London Borough of Hillingdon

Third Local Implementation Plan (LIP3)

2019 - 2041

March 2019

HILLINGDON

LONDON

Contents

	Page Number
Foreword	1
Executive Summary	2
1. Introduction and preparing a LIP	7
2. Transport in Hillingdon - The Local Context	11
3. Mayor's Transport Strategy Outcomes & Borough Objectives	28
4. The Delivery Plan	113
Appendices	117

Foreword

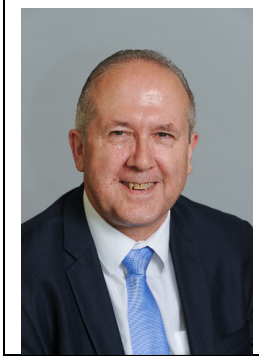
Hillingdon welcomes this opportunity to set out future transport plans for the Borough. Through this Transport Strategy and Local Implementation Plan (LIP), Hillingdon Council has detailed its aspirations for the Borough up to 2041 to contribute towards achieving the ambitious visions of the London Mayor's Transport Strategy (MTS).

The Council recognises the importance of its role not only in delivering a programme of investment that supports the visions of the Mayor at a higher level, but is also tailored to needs of Hillingdon. Our residents are at the heart of everything we do and we will ensure that their views and needs are at the forefront of our transport programme.

On this basis, we welcome the Healthy Streets approach which will help us to achieve a transport network that is safe and inclusive for all, and creating active, attractive and vibrant places where people enjoy living, working and carrying out activities. To ensure initiatives meet the needs and are supported by those who live, work and spend time in Hillingdon, we are reaching out for public input.

Through this LIP, the Council sets out its objectives over the next three years (2019 – 2021) which are aimed to complement the objectives of the MTS. It informs how the Council will invest over the three-year period in transport improvement projects within Hillingdon's control, and identifies areas beyond the Council's control where we will collaborate with relevant bodies, including Transport for London (TfL), National Rail, and neighbouring boroughs, to achieve the objectives of this LIP and the MTS.

This LIP forms a working document, and throughout the three-year period, Hillingdon's progress towards achieving the objectives of the MTS will be monitored and reported to the TfL on an annual basis. Hillingdon will work collaboratively with governing bodies, public transport providers, and those who reside and work in Hillingdon, to create a LIP that will work towards achieving a healthy, safe and sustainable network with vibrant links and places that are pleasant for all.



Councillor Keith Burrows

Cabinet Member for Planning, Transportation and Recycling

Executive summary

Overview

Hillingdon's Local Implementation Plan (LIP) is a statutory document prepared under the GLA Act that requires the Borough to detail its proposals for implementing the Mayor's Transport Strategy (MTS) within Hillingdon. With each new MTS, new LIPs are required to be prepared, and this document forms the third LIP for the Borough to correspond with the new MTS, published in March 2018.

The population of Hillingdon has increased by 18% over the past 10 years, with it forecast to grow by another 11% in the next 10 years. The Mayor's London Plan sets a requirement for the borough to deliver new homes, and areas were identified in Hillingdon's Local Plan Part 2 (LP2). Hayes Town Centre designated as a Housing Zone will deliver approximately 2,788 new homes, including 847 affordable homes, bringing more demand for better north-south orbital transport connections within the Borough.

Central and southern Hillingdon are generally well served by the London Underground, National Rail services and a radial bus network. By contrast the north of the Borough is less densely built up, key services and facilities are more sparsely distributed resulting in longer trip lengths with many more points of origin and destination. This pattern of land use makes public transport more expensive to provide resulting in some areas having little or no public transport services particularly on Sundays and evenings. As result of this limited travel choice, residents are inevitably dependent on the private car to satisfy their daily travel needs. By inference they also need somewhere to park this car both at home and at their final destination. Without car parking and access to good public transport their mobility will be restricted denying them access to essential services and facilities as well as employment opportunities, education and training, healthcare, leisure and visiting family and friends.

There are no crowding issues on rail, however, public transport frequency and connectivity needs to be improved to tackle the Borough's predominant travel by private vehicles. The Council has identified that extending the Central Line to Uxbridge will vastly improve connectivity between Hillingdon and the rest of London, as well as having better orbital bus connections. Hillingdon is surrounded by motorways, M40, M25, M4 as well as main roads A4, A40, A312, and A404 all of which carry significant traffic flows generated in part by the demand to access Heathrow Airport which increases congestion while delaying journey times for buses. In addition, the borough lacks a coherent cycle network, reducing the ability for people to partake in active travel.

The construction of HS2, the new high-speed north-south railway connecting London with Birmingham and beyond, will have a big on the Hillingdon road network during the lifetime of the Delivery Plan. The railway will run in a tunnel from Ealing into Hillingdon before emerging just west of Ickenham High Road. Given the location of the tunnel portal, there will be a great deal of construction activity in the West Ruislip and Ickenham area generating significant volumes of HGV construction traffic. This construction traffic will assign to Harvil Road/Breakspear Road, Swakeleys Road and then use Swakeleys Roundabout to gain access to/from the A40. Swakeleys Road between Harvil Road Roundabout and Swakeleys Roundabout is principally a single carriageway in either direction; this link already experiences delays southbound in the AM peak and northbound in the PM peak.

HS2 construction traffic will make congestion worse on a network that is already saturated making journey times longer and less reliable; this delay will also affect the following bus services that use the HS2 construction routes.

By 2020 Elizabeth Line (Crossrail) trains will start to operate between London Paddington and Heathrow Airport stopping at Hayes and Harlington. When the line is fully operational, trains will call at West Drayton as well as Hayes and Harlington serving the West End, City and Docklands and running from Reading and Heathrow in the west across to Shenfield and Abbey Wood in the east.

Solving these issues cannot realistically be addressed by limited sources of funding. The Borough must therefore look to solutions through this LIP focussed on changing travel behaviour at a local level. These will support the major infrastructure projects that the Borough aspires to deliver through working in partnership with Transport for London (TfL), public transport providers, and neighbouring boroughs where appropriate.

The Borough is responding to these challenges and opportunities by setting out its short- and long-term goals and transport objectives for Hillingdon up to 2041. The LIP details a programme of investment over a three-year period from 2019/20 to 2021/22 and sets out the aspirations for the Borough for long-term major infrastructure improvements to be delivered up to 2041. In common with the MTS, Hillingdon are opposed to Heathrow expansion. Should this be taken forward, despite our objections, it needs to be recognised that the LIP3 will require an extensive review of the infrastructure that will be required to address the problems of increased air pollution, traffic congestion and overcrowded public transport.

All measures identified within this LIP will support the delivery of the Mayor's Transport Strategy within Hillingdon. It will enable the Borough to plan strategically for transport, to achieve the broad MTS goals of;

- Healthy Streets and healthy people
- A good public transport experience

- New homes and jobs

A key aspect of the LIP is the Council's role as a partner, working with TfL, residents, businesses and other local stakeholders to achieve a range of improvements to the transport network and transform the way that people travel.

Some of the measures and proposals in the LIP can be implemented by the Council, using its statutory planning, highways and network management, and parking powers. Other interventions, particularly larger long-term projects, will have to be delivered in partnership with TfL and other organisations, particularly improvements on the Transport for London Road Network (TLRN), at rail and underground stations and the Grand Union Canal.

Common to all London boroughs, this LIP comprises of the following parts:

- Chapter 1 – defines the process followed in preparing the LIP
- Chapter 2 – outlines the local context, challenges and opportunities considered in preparing the local objectives of the LIP within the framework of the MTS priorities and outcomes
- Chapter 3 – details a three-year programme of investment that will deliver the LIP objectives and the outcomes of the MTS, and a more detailed annual programme for the first year of investment through the LIP

The borough undertook public consultation between 28th November 2018 and 9th January 2019. The consultation appeared on the borough's website and was available for any member of the public to respond.

In total, 5 stakeholders and 4 individual responses were received. Key themes of concern for the public were addressing air pollution, towpath improvements, extension of the central line to Uxbridge, school travel plans and sufficient walking, cycling facilities. A full summary of public feedback can be found in Appendix B.

Challenges and opportunities

The challenges and opportunities within Hillingdon were considered in relation to inciting a change in the transport mix and within the context of the MTS outcomes.

A wide range of issues and opportunities have been identified, with some of the main issues as follows:

Challenges

- HS2 construction traffic placing further demands on a network that during peak hours is already saturated

- Lack of orbital connections, by bus and rail, hindering access to jobs within the Borough and beyond, contributing to the attractiveness of making such journeys by car.
- Low levels of frequency on National Rail services, making Hillingdon feel less connected.
- Competition for available road space by a variety of users leading to congestion, longer travel times, environmental impacts and perceptions of safety.
- Poor quality transport network, including issues relating to accessibility, surface quality and signage, impacting the quality of user's experiences and perceptions of safety.
- High levels of traffic which contributes significantly to poor air quality and pollution levels.
- Parking pressures.
- Lack of strategic cycle networks, restricting the opportunity for a modal shift to cycling.
- Accommodating a growing population with a limited orbital public transport network.

Opportunities

- Strengthening orbital connections through high-quality walking and cycling links, and new bus routes through collaboration with TfL.
- Improving active travel links to public transport access points, particularly in the areas with low Public Transport Accessibility Levels (PTAL) to facilitate multi-modal journeys.
- Collaborative working with TfL and neighbouring boroughs to reduce traffic levels, particularly through-traffic and improve air quality throughout the borough with a prioritised focus in the identified air quality hotspot areas.
- Exploring opportunities arising from wider regeneration plans and master planning exercises.
- Investment in strategic infrastructure to unlock potential for growth.
- Elizabeth Line (Crossrail) and the new revised bus network that will serve it

Objectives

Based on the challenges and opportunities considered within the LIP, a set of objectives for Hillingdon have been derived. These have been developed to align and assist with meeting the MTS aim of increasing the sustainable travel mode share and creating safer network links.

