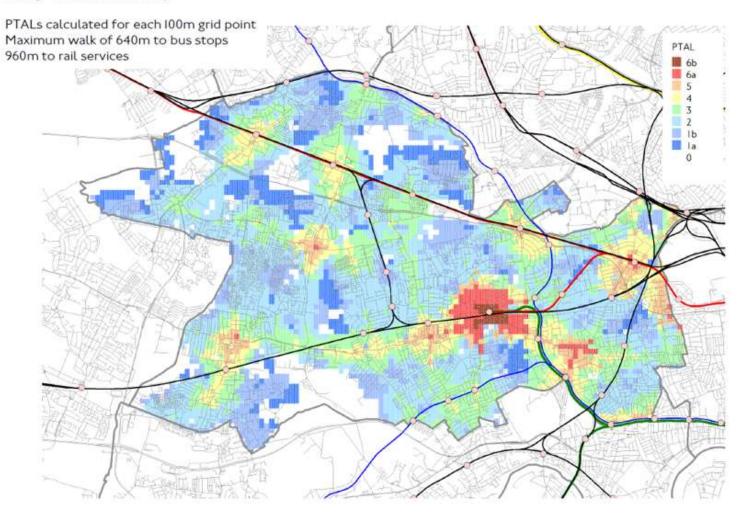*Policy Goal 7: Providing a Better Public Transport Network and Experience*

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

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[31] STATS 19 Road Casualty Data, TfL
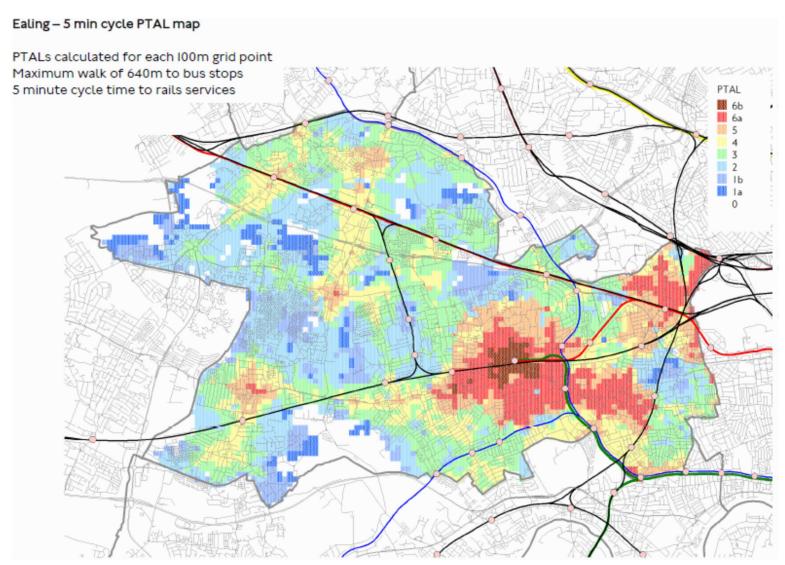[32] Bus Lane Experiments: Changes to hours of operation & Motorcycles in bus lanes, Cabinet Report (21/12/10) Ealing Council

Figure 12 Public Transport Accessibility (PTAL) in Ealing

Ealing – standard PTAL map

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

PTAL
6b
6a
5
4
3
2
1b
1a
0

Figure 13 PTAL in Ealing (taking account of cycling)

Ealing – 5 min cycle PTAL map

PTALs calculated for each 100m grid point
Maximum walk of 640m to bus stops
5 minute cycle time to rails services

PTAL
6b
6a
5
4
3
2
1b
1a
0

Reducing Road Traffic Collisions

Every life is precious, and death 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 and fatal road traffic collisions occur on roads with faster moving traffic[33] because speed is normally the main determinant of the outcome of a collision[34]. Children are more vulnerable to road traffic injury, as they are not able to assess traffic scenarios accurately until they are in their teens[35]. 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 isolation[36]. Therefore, reducing the speed of traffic is a priority.

Figure 14 Survival rate and vehicle speed

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.

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[33] Roads Task Force Technical Note 19 (2013) TfL
[34] Racioppi, F et al. Preventing Road Traffic Injury: A public health perspective for Europe (2004) WHO European Region
[35] Racioppi, F et al. Preventing Road Traffic Injury: A public health perspective for Europe (2004) WHO European Region
[36] Racioppi, F et al. Preventing Road Traffic Injury: A public health perspective for Europe (2004) WHO European Region

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 cycling[37].