Delivery plan

Based on the objectives of the LIP, and the outcomes of the MTS, the Delivery Plan outlines the investment programme and projects for the three-year period from

2019/20 to 2021/22, as well as the longer-term aspirations for new and upgraded infrastructure and services that will be brought forward collaboratively with the Borough, TfL and public transport providers.

Monitoring

An important part of delivering the LIP is monitoring its progress against the MTS outcomes to ensure that the LIP is succeeding in achieving them. The trajectory of change to achieve the outcomes is likely to change and fluctuate over the course of the MTS period, and monitoring will allow the Council to adjust schemes and interventions to target requirements.

TfL will collect strategic data on behalf of the boroughs for the overarching mode share aim and the MTS outcomes to assist in monitoring. In addition to outcome indicators, delivery indicators are also set against each of the nine MTS outcomes. These provide a reference for the delivery of the MTS at a local level. The Council will monitor and record the delivery indicators and report to TfL once a year using Proforma C.

Introduction and preparing a LIP

Introduction

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

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

This LIP identifies how the London Borough of Hillingdon will work towards achieving the MTS goals of:

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

The Council notes that the overarching aim of the strategy is for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041, compared to 63% today, and there are different targets set for central, inner and outer London. The MTS target for Hillingdon is 56% of all trips to be made on foot, by cycle or using public transport by 2041 in the Borough, compared to the 43% observed in 2016/17. The LIP outlines how Hillingdon Council will set local priorities and targets in order to assist with achieving this aim. The Council recognises that this modal shift can only be achieved by tackling the dangers that can result in road collisions and the fear of these dangers that discourages the use of these more active, sustainable and efficient modes of travel. The Council will work hard with TfL towards the attainment of the Mayor's Vision Zero ambition – the elimination of all deaths and serious injuries from London's streets by 2041.

This document also outlines how the Council will work with TfL to assist with delivering the outcomes, polices and proposals of the MTS at a local level.

Local approval process

The Cabinet Member for Planning, Transportation and Recycling has provided guidance to the borough officers during the development of the Draft LIP.

On 27th September 2018, the Cabinet Member presented a Report to Cabinet setting out Hillingdon's LIP3 Objectives, this Report was subsequently approved.

The Final LIP was revised in response to feedback from consultees and the revised draft was submitted to TfL for comment in early 2019. The final draft version was submitted to TfL in February 2019.

Statutory consultation

The GLA Act 1999 places a duty on boroughs, when preparing a LIP, to consult with the following organisations:

- The relevant Commissioner or Commissioners of Police for the City of London and the Metropolis
- TfL
- Such organisations representing disabled people as the boroughs consider appropriate
- Other London boroughs whose area is, in the opinion of the council preparing the LIP, likely to be affected by the plan
- Any other body or person required to be consulted by the direction of the Mayor

The borough undertook a public consultation exercise between 28th November 2018 and 9th January 2019. The consultation appeared on the borough's website, and was available for any member of the public to respond.

In addition, a total of 29 bodies were directly consulted, including the statutory consultees mentioned above. All direct consultees were written to, drawing attention to the consultation, where it could be found on the borough's website, and the closing date. In total, 5 stakeholder and 4 individual responses were received.

The Greater London Authority Act 1999 requires consultation of the local Borough Commander and TfL. The 'Guidance on developing the Third Local Implementation Plans' states that boroughs may also wish to consult with Elected Members; local service providers (LSP); local community groups; Mobility Forum; other service sectors (e.g. health, education etc); crime and disorder reduction partnerships; business communities and transport operators.

A six-week targeted consultation on Hillingdon's Draft Local Implementation Plan (and the accompanying Strategic Environmental Assessment) was carried out to include those consultees as listed below:

Transport for London	Environment Agency	Canal & River Trust
Natural England	Highways England	Internal Hillingdon Consultees
Network Rail	Elected Members	London Travel Watch
Local Service Providers		
Hillingdon Association of Voluntary Services	Metropolitan Police	London Ambulance
London Fire Brigade	NHS	Ceracare
Age UK Hillingdon		
Transport operators		
Chiltern Railways	Crossrail	RATP Dev London
Heathrow Express	Arriva	Metroline
Adjoining councils		
Buckinghamshire County Council	Hertfordshire County Council	Ealing Borough Council
Harrow Borough Council	Hounslow Borough Council	Slough Borough Council
Surrey County Council		

A more detailed summary of the responses received, and the borough's response to individual concerns raised, can be found in Appendix B.

The main changes made to the LIP following consultation are listed below:

- Revisions and changes have been made to all nine objectives;
- More information has been provided in the Delivery Plan as requested by TfL;
- Public consultation responses have been summarised and attached;
- A table identifying TfL requirements, and where they have been met within the LIP, has been included.

Statutory duties

The borough has taken into account all the statutory duties and processes as set out in the GLA Act in the preparation of this LIP3.

The Equality Duty's purpose is to help public bodies consider how different people will be affected by their activities and to ensure this forms part of the policy and decision-making processes. It applies to all public authorities named in Section 19 of the Equality Act, including government departments, health bodies, local authorities, transport authorities, schools and the police. It is enforced by the Equality and

Human Rights Commission (EHRC), which has overall responsibility for assessing compliance with the Equality Duty and its enforcement, with the power to issue compliance notices to public bodies.

As part of the Equality Act 2010, a legal duty was placed on public bodies and others carrying out public functions to ensure that they consider the needs of all individuals in their day to day work - known as the Public Sector Equality Duty. It covers a number of protected characteristics, such as age, race and disability. The Public Sector Equality Duty[1] states that a public authority must, in the exercise of its function, have regard to the need to:

"eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act" and *"take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it;"*

The Public Sector Equality Duty and The Equality Act require councils not to discriminate on the basis of age and ability. Therefore, the transport network and roads we live on, or use to get about, need to be usable for all ages and abilities.

LB Hillingdon has taken account of these duties and the legal duties placed on local authorities through the Health and Social Care Act 2012 to promote public health through transport. The Hillingdon objectives and programme of schemes reflects our adherence to the principles of health and equality for all in public transport and highways design.

The SEA Environmental Report, including a non-technical summary, and a draft of the EQIA were available on the borough's website during the consultation period, but no comments were received. The Environmental Report and the final EQIA remain on the council's website. This process did not identify any necessary changes to the LIP.

LIP approval

The draft LIP was submitted to the Mayor on 15th February 2019.

[1] Equality Act 2010, Public Sector Equality Duty
https://www.legislation.gov.uk/ukpga/2010/15/section/149

Transport in Hillingdon - The Local Context

Introduction

This chapter sets out the local policy context for Hillingdon's LIP3. It covers the borough's detailed interpretation at a spatial level and the local policies and proposals which will help deliver the MTS. The chapter also considers the link between the LIP3 and other key frameworks against which the borough plans and delivers local services.

This LIP3 is informed by evidence and analysis of local needs and issues; the Council's own Plans and Strategies, Central Government's Guidance and best practice. It is shaped by the wider context of the MTS vision, the MTS Healthy Streets Approach and the MTS policies, proposals and outcomes.

Local context

The London Borough of Hillingdon (LB Hillingdon) is an outer London Borough located approximately 14 miles west of Central London. The Borough is bordered by the London Boroughs of Harrow, Ealing and Hounslow as well as Council outside Greater London namely Three Rivers District Council (Hertfordshire County Council), South Bucks District Council (Buckinghamshire County Council), Runneymede District Council (Surrey County Council) and Spelthorne District Council (Surrey County Council)

Hillingdon covers a land area of 1165.70km^2 (11,6ha), it is the second largest by area of all London Boroughs. The Borough outline is long and narrow which is a key consideration in this LIP.

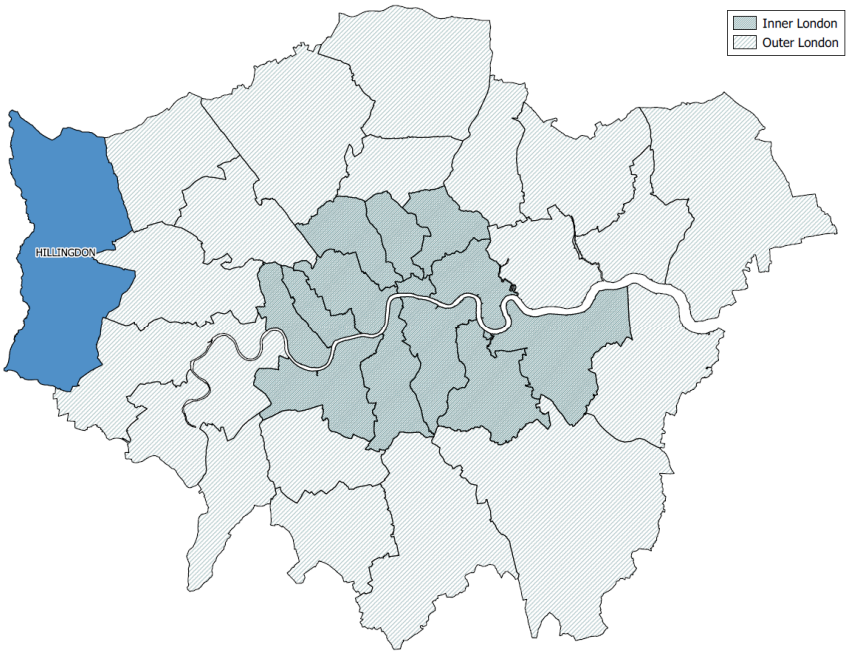


Figure 1: Hillingdon Location

LB Hillingdon is comparatively densely populated in the south and similar in character to parts of inner London. By contrast the centre of the Borough is suburban in nature with the north being sparsely populated necessitating longer trips to services and facilities. In the north access to public transport network is deficient limiting travel choice. Hillingdon possesses several locally important densely populated town centres which include:

- Uxbridge;
- Hayes;
- Ruislip;
- Northwood;
- Yiewsley; and
- West Drayton.

Alongside these town centres other key areas include London Heathrow Airport which is situated to the south of the borough, RAF Northolt which is situated to the north east as well as Brunel University and Hillingdon Hospital both of which are located to the south of Uxbridge to the west of the borough. New Bucks University has a campus on the edge of Uxbridge town centre.

Demography

The total population of Hillingdon is 302,471. The population has increased by 17.7% (45,490 people) over the past 10 years. Since 2005, the rate of population change has increased and has been growing relatively steadily since as shown in Figure 2.

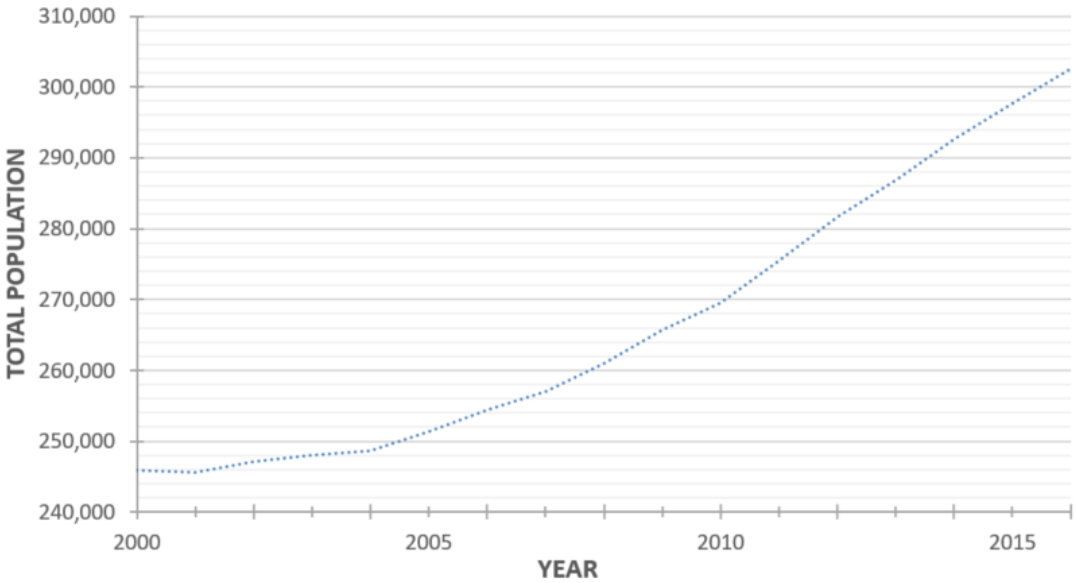


Figure 2: Hillingdon Population Increase 2000 – 2016

The average age within the borough is 36 (Outer London: 37, Greater London: 36, England: 40). 27% of residents are 19 or younger and 5% of residents over 75.

For Hillingdon residents, life expectancy at birth is 80.4 for males and 83.9 for females[2]. This has improved by 3 years for males, and 2.3 years for females over the course of the last 10 years.

Hillingdon's life expectancy is 0.1 years higher and 0.3 years lower than the Greater London average for males and females respectively suggesting women are more disadvantaged than men in terms of healthy living, well-being and/or access to health care.

[2] ONS, Life Expectancy at Birth and Age 65, 2015

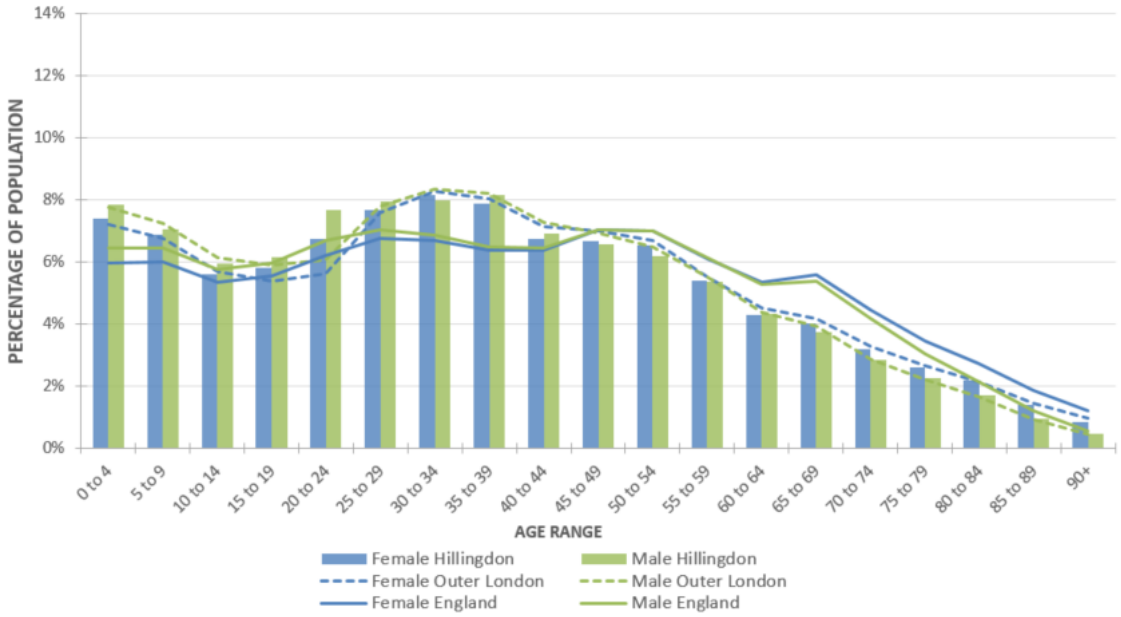


Figure 3: Residents by Age and Gender in Hillingdon, Outer London and England

According to the 2011 Population Census Hillingdon has 227 individual ethnicities this is the 23rd highest number recorded in England and Wales and the 11th highest in Outer London. The proportion of non-white British ethnicities is 48%, Hillingdon is less diverse than Outer London (54%) but more diverse than England generally (20%). The most ethnically diverse areas are located to the south and east of the Borough as shown below in Figure 4.

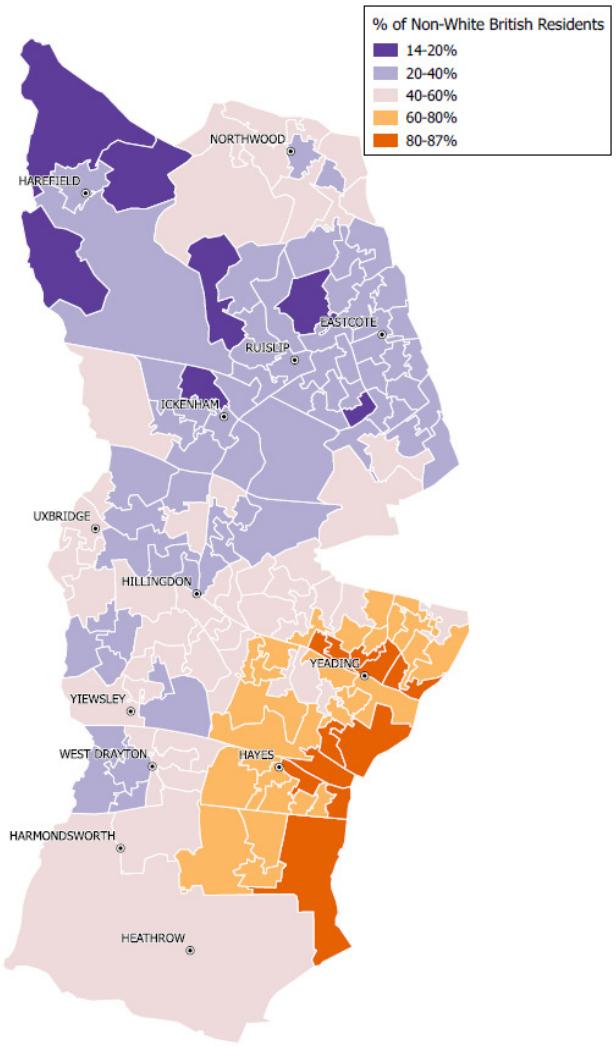


Figure 4: Proportion of Non-White British Hillingdon Residents

The employment rate for the borough amongst the working age population is 74.4%, consistent with the Outer London average of 74.5%. Areas of lowest employment are around Cowley and Brunel University London.

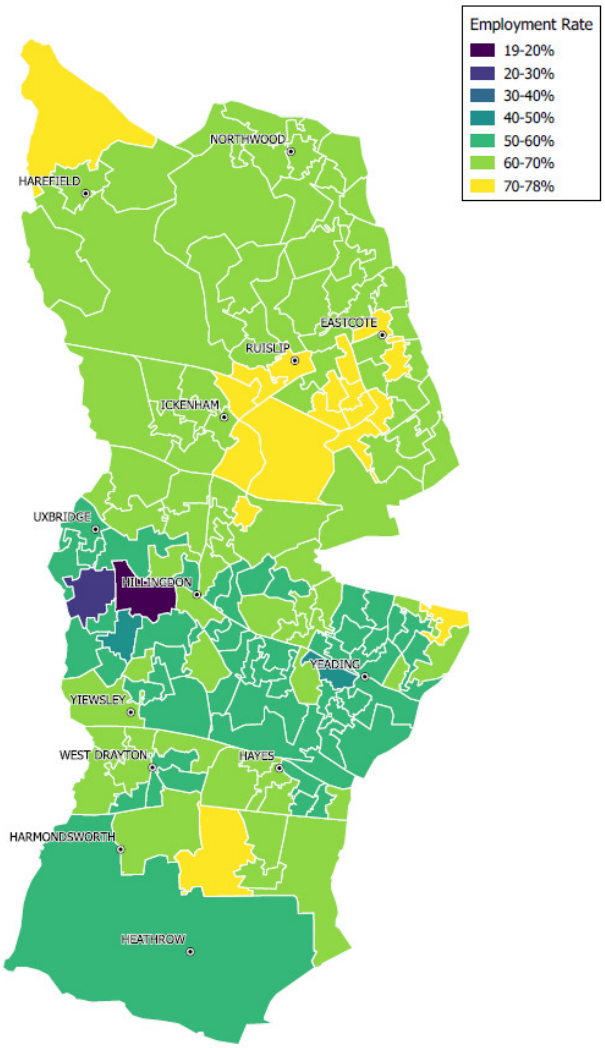


Figure 5: Hillingdon Employment Rate

The Index of Multiple Deprivation (IMD)[3] is based upon indicators of income, employment, education, health, deprivation, disability, crime, barriers to housing and services, and living environment. Hillingdon is predominantly an affluent borough with deprivation occurring mostly in the south and east of the Borough. These areas tend to have lower employment rates, greater diversity and less access to private motor vehicles.