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. Recent changes with the way the Police report traffic collisions has led to the quality of the data dropping alarmingly, making valid analysis of collision hot spots almost impossible. However, TfL have committed to re-evaluate previous 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 and, therefore, outside the time limits of this strategy, 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 particular concern, especially since there were two cyclists killed in the Borough in such collisions in the last 12 months. HGVs have many blind spots due to their poor design[38], therefore the Council will lobby for high visibility cabs and detection systems to become mandatory.

Policy Goal 8: Reducing the Volume and Severity of Road Collisions

To make the Borough's roads safe for all road users, with priority on infrastructure for walking and cycling

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[37] National Propensity to Cycle Tool Project, DfT (2016)
[38] Summerskill and Marshall. Understanding Direct and indirect Driver Vision from Heavy Goods Vehicles (2016). Loughborough University/TfL

7.4 Support Good Growth and Enhance the Borough's Economy

By Supporting Growth in the Economy

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 cars[39]. 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).

Policy Goal 9: Improve the Public Realm

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

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[39] Southall Town Centre, Travel Habits and Spend (2012) Accent Research

Ensuring New Developments provide the best Solutions for the Transport Network

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 a number of significant developments sites, and these are detailed in the Local Plan. It is vital, therefore, that new developments, therefore, do not create transport issues and the transport provision is self-sufficient. It is unfair that the Council should retrospectively pick up the bill 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 bicycles, 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).

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.

Heathrow Airport expansion will also have a significant impact given its proximity to the Borough and the high level 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.

Policy Goal 10: New Development and their Contribution to Transport

To ensure that new developments (including Heathrow Airport and Old Oak/Park Royal development area) contribute to increasing active travel and reduce environmental impacts of transport through design, operation and contribution to the public realm & transport network

8. The Council's Approach to Making Transport Better

In order to achieve these Policy Goals, the Council will need to have a co-ordinated approach to transport planning and the other disciplines (particularly Planning and Regeneration). This section sets out this approach, and the policy actions that will ensure the Council and developers adhere to it.

8.1 Healthy Streets Approach

This strategy is 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 can 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. Because a significant proportion of travel time is spent on our streets including bus trips to and from Tube and rail stations we should be creating streets that feel pleasant, safe and attractive. Streets where noise, air pollution, accessibility and lack of seating and shelter are not barriers that prevent people, particularly our most vulnerable people, from getting out and about.

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 with enough space for dwelling, walking, cycling and public transport use.
- **Network level**: how the city's streets are planned and used at a larger scale. For example, the extent and reliability of the public transport network; whether, where and how fast people drive; and how clean London's air is could all affect the

character of any street, anywhere in London. Developing more efficient and affordable services will make public transport the obvious choice for more journeys, and this will deliver the switch from car use that will make the streets more attractive places to walk and cycle. Designing and managing our stations and stops better will encourage more people to walk and cycle for onward journeys.

- **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. Planning a city where walking, cycling and public transport are the first choices for travel is the only way for us to achieve this. Developing new housing around stations and improving connections to town centres will mean more people have the things they need within walking or cycling distance, while destinations further afield will be easily accessible by public transport.

The Healthy Streets Approach uses ten evidence-based indicators of what makes streets attractive places (figure 17). Working towards these will help to create a healthier city, in which all people are included and can live well, and where inequalities are reduced.

Figure 15 The Healthy Streets Approach

Good performance against each of the ten Healthy Streets indicators will means 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.

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 priority to road safety particularly for cyclists over other considerations, including bus priority.

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.

9. Constraints and Barriers

Whilst there are great opportunities to positively transform transport and accessibility within the Borough, it is recognised that there are many constraints to the delivery of the Transport Strategy. These include:

- **Physical Constraints:** Physical barriers, such as railways, canals and main roads can result in long detours to active travel routes to find a crossing point. Even then the quality of the crossing (bridge, under pass or junction) needs to be safe and suitable for walking or cycling. These crossing points are limited in number and are often congested as many movements converge to use them.
- **Attitudinal Constraints:** Such as concerns about safety and motivational barriers even though research shows these concerns are usually exaggerated and the benefits of active travel considerably outweigh the risks. Also, there can be opposing views and attitudes where people are unwilling to make change or challenge the reported developments.
- **Physical Limitations:** the limits of road space to provide sufficient carriageway and footway for each mode within Department for Transport (DfT) and TfL guidance which leads to compromise.
- **Financial Limitations:** The Council's total budget from TfL for transport schemes is around £2,700,000 annually, but this must cover all areas of works and a number of overheads.
- **Timescales for Delivery:** Once funding is secured, it can usually take 12 to 18 months to design and receive final approval to implement a scheme of any significant size. The reason for this is that there are many external agencies involved. The implementation of large scale schemes can also take a similar period.