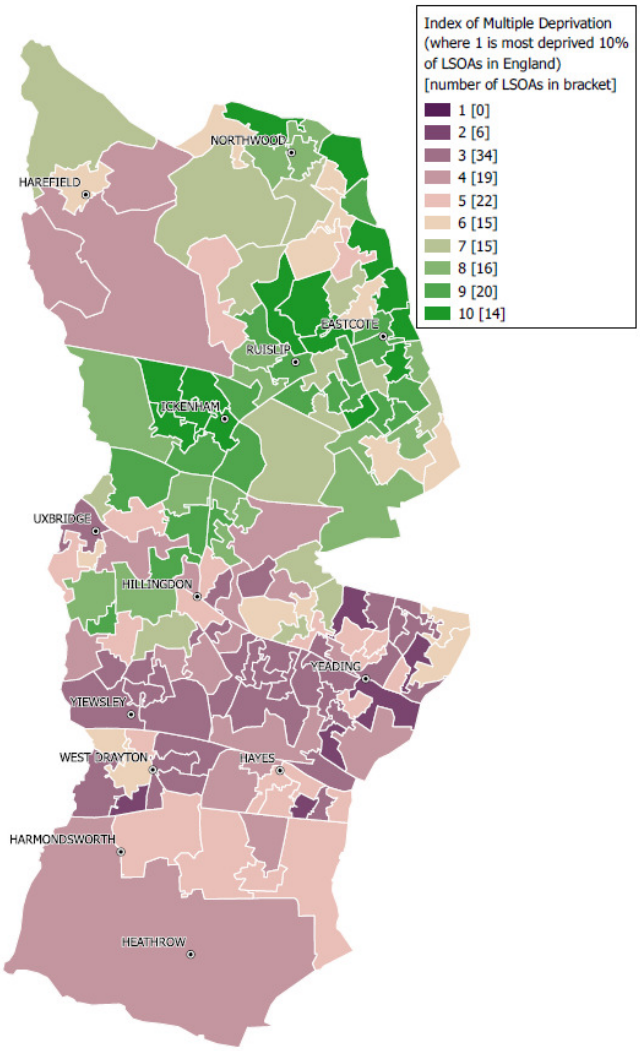


Figure 6: Index of Multiple Deprivation Deciles

[3] Department for Communities and Local Government (DCLG), English Indices of Deprivation 2015 for London

Figure 6 shows the distribution of IMD decile ratings within the borough at Lower Super Output Area level. These are calculated by ranking each LSOA in England from most to least deprived and splitting the rankings into 10 equal groups. Each decile is given a rating, with decile 1 comprising the most deprived 10% of LSOAs in England, and decile 10 comprising the least deprived 10%. The highest proportions (21%) of Hillingdon's areas are ranked in the 3rd decile, indicating they fall within the 30% most deprived areas in England.

Land Use

Majority of Hillingdon's land use is comprised of greenspace (49%), which is higher than both London overall (38%) and outer London (43%). Domestic gardens, other land uses, road and buildings primarily shape the rest of Hillingdon's land use.

Land Use (%)[4]	Hillingdon	Outer London	London	England
Area of Unclassified Land	0%	0%	0%	0%
Area of Other Land Uses	11%	7%	8%	1%
Area of Water	3%	3%	3%	3%
Area of Greenspace	49%	43%	38%	87%
Area of Path	1%	1%	1%	0%
Area of Rail	1%	1%	1%	0%
Area of Road	9%	11%	12%	2%
Area of Non-Domestic Buildings	3%	3%	5%	1%
Area of Domestic Gardens	19%	25%	24%	4%
Area of Domestic Buildings	5%	8%	9%	1%

Table 1: Land Use by Area

Dwellings within Hillingdon are evenly distributed with 29% consisting of both flat / maisonette and semi-detached housing. This is lower than other outer London boroughs, over 30% of dwellings in Hillingdon are flats are predominantly in Northwood, Uxbridge, Yeading, Hayes Harlington and Yiewsley. The remaining housing proportion is mainly terraced housing (27%), in similar proportion to the rest of London.

[4] Department for Communities and Local Government (DCLG) Generalised Land Use Database, 2005

As seen below in Figure 7, areas with higher proportions of flats broadly correspond with areas of local centres.

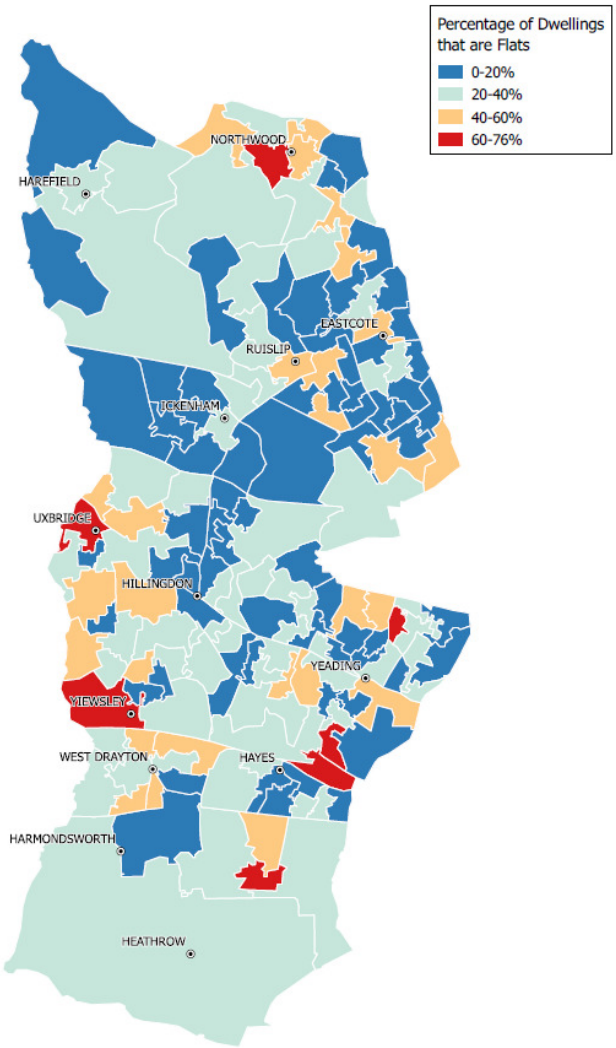


Figure 7: Percentage of Dwellings that are Flats

Transport

The existing public transport network in Hillingdon consists of bus, rail and London Underground services and is most strongly developed along east west routes, with all rail and Underground lines and many bus services travelling from central London to the west.

London Underground and National Rail services are largely concentrated on radial links to Central London, many of which offer high frequency services. However, there are limited services connecting town centres within Hillingdon; the majority of inter-borough public transport journeys must be made by bus. Bus services within the borough are radial in nature and therefore offer limited connectivity between town centres. As a result, many north-south movements across the borough are somewhat limited by public transport. Consequently, these modes do not offer a genuine alternative to driving a private car.

LB Hillingdon is served by three London Underground lines; the Metropolitan Line, Central Line and Piccadilly Line.

The Metropolitan Line serves the north of the borough with two branches that separate between Harrow on the Hill and West Harrow, the southern branch serves Uxbridge and the northern branch Northwood. Both branches connect the borough to Central London. The Piccadilly Line also has two branches which separate at Rayners Lane. The southern branch serves Heathrow and the northern branch Ruislip and Ickenham terminating in Uxbridge town centre. The Central Line crosses the centre of the borough in an east west alignment.

Three principal railway lines run through LB Hillingdon. The Great Western Main Line runs east to west through the south of the borough with stations at West Drayton and Hayes and Harlington. The Great Western Main Line runs between London Paddington and southwest England and Wales, however Great Western Main Line rail services calling at LB Hillingdon stations are restricted to services between London Paddington and Reading / Oxford and Didcot Parkway. The corridor also has a link further south to Heathrow Airport; Heathrow Express and Heathrow Connect provide direct connections between the Airport and London Paddington.

The Chiltern Main Line runs east to west through the north of the Borough with stations at West Ruislip and South Ruislip. The Chiltern Main Line runs between London Marylebone and the Oxfordshire/The West Midlands.

Public Transport Accessibility (PTAL) is a measure of accessibility to public transport in London. PTAL ratings range from 1 to 6 with 6 representing an excellent level of accessibility to public transport and 1 representing an extremely poor accessibility to public transport. Figure 8 shows the PTAL ranking across the borough.

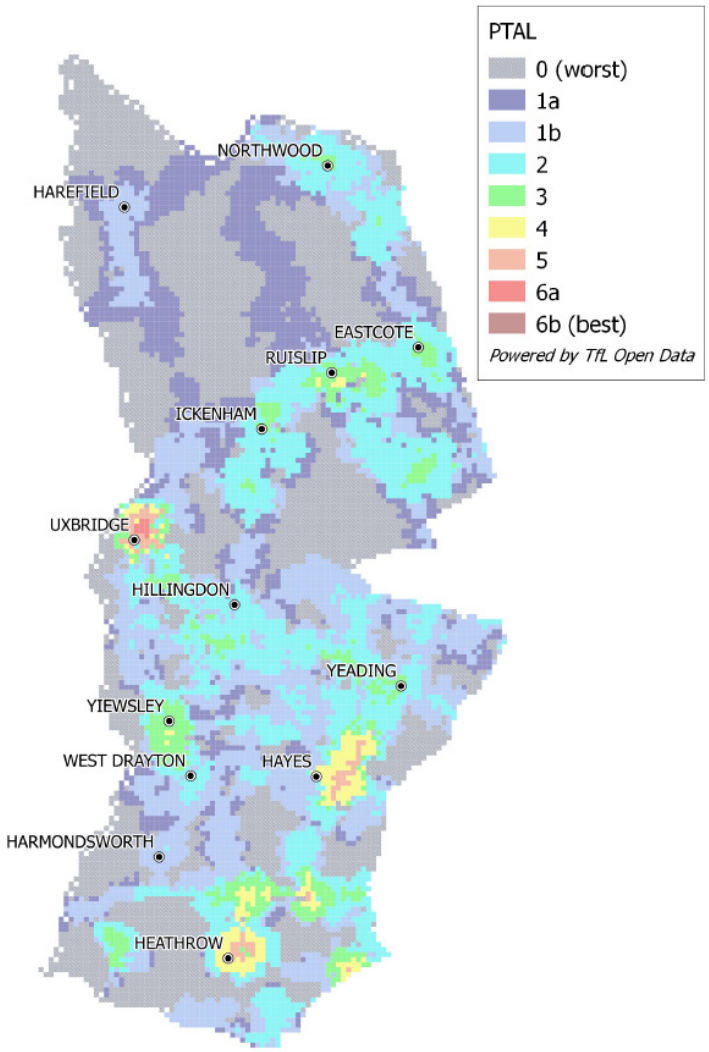


Figure 8 Hillingdon Public Transport Access Level (PTAL) 2015

In common with many outer London boroughs, the PTAL across Hillingdon is subject to significant variation given the reduced frequency of services further away from the locally important areas.

Areas with the highest PTAL in the borough correspond with the areas served by regular London Underground services. As such, Uxbridge, Heathrow Airport and Hayes and Harlington have concentrations of PTAL 5 and 6 ratings. In between key local centres, areas that are served by London Underground services such as Ruislip, Ickenham, Northolt and Northwood have a PTAL rating of between 3 and 4 within the confines of the centres. In addition, key bus corridors, notably along Uxbridge Road and Bath Road, have a PTAL rating of 3. However, most of the borough has a PTAL of 2 or below reflecting the limited public transport options available outside the local town centres.

Owing in part to its outer London location, many strategic roads run through or within close proximity to the Borough. Key routes within the borough are shown in Figure 9 and are described in further detail below.

Hillingdon's existing road network has direct links to central London and other parts of the country via the motorway and strategic road network. The Strategic Road Network (SRN) routes that run within or adjacent to the borough and are operated by Highways England include:

- The M25 London orbital motorway running north to south immediately to the west of the Borough;
- M40 which starts in the north west of the borough and provides access to the Midlands
- M4 running east to west through the southern half of the borough linking London with the south west; and
- A3113 to the immediate west of Heathrow Airport.

The Transport for London Road Network (TLRN) routes that run within or adjacent to the borough and are maintained by TfL include:

- A40 (Western Avenue) which transitions from the M40 in the north west of the borough to run east-west through the northern part of the Borough; and
- A312 (the Parkway) between Polish War Memorial and Junction 3 of the M4.

Accordingly, LB Hillingdon is extremely well connected to the wider strategic highway network, albeit some of these connections are highly congested.

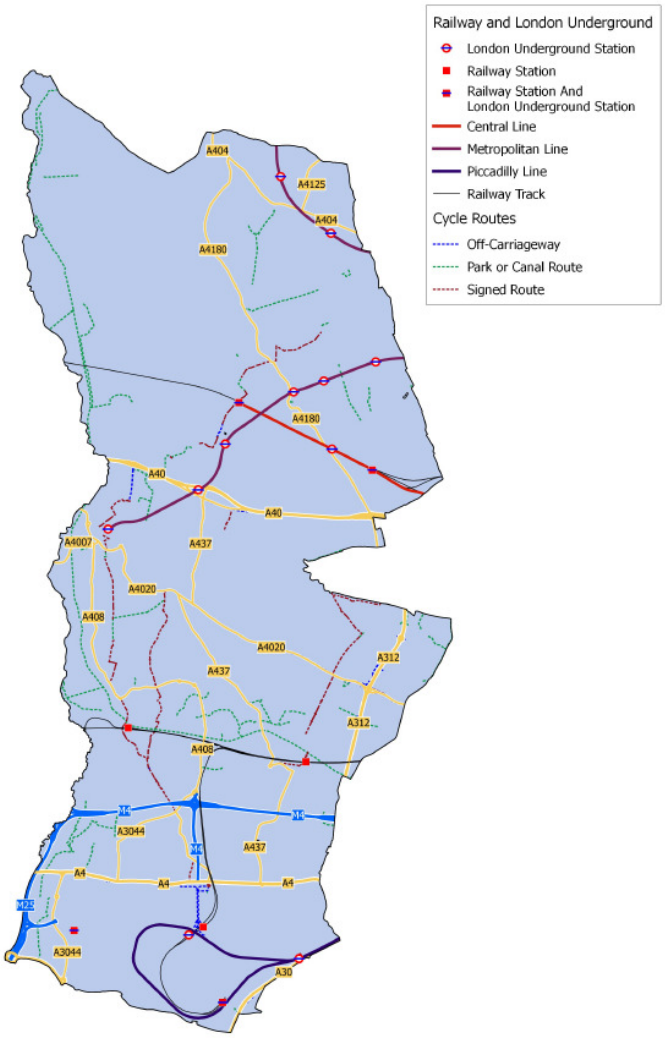


Figure 9: Existing Hillingdon Transport Network

Changing the transport mix

Challenges and opportunities

Given Hillingdon's location as an Outer London Borough it has the lowest active mode share in London (TfL factsheet). Residents predominantly travel by private motor vehicles (56%, 2017).

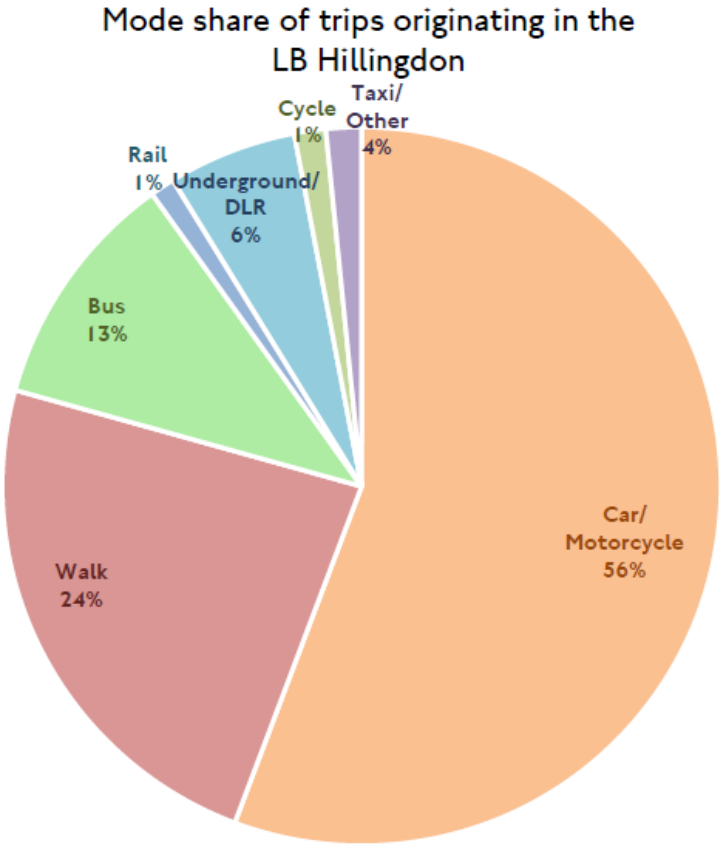


Figure 10: Mode share of trips originating in the London Borough of Hillingdon

Hillingdon looks to sustain, support and grow its economic base. It prides itself on being 'connected for business and a great place to live'.

Excellent transport and communications provision are key factors in Hillingdon's buoyant economy as are a skilled workforce. Hillingdon has all of these attributes and would look to build upon these foundations to encourage further investment in the borough. The borough has over 15,000 economically active businesses. Similar to most boroughs Hillingdon has a large number of micro businesses and SME's but unlike most West London boroughs Hillingdon has over 100 corporate headquarters and other enterprises employing over 250 staff.

As is to be expected with such a quantum of businesses, the range and diversity of business activity in Hillingdon is significant. Whilst as is to be expected with a borough that has two airports, two Universities and a hospital and excellent road and rail connections the logistics, transport and storage sector is strong, the professional scientific and technical sector and the service sectors are both major employers. It comes as little surprise that because of having such a broad-based economy Hillingdon has one of the lowest Job Seekers Allowance levels in London. Furthermore, Hillingdon supports a jobs density ratio of 1.05 (ratio of total jobs to population).

Whilst Hillingdon has an excellent economic base there is no room for complacency. For the borough to remain an attractive destination for businesses and investors more investment is required in the borough's transport infrastructure. With much of the growth in employment (and housing) projected for the south of the borough, investment in Hillingdon's north south connectivity is required in order that the projected economic growth benefits to be as accessible as possible. Existing orbital connections are lacking by both bus and rail, limiting access to jobs within the Borough and beyond, and contributing to the attractiveness of making such journeys by car. Opportunities strengthen orbital connections through high-quality walking and cycling links, and new bus routes through collaboration with TfL, will serve the borough well in encouraging growth.

LB Hillingdon has a 5-year plan for building new homes (5 Year Supply of Deliverable Housing Sites, 2017/2018 to 2021/2022, December 2017). The current monitoring target for Hillingdon is 559 residential units per annum. This includes a 5% buffer and taking account of the 1,759 dwellings already delivered over the period 2015/16 to 2016/17, the 5-year housing provision target for Hillingdon amounts to 2,516 dwellings over the period 2017/18 to 2021/22. The London Borough of Hillingdon has a record of persistently meeting and exceeding its housing target

Over the period 2016 to 2026, between 7,390 and 7,998 new homes are likely to be built in the London Borough of Hillingdon, with around 60% of this growth expected to occur in the Hayes Housing Zone. (‘London Borough of Hillingdon Strategic Infrastructure Plan’, Inner Circle Consulting, May 2017)

According to the Local Plan: Part 1, 2012, there is demand for large scale commercial/ mixed use developments particularly in the southern part of the borough on the fringe of Green Belt and/ or Conservation Areas. Local Plan: Part 1, 2012 also highlights slow and deficient public transport access between Uxbridge and central London and other key centres; poor and unsustainable access to and from local destinations, including shopping centres, employment and leisure concentrations/ areas and high dependency on private vehicles and low proportion of trips made by cycling, walking and public transport.