10. Action Plan

10.1 Policy Actions and Key Projects

To implement the Healthy Streets approach, table 4 below shows the council's Policy Actions and associated projects, that will be incorporated into the design of streets in the Borough for the lifetime of this Strategy.

Table 4

	Policy Goals	Policy Actions	Key Projects
1.	To increase active travel modes within the Borough through improved infrastructure for walking and cycling and behavioural change activities.	• To put walking and cycling first in the design of our streets, including the potential for road closures and filtered permeability schemes where appropriate. • To implement a robust cycle network within the Borough and to nearby important destinations on all major routes, and to make every road pleasant and safe to cycle along by 2040. • To work with neighbouring boroughs to ensure that walking and cycling routes do not stop at the Borough boundary, particularly where there are key destinations, services or routes close by. • To include cycle parking infrastructure as part of parking scheme designs and implementation. • To provide temporary cycle parking at events to accommodate a minimum of 10% of the attendance. • To provide free cycle training in schools and to adults who live, work or are educated in the Borough. • To seek the removal of car parking spaces where they create a barrier to active travel.	• Implement a Borough wide 20 mph limit incorporating all Borough roads. • Implement a Liveable Neighbourhood scheme in West Ealing. • Implement mini Liveable Neighbourhoods schemes around schools. • Implement a safe cycle route on the Uxbridge Road corridor. • Implement parking controls on cycle routes and enforce effectively. • Investigate the potential for school streets or school zones which restrict vehicular access and parking.

		• Use parking controls, enforcement and pricing to make car journeys less attractive and to use additional funds raised to improve active travel choices. • No and low car development parking provision in line with draft London Plan. • To work with schools and businesses in the Borough to encourage the use of and compliance with Travel Plans. • To require that Healthy Streets audits are included in Transport Assessments for development proposals and that they deliver improvements to all ten indicators. • To utilise the Council's and partners' marketing and communications to extoll the benefits of active travel to residents and businesses. • Seek to ensure Heathrow Airport expansion proposals incorporate appropriate mitigation to facilitate active travel modes	• Implement business parking zones on industrial estates • Investigate workplace parking levies in business locations where the modal share of car use is high.
2.	To make the Borough accessible to those with a mobility impairment and reducing severance by removing the barriers (physical and motivational) to movement.	• To comply with Equalities Act guidance as the default position for footway widths and ramps, including safeguarding footway width where this creates a barrier (e.g. A-boards, on-kerb parking, dockless cycles etc.) • To lobby Network Rail and London Underground to make all stations in the Borough step free. • To seek to create new routes (particularly for active travel) across roads, railways and canals where severance is an issue. • To make sure that the design of streets considers visual impairments by decluttering and aligning essential street furniture to provide a clear and obvious route plus using contrast colours for remaining street furniture. • Seek to attach signage on buildings (with landowners' permission) and requiring new streets to do so.	• Continue to financially support the Freedom Pass, Taxi Card and Ealing Community Transport • Implement a new cycle and pedestrian bridge in Southall to replace the condemned Merrick Road footbridge.

		• To consider dementia and other mental health issues in designing streets and wayfinding to improve access and inclusivity.	
3.	To reduce and mitigate against the Borough's contribution to traffic-based air pollutants.	• To promote the use of active travel modes (see Policy Goal 1) • To introduce differential parking charges based on vehicle emissions to encourage the use of smaller, less polluting vehicles. • Use plants and greenery to act as a barrier to and absorb traffic-based pollution. • To introduce no-idling zones where necessary. • To provide a network of EVCPs across the Borough so that no resident is more than 10 minutes' walk from a charging point by 2021. • To comply with the draft London Plan on the provision of active EVCPs in new developments. • All large/commercial developments to have a DSP, AQAP and travel plan. • Seek to ensure Heathrow Airport expansion proposals incorporate appropriate mitigation and controls for airport traffic.	• Implement differential parking charges based on emissions in CPZs, and investigate the potential for on- and off-street paid parking • Review CPZs to ensure that they maximise the potential for active travel and reduce traffic-based emissions. • Implement a network of EVCPs. • Implement no-idling zones.
4.	To implement SuDS schemes to reduce flooding on the Highway and mitigate against transport-based pollutants getting to the Borough's water bodies.	• Include SuDS in all street designs as default • SuDS measures to be included in highway design for all significant new developments referred to in draft London Plan • To use permeable surfaces in highways design and replacement where possible.	• Include street trees and planting wherever possible in street improvements.