Hillingdon aims to create the right road and transport environment for sustained economic growth whilst harnessing the benefits for residents and businesses. Certain types of development and transport are conducive to this. Mixed use development focused around a transport hub creates more areas where people can work, travel, shop, socialise and spend time, reducing car dependency.

Many businesses choose to be located within dense developments near good transport links that provide to access a wide talent pool of potential employees, proximity to customers and convenient opportunities for deliveries and distribution. The Council recognises that mixed use developments centred around a transport hub allows more people to work shop and socialise locally, reducing reliance on the private car to satisfy their daily travel needs.

Hillingdon's Local Plan promotes sustainable forms of transport with an overall aim of improving air quality and reducing private car dependency (London Borough of Hillingdon Strategic Infrastructure Plan, Inner Circle Consulting, May 2017, p53). Hillingdon's existing public spaces and new developments could be designed to enable more walking and cycling which would help strengthen the economy.

The high levels of growth and development planned for Hillingdon will bring with it an increase in construction traffic over the coming years. HS2 construction traffic in particular will create pressure on Hillingdon's road network that is already saturated during peak hours.

There are opportunities to reduce car dependency within the borough, through improvements to active travel links, facilitating multi-modal journeys, and improving public transport access and links. This will ease the predicted pressure from construction traffic by reducing base traffic levels; however, increases in construction traffic will bring disbenefits to air quality, noise and general amenity for pedestrians and cyclists. Encouraging growth of the borough through development whilst limiting the negative impacts of construction traffic will be a challenge to be overcome during the LIP period and should be achieved through effective management and planning.

Hillingdon's location on the periphery of London with key strategic road links passing adjacent and through the borough will make managing construction traffic, as well as general vehicle traffic, challenging for the Council. This will need to be addressed through collaborative working with TfL and neighbouring boroughs to reduce traffic levels, particularly through-traffic and improve air quality throughout the borough with a prioritised focus in the identified air quality hotspot areas.

As mentioned previously, there is a general lack of orbital north-south connections within the borough for more sustainable modes. A step-change is required in the provision of bus and rail services, both in routing and rail frequency, to encourage public transport uptake and make the borough feel more connected both internally and to the rest of London. Achieving this step-change will require significant investment and collaboration with the relevant providers (TfL and National Rail); however, the borough also has the opportunity to supplement these aspirations with improved cycle and pedestrian networks. There is a general lack of strategic cycle networks, restricting the opportunity for a modal shift to cycling. The borough has the opportunity to fill the gap for areas with lower Public Transport Accessibility Levels (PTAL) by providing attractive active travel links to public transport hubs, facilitating multi-modal journeys and maximising the potential of the existing public transport network.

Mayor's Transport Strategy Outcomes & Borough Objectives

MTS Outcomes	Hillingdon Objectives
Outcome 1: London's streets will be healthy and more Londoners will travel actively	Hillingdon will encourage and promote healthy travel behaviours.
Outcome 2: London's streets will be safe and secure	Hillingdon will prioritise road safety and work towards achieving the Mayor's Vision Zero.
Outcome 3: London's streets will be used more efficiently and have less traffic on them	Hillingdon will promote sustainable travel to encourage a reduction in car use.
Outcome 4: London's streets will be clean and green	Hillingdon will improve the environment to be vibrant, attractive and well-connected places to be enjoyed with good air quality.
Outcome 5: The public transport network will meet the needs of a growing London	Hillingdon will improve connectivity at transport interchanges to enable more trips; and work with stakeholders to identify and deliver public transport opportunities.
Outcome 6: Public transport will be safe, affordable and accessible to all	Public transport will be safe, accessible and a viable transport option in Hillingdon.
Outcome 7: Journeys by public transport will be pleasant, fast and reliable	Hillingdon will support on improving bus journey times and reliability with stakeholders, to make journeys pleasant, faster and more reliable.
Outcome 8: Active, efficient, and sustainable travel will be the best option in new developments	Hillingdon will support new development environments that prioritise sustainable travel.
Outcome 9: Transport investment will unlock the delivery of new homes and jobs	Hillingdon will support and secure transport investments that unlock employment and housing opportunities.

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

Challenges and opportunities

More active travel and less motor traffic would help address a number of health and wellbeing issues highlighted in the policy document 'Better Health, Better Environment: A GLA guide for London's Boroughs. London Borough of Hillingdon' November 2013'.

14% of Hillingdon residents participate 5 times per week in physical activity for at least 30 minutes and nearly half participate once a week which is well below the London average[5]. Hillingdon's adult obesity prevalence is 23%, which is higher than the London rate, 21%, but lower than the national rate, 24%[6].

Transport impacts directly affecting the health of the local population include:

- limited access to green space in parts of the Borough (although about half the population has access to green space, well above the London average of 17%);
- poorer air quality particularly close to the main road network and near Heathrow airport;
- poor health due to air pollution and lack of physical activity;
- injuries and deaths caused by motor vehicles; and
- intrusive traffic in residential areas that harms quality of life.

More active travel and less traffic leads to cleaner air, it also improves fitness, community cohesion, happiness and greater access to green spaces and jobs for all. Particularly for shorter trips and the first and last mile of journeys involving public transport, it is recognised that there is great potential to increase walking and cycling rates in LB Hillingdon.

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[5] Toolkit showing levels of adult obesity , taken from Adult Obesity (2011-2012) National Obesity Observatory , NHS UK, Public Health England; http://www.sepho.nhs.uk/NOO/e-Atlas/adult/atlas.html

[6] Toolkit showing levels of adult obesity , taken from Adult Obesity (2011-2012) National Obesity Observatory , NHS UK, Public Health England; http://www.sepho.nhs.uk/NOO/e-Atlas/adult/atlas.html

Under the 'Better Health, Better Environment' document many actions align with the ambitions of the MTS:

- Designing street environments to encourage walking and cycling.
- Designing and engineering roads to reduce motor vehicle speed and implement 20mph zones where appropriate.
- Promoting a network of roads and paths that are safe and convenient for cycling and walking.
- Supporting walking and cycling by ensuring that, where possible, the needs of cyclists and pedestrians are considered from the outset.
- Promoting cycling through information, maps and cycle hire schemes.
- Improving safety of heavily trafficked streets where most traffic related health risk is concentrated.

A number of behaviour change schemes have been popular such as 'Explore Hillingdon Programme'; personalised travel planning and active travel awareness initiatives.

However, the evidence suggests that of all the different measures used to promote active travel, it is physical infrastructure which is the most powerful determinant of walking and cycling levels[7;8;9]. Evidence shows that high quality infrastructure for pedestrian and cycle traffic is key to making these modes more attractive[10].

Walking

Walking is, in many ways, the mode of travel that is most important to the aims of the MTS. A quarter of trips made by Londoners each day are on foot, and the number choosing to walk has been relatively constant for many years. A better walking environment will help connect communities and reduce road danger, leading to an increased shift to walking from use of the car with increasing benefits for air pollution, noise, and health and economic inequalities.

Twenty-one per cent of Londoners report too much traffic is a barrier to walking, and 14% say traffic travelling too fast is what stops them walking more. Twelve per cent of Londoners say that fear of road collisions stops them from walking more. In 2016,

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[7] Pucher, J. and Buehler, R., (2008). 'Making cycling irresistible: lessons from the Netherlands, Denmark and Germany'. Transport Reviews, 28(4), pp.495-528.

[8] Pooley, C.G., Horton, D., Scheldeman, G., Mullen, C., Jones, T., Tight, M., Jopson, A. and Chisholm, A., (2013). 'Policies for promoting walking and cycling in England: a view from the street'. Transport Policy, 27, pp.66-72.

[9] Aldred, R., Watson, T., Lovelace, R. and Woodcock, J. (2017) 'Barriers to Investing in Cycling: stakeholder views from England'. Transportation Research A

[10] Pucher, J. and Buehler, R., (2008). 'Making cycling irresistible: lessons from the Netherlands, Denmark and Germany'. Transport Reviews, 28(4), pp.495-528.

pedestrians accounted for 35% of those killed of those killed and seriously injured on London's streets. Fear of traffic is the main reason people give for being unwilling to let their children walk unaccompanied[11].

TfL analysis highlights the importance of helping London's children to walk more.

In outer London, walking is less common, with only 29% of trips made on foot (compared to 41% for central and inner London)[12]. These journeys are concentrated around public transport interchanges and town centres.

TfL analysis shows Outer London boroughs like Hillingdon have the greatest walking potential. More than 60% of all walkable trips made in London every day by car, bus or taxi are made in outer London[13]. The greatest opportunities for Londoners to try walking lie in non-work purposes – half of all walkable trips are currently being made for leisure and shopping reasons.

Solutions to walking for Outer London include:

- addressing the dominance of motorised transport
- improving walking and cycling environments to make them more attractive to use rather than resorting to the car
- making local streets better places to walk and spend time
- making significant improvements to public transport, both rail and bus
- improving walking access to town centres and transport interchanges, including rail and Underground
- bringing in a more joined-up approach to planning transport and dense, mixed land-use developments to encourage active, efficient and sustainable travel patterns and
- targeting trips to school, with a focus on reducing car use

Hillingdon's Local Plan: Part 1, 2012 encourages active travel. Walking and cycling accessibility is particularly important in district centres (for example in Ruislip, West Drayton, and Hayes), as these centres provide a full range of the goods and services needed to satisfy daily demands. The Council recognises the importance of having attractive and thriving local shopping parades as these are often most accessible by walking and cycling.

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[11] 'Walking action plan: making London the world's most walkable city.' Transport for London. July 2018, p. 27
[12] Walking action plan: making London the world's most walkable city.' Transport for London. July 2018
[13] Walking action plan: making London the world's most walkable city.' Transport for London. July 2018, p19

Figure 11[14] illustrates the level of walking potential across a 350m hex grid in the Borough. These are derived from the London Travel Demand Survey (LTDS) and represent trips that could reasonably be walked or cycled, but are not at present. The trip data is plotted along the road network for walking potential. The total walk trip length in km is then summed per cell to calculate the walking potential.

The west of the Borough has lower walking potential than the east. However, this is likely to be due to a lower population density (see *Figure 2*) and more dispersed goods and services, rather than higher existing pedestrian and cycle mode share. Providing effective active travel links to public transport access points will provide opportunities for multi-modal journeys, incorporating walking in to longer-distance journeys.

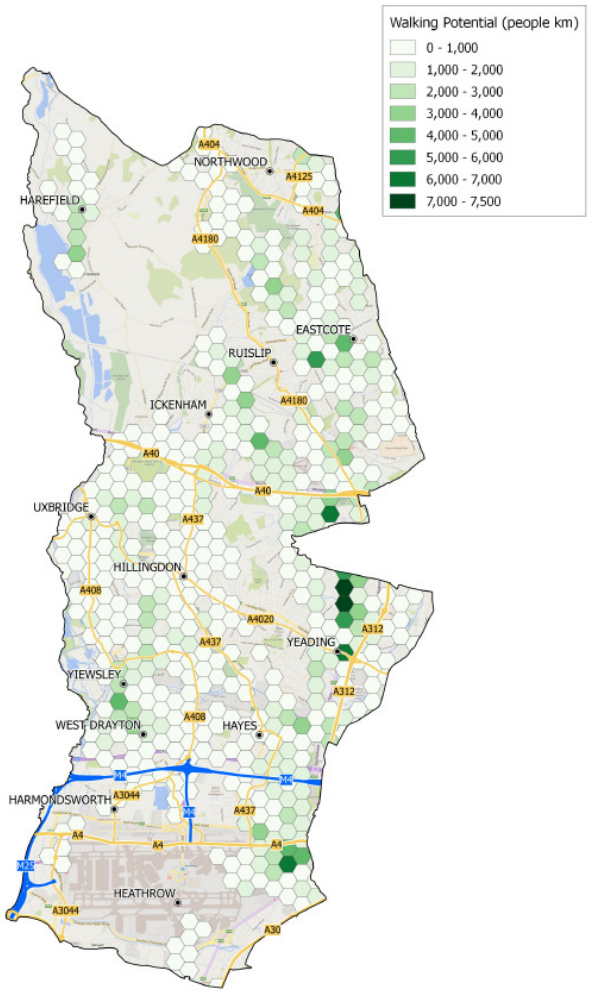

Figure 11: Potential Walking Trips

[14] TfL City Planning Tool: Cycling Potential (LTDS Switchable trips 2010-15)

Cycling

The Council has an ambitious vision for the future of cycling in the Borough and wants to become one of the easiest and safest places to cycle in London. However, Hillingdon has very low cycling levels: only 1% of all trips are done by bicycle. This is lower than the national average of 2% mode share and considerably lower than many of the central and inner London Boroughs.

Figure 12 illustrates the cycling potential across a 350m hex grid in the Borough. These are derived from the London Travel Demand Survey (LTDS) and represent trips that could reasonably be walked or cycled but are not at present.

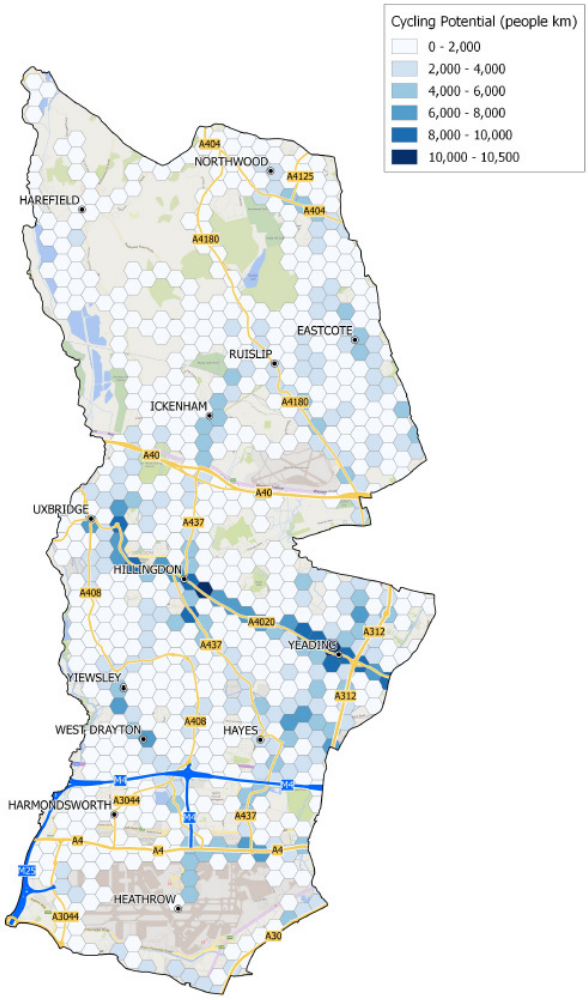

Figure 12: Potential Cycling Trips

As can be seen, potential cycle trips are concentrated along the major road network, whereas potential walking trips are more widely distributed across the Borough (see *Figure 11*). The trip data is plotted using link data assigned by the Cycle Network for London (Cynemon) model by TfL for cycle potential. The total cycling trip length in km is then summed per cell to calculate the cycling potential.

Below is the cycling potential for an area of Hillingdon derived from detailed cycling potential results from the Propensity to Cycle Tool (www.pct.bike). Figure 13 shows what the PCT suggests for current (2011) levels of commuter cycling in an area of Hillingdon.

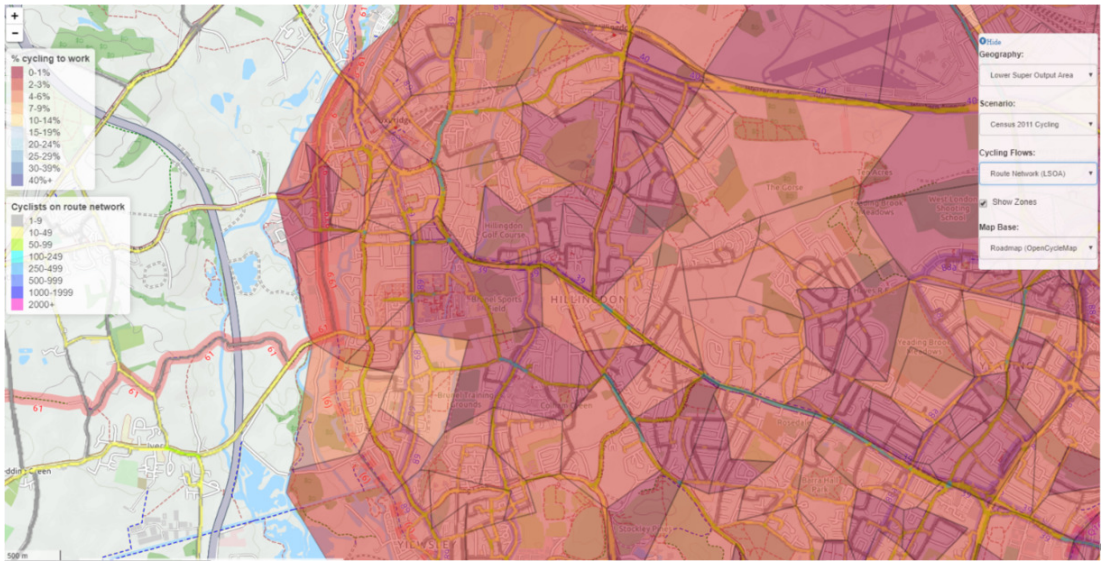

Figure 13: Levels of commuter cycling in Hillingdon, 2011. Derived from the Propensity to Cycle Tool. Hillingdon

Figure 14: Ebike scenario for Hillingdon. Derived from Propensity to Cycle Tool.

The E-bike scenario shown in

Figure 14 calculates what we would see if English commuters become as likely as Dutch commuters to cycle trips of particular lengths and hilliness, and people have access to e-bikes for some longer and hillier trips (based on Dutch and Swiss survey data on e-bike use). The scenario suggests Hillingdon's commuter cycling levels could be nearer 15-39% than 0-6%.

Hillingdon has a network of green corridors including 21km of traffic-free towpaths alongside the Grand Union Canal; it has more towpaths than any other London Borough. They connect the town centers of Hayes, West Drayton, Uxbridge and Rickmansworth, as well as bordering the major employment site at Stockley Business Park. The towpath also provides a traffic free connection between Harefield and Hayes via Uxbridge avoiding the need to use Harvil Road.

The Grand Union Canal towpath is a great asset and a resource that the Council is keen to expand on. Some sections of the towpath remain undiscovered by residents. The Council is aware that some of the paths are regarded as unattractive due to dropped litter. Concerns have also been raised about personal security; the towpath can feel isolated due to lack of lighting and low footfall which reduces natural surveillance. Some canal paths are not easily accessed from the surrounding environment and cannot be readily accessed particularly for those with pushchairs, child cycle trailers or mobility scooters.

Grand Union Canal is part of the three-strategic cross-borough Quietways, responding to the Mayor's Cycling Vision[15].

However, *"The Quietway project is forecast to run over budget putting completion of the final section in Hillingdon at risk…The Council expects the project to reach West Drayton - preferably Uxbridge. By working in partnership together this is considered achievable as the Council itself has already secured developers contributions towards this project and further funding is being negotiated"* [16]

London Brunel University is to establish a Santander bike sharing scheme on its campus. In November 2017, the university were one of two successful winners of the Santander Bank challenge for the setting up of a cycle hire scheme. Furthermore, the university successfully secured £80k in crowdfunding to support the scheme which came from 438 separate supporters both online and in cash donations at organised events. The scheme has 50 bikes distributed across six docking stations:

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[15]Hillingdon Towpaths Canal & River Trust, July 2014 https://canalrivertrust.org.uk/media/library/8741-hillingdon-towpaths-report.pdf.