5.	To reduce and mitigate against transport-based noise pollution.	- Use low noise road surfaces in residential area where road noise exceeds 60 decibels. - Install 'green barriers' as part of Highways design to reduce exposure to noise. - New developments close to transport related noise sources should take measures to mitigate noise such as erect noise barriers. - Seek to ensure Heathrow Airport expansion proposals incorporate appropriate mitigation for any potential increase in airport noise (surface and air). - Incrementally replace older round top road humps with sinusoidal humps as part of the resurfacing programme. - To maintain the Highway to the best possible standard	- Implement a network of EVCPs. - Implement no-idling zones. - Implement a safe cycle route on the Uxbridge Road corridor. - Investigate the potential for freight consolidation centre(s) in the Borough - Investigate the potential for school streets or school zones which restrict vehicular access and parking.
6.	To reduce traffic congestion on Borough Roads through the increase of active travel modes.	- To promote the use of active travel modes (see Policy Goal 1) - To give priority to walking and cycling and/or restrict vehicular traffic access around schools at opening/closing times. - To install bus priority measures where appropriate. - Undertake signal timing reviews in conjunction with TfL where there is traffic congestion or where active travel modes can be given an advantage. - To undertake Healthy Street audits of all significant Highways schemes with the view to improve scores for all ten indicators. - To improve parking controls and enforcement on key routes where parking and loading takes place on cycle lanes or causes traffic congestion. - To promote the most sustainable freight movement possible.	- Introduce a red route on Uxbridge Road - Investigate the potential for freight consolidation centre(s) in the Borough

| 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. | • To improve the journey times reliability for buses through highway design and specific bus priority measures
• To lobby TfL to ensure the bus network is continued to be developed particularly in locations where PTAL are low.
• To monitor and assess the impacts of HS2 and Crossrail to ensure they deliver the committed benefits and that the construction does not adversely impact on residents.
• To seek improvements to the London Overground network in terms of frequencies and destinations
• To ensure that London Underground delivers the proposed signalling improvements to the Piccadilly and Central lines.
• To seek to install Real Time Bus information (Countdown) in areas of greatest need.
• To make interchange between bus and rail/Underground as simple as possible.
• To improve walking and cycling route to/from rail and Underground stations.
• To provide safe and secure cycle parking at all rail and Underground stations. | • Provide support for the Southall to Brentford passenger rail service.
• Provide support for the West London Orbital (proposals, if suitable mitigation can be found for the two-level crossings in Acton.
• Lobby for service improvements (including frequency) on the Greenford branch line.
• Review CPZs around stations and other public transport interchanges.
• Investigate Demand-Responsive Bus Service (DRBS) in the Park Royal area. |
| 8. | To make the Borough's roads safe for all road users, with priority on infrastructure and behaviour change to promote walking and cycling. | • To reduce traffic speeds across the Borough
• To sign up to the Construction Logistics and Community Safety scheme (CLOCS).
• To ensure that all Council contractor HGV vehicles are equipped with direct vision cabs, and to lobby for all HGVs to be equipped with them. Legacy HGVs must have Cycle Shield fitted.
• To require construction companies and contractors take their responsibilities for training HGV drivers seriously, making it safer for pedestrians and cyclists around the Borough.
• To put walking and cycling first in all highway designs. | • Implement a borough wide 20 mph limit.
• Investigate all collision clusters and make changes to road layouts where there is an engineering solution.
• Lobby for direct visible cabs to become mandatory for HGVs.
• Lobby the Police to undertake targeted traffic |

		• To remove guardrailing, except in locations where it has a large, positive impact on pedestrian road safety. • To provide areas within the street scape for community events and safe playing, including temporary street closures for playstreets. • To support the Metropolitan Police in Traffic Enforcement and cycle safety activities. • To keep abreast of development in road safety (including autonomous vehicles) and undertake trials where appropriate. • To review the marking and enforcement of wide vehicles parked outside parking bays. • To utilise the Council's marketing and communications to promote road safety.	enforcement to benefit cycling and buses.
9.	To design the Borough's streets for people not for vehicles to encourage active travel and benefit local economies.	• To put walking and cycling first in all highway designs • To provide a high quality urban realm with an emphasis on place-making and greenery (including SuDS) to increase active travel and reduce exposure to pollution and that new developments contribute to this. • To undertake Healthy Street audits of all significant Highways schemes with the view to improve scores for all ten indicators. • To ensure there is sufficient cycle parking around shopping and business areas for workers and visitors alike • To seek the removal of car parking spaces where they create a barrier to active travel. • To investigate the potential for converting road space to footway, including full pedestrianisation in town centres to provide more space for active travel and events. • All large/commercial developments to have a Construction Management Plan (CMP), Delivery and Serving Plan (DSP), AQAP and travel plan.	• Implement a Liveable Neighbourhood scheme in West Ealing. • Implement mini Liveable Neighbourhoods schemes around schools. • Implement a safe cycle route along the Uxbridge Road. • Investigate the potential for converting road space to footway, including full pedestrianisation in town centres.

		• All future developments should incorporate loading off street to avoid creating traffic congestion.	
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.	• To comply with the draft London Plan on parking standards and location of development regarding transport accessibility. • To review parking controls to prevent residents in car-free development parking in other on-street locations. • All future developments should incorporate loading off street to avoid creating traffic congestion. • Promote the use of car clubs and car sharing to reduce the requirement for parking space and enabling active travel for most journeys, • All significant developments must include a CMP which includes dedicated routes (to be agreed with the Council) for construction traffic • To include concierge/secure drop-off area for home deliveries in larger developments to avoid the need for multiple drop-offs and/or return visits • To require developers to undertake Healthy Street audits of all significant new developments as part of Transport Statements/Assessments with the view to achieve high scores for all ten indicators. • To require CLOCS for construction vehicles. • To ensure that Heathrow Airport expansion gets developed as proposed that the promise of 'no additional vehicular trips to/from the airport' is adhered to. • To provide high quality cycle parking provision in all developments in compliance with WestTrans Cycle Guidance	• Investigate the potential for freight consolidation centre(s) in the Borough

10.2 Railway Projects

There are two large scale railway projects currently underway within the Borough:

- *The Elizabeth Line (Crossrail);* TfL took over the operation of Heathrow Connect Services in May 2018, and will provide services between Reading, Heathrow and Shenfield via central London by 2021. Station upgrades by both the Council and Network will be completed as part of this project.
- *High Speed 2;* Construction of phase 1 of the new high-speed rail link from London Euston to Birmingham commenced in 2018. A new interchange station at Old Oak Common immediately adjoining the Borough will be included as part of this project.

In addition, there are other potential railway projects potentially improving capacity and the frequency of trains, plus introducing new services on orbital links within the Borough. These projects are in the early stages of feasibility:

- *West London Orbital (Dudding Hill Line):* conversion of the freight line to passenger use to create a service between Brent Cross and Brentford.
- *Overground Frequency Enhancements;* Additional frequency on the line plus additional station at Old Oak Common Lane
- *Brentford – Southall Rail Passenger Service* a conversion of the freight line to passenger use to create a service between Brentford and the Elizabeth Line at Southall.
- *Greenford Branch Line enhancements*, the Council is lobbying both Department of Transport and the Mayor of London/TfL for service frequency increases for this rail line, which links Greenford with The Elizabeth Line at West Ealing.

Heathrow Expansion

Whilst Ealing Council welcomes the jobs and economic benefits of Heathrow, a third runway and associated facilities will inevitably cause more noise, pollution and traffic that will damage the quality of life of local people. Heathrow's current proposals involve a doubling of airport passengers to 130,000,000 people per year by 2040 plus significant increases in airfreight.

The adverse impacts should be clearly recognised to address them with adequate mitigation measures. Airport expansion needs to adhere to the principles of sustainable development and minimise the environmental impacts of all forms of transport.

Other Significant Transport Projects

Finally, there are the following other significant transport projects being progressed either within or affecting LB Ealing:

- Cycle Superhighway 10 (A40 Route)
- Cycle Superhighway 9 (A315 LB Hounslow)
- Bulls Bridge A312 enhancements

11. Reference Section

The key documents referred to and supporting this Transport Strategy are given below.

- Mayor's Transport Strategy

- London Plan (draft)

- London Environment Strategy

- Corporate Plan

- Borough Plan

- Local Plan

- Air Quality Action Plan (draft)

- LIP 2019-22