[16] Meeting between Mike Brown MVO, Commissioner TfL and Cllr Ray Puddifoot MBE, Leader of the Council LB Hillingdon 23rd November 2017,

- Brunel University main campus (2 docking stations);
- Brunel University halls of residents;
- Brunel University sports grounds;
- Hillingdon Hospital; and
- Uxbridge Town Centre.

The docking stations provided for the scheme are different than those found in central London and associated with the main London cycle hire scheme. The docking stations are provided by NextBike and are much smaller in size. The scheme is due to be installed in January 2019 and become fully operation in March 2019.

There are ambitions to extend the scheme in the future; locations being considered include Stockley Park and West Drayton Station. LB Hillingdon has supported Brunel throughout the developed of the scheme and will continue to support future expansions of the scheme where possible.

In addition, a number of behaviour change schemes have been popular, such as the 'Explore Hillingdon Programme', personalised travel planning and active travel awareness initiatives.

However, cycling take-up is unequal in the UK; children, women, older people, ethnic minorities and the disabled are generally less likely to cycle. Motor traffic is the main deterrent to cycling for these groups.[17] In the UK, where protected cycling infrastructure is rare, men make three times as many cycle trips as women[18] whereas in countries with protected cycle infrastructure women cycle more than men [19];[20]. Lack of protected cycle routes therefore disproportionately limits the lives and travel needs of women (and the children they accompany), particularly given women are less likely to hold a driving licence or have access to a car than men[21].

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[17] [17] Pucher, J. and Buehler, R., (2008). 'Making cycling irresistible: lessons from the Netherlands, Denmark and Germany'. Transport Reviews, 28(4), pp.495-528.
[18] Department for Transport, (2016a). 'Average number of trips (trip rates) by age, gender and purpose: England, 2016'. National Travel Survey. Table NTS0611
[19] Camp, A., 2013. 'Closing the bicycling Gender Gap'.
[20] Pucher, J. and Buehler, R., (2008). 'Making cycling irresistible: lessons from the Netherlands, Denmark and Germany'. Transport Reviews, 28(4), pp.495-528.
[21] Department for Transport, (2015). Understanding the drivers of road travel: current trends in and factors behind roads use.'

Women have more complex travel diaries, linking multiple trips, and making more and shorter trips[22] – exactly the kinds of journeys which could be done on foot or bicycle.

Women also make approximately four times as many 'escort education' trips as men[23] so are more likely to have the added complication and responsibility of cycling with children which heightens safety concerns. A physical environment which may be acceptable to a single person without responsibility for others becomes unacceptable when cycling with children. While most people, regardless of gender, prefer not to interact with motor traffic while cycling, women place greater importance on being separated from traffic[24].

In Hillingdon 8% of children cycle or scoot to school (see Table 2). Our aim is that 70% of children will travel to school actively by 2021.

Sample Modal Split	2013 -14 % of Modal split (8 schools)	2018 % of Modal split
Active travel (Walking, scooting, cycling, public transport and Park n Stride)	*61%*	*65.14%*
Walking and Park n Stride	*42%*	*48.71%*
Public transport	*16%*	*8.12%*
Cycling / scooting	*3%*	*8.18%*
Car, motorbike and car share	*39%*	*34.86%*
Car use		*32.98%*
Car share		*1.88%*

Table 2: Modal split for travel to schools derived from Hands-Up Hillingdon School Travel Survey 2018.
** Source: Transport for London STaRS website, 2238 individual responses (excludes private schools)*

Many disabled people already cycle and many more could do so given the right conditions. Disabled Londoners, like Londoners in general, overwhelmingly use

[22] Department for Transport, (2014). 'National Travel Survey Trip Chaining: 2002-2014'

[23] Department for Transport, (2016a). 'Average number of trips (trip rates) by age, gender and purpose: England, 2016'. National Travel Survey. Table NTS0611

[24] Aldred, R., Woodcock, J. and Goodman, A., (2016). 'Does More Cycling Mean More Diversity in Cycling?', Transport Reviews, 36:1, pp. 28-44

public transport or the car as their main mode. Cycling accounts for 3% of commutes by disabled Londoners, well behind other modes but used by more Londoners than taxis and 'other' combined (each on 1%)[25]. Where possible, Hillingdon will adopt the design principles set out by Wheels for Wellbeing.

Some disabled people find cycling easier than walking. However, under existing legislation, cycles are not listed as a mobility aid (unlike wheelchairs and mobility scooters); meaning disabled cyclists may be asked to dismount in designated non-cycling zones (despite the fact that walking, wheeling or lifting a cycle might be physically impossible for some).[26]

Substandard cycle lanes, steps, speed reduction treatments, physical obstacles, bollards and barriers reduce accessibility for non-standard cycles, which are often wider, longer and heavier than standard bicycles. The majority of cycle parking and storage facilities fail to cater for the needs of disabled cyclists[27]. The Council will take note of and adopt where possible the principles set out under 'A guide to inclusive cycling; First edition – November 2017' Wheels for Wellbeing'

School Travel and Road Safety (STaRS)

LB Hillingdon will focus on producing an environment which enables all ages and abilities to cycle. With fear of traffic being the major deterrent to cycling for 80% adult's[28] solutions which provide protection and continuity without delays are likely to be attractive for the majority. This type of provision for cycling will mean re-allocating road space away from motor vehicles and reducing on-street car parking (both of which can be unpopular).

Presence of children, women, older people and disabled cycling is therefore just as important a measure of success as cycling numbers. Although it is possible to measure increasing diversity in cycling in London, at the borough level sample sizes taken by Transport for London are too small to give meaningful results. However, measuring uptake in cycling among children, women, ethnic minorities, disabled and older people could be done by borough's using surveys.

Measuring changes in cycling resulting from isolated schemes can be difficult. Area-wide schemes such as Liveable Neighbourhoods (area-wide implementation of

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[25] Andrews, N., Clement, I. and Aldred, R., 2018. Invisible cyclists? Disabled people and cycle planning–A case study of London. Journal of Transport & Health, 8, pp.146-156.
[26] 'A guide to inclusive cycling; First edition – November 2017' Wheels for Well-Being
[27] A guide to inclusive cycling; First edition – November 2017' Wheels for Well-Being
[28] Pooley, C., 2011. Understanding Walking and Cycling. Lancaster Environment Centre, Lancaster University.

modal filters, continuous footways, protected cycle routes and traffic reduction) may demonstrate changes in diversity and cycling uptake more clearly.

Hillingdon has established ambitious targets for its School Travel and Road Safety activity in line with the Mayor's Transport Strategy namely to increase:

- Active travel on the school run from 65% in 2018 to 70% by 2021, 75% by 2031 and 80% by 2041,
- Walking / park & stride from 48% in 2018 to 50% by 2021,
- Public transport from 8% in 2018 to 10% by 2021,
- Cycling / scooting from 8% in 2018 to 10% by 2021 and
- The number of TfL STARS accredited schools from 17 in 2018 to 57 by 2021.

Hillingdon's School Travel and Road Safety team (STaRS) works with school communities, emergency services (fire, police and ambulance), the Health Authority and colleagues across the Council to promote active travel and improve safety on all journeys made by children and young people across the Borough. The projects and initiatives developed and delivered by the STaRS team are key to encouraging parents and students to choose active travel modes (walking, cycling or using public transport) and reduce car use on the school run. The team also works with schools to ensure that any projects adopted form part of a coherent and consistent School Travel Plan, specific to the needs of the school community.

Schools developing a School Travel Plan must complete an annual hand up travel survey and identify at least two targets and complete a number of activities, including curriculum work and consultation, to work towards nationally recognised accreditation levels (Bronze, Silver and Gold) to recognise their efforts. Schools are encouraged to consult widely with parents, residents and the wider community on their proposals and consider the feedback they receive to help shape the projects and initiatives adopted. Pupils are central to the development and implementation of a School Travel Plan, and wherever possible pupil representatives are encouraged to take ownership of the Plan and lead on campaigns and projects by becoming Mini Road Safety Officers (Key Stage 1), Junior Road Safety Officers (Key Stage 2) or Youth Travel Ambassadors (Key Stages 3 and 4).

TfL, GLA and LB Hillingdon projects which affect walking and cycling

Hillingdon aims to benefit from the £115m Liveable Neighbourhoods programme, which is funded by TfL and delivered by the London boroughs and will be submitting a bid in autumn 2018.

TfL are planning maintenance and enhancement along A40 (including Swakeleys Roundabout and the Polish War Memorial), A312 and A4, including improving safety, bus, walking and cycling connections. A Safety Bid is being considered for cycle priority measures in the Swakeleys Roundabout area[29].

GLA and TfL are implementing Quietways and other projects to increase cycling along key corridors in line with GLA and WestTrans targets.

LBH are in process of implementing: 1) Grapes Junction and Harlington Corner improvements to crossings and public realm to improve town centre access particularly for people to walk, cycle or travel by public transport. TfL have encouraged LBH to make The Grapes principally a Bus Priority Scheme using WestTrans' BRT initiatives, but there will be cycling benefits which strengthen the case for Liveable Neighbourhoods. 2) Hayes Town Centre Major Scheme improvements to public realm and transport accessibility to facilitate growth and town centre access

Developers of large development sites, particularly in the Hayes Housing Zone, are also providing opportunities to encourage walking and cycling. The Council is actively exploring opportunities to improve connectivity by means of new infrastructure through S106 contributions. Examples are the Old Vinyl Factory providing 16,722sqm of landscaped public space Cranford Park, Grand Union Canal Quietway and a new towpath on the south side between Station Road (Hayes) and Dawley Road), CRT Mooring Strategy and Colne Valley Park HS2 Additional Mitigation Plan[30].

[29] London Borough Hillingdon Strategic Infrastructure Plan (SIP) May 2017, p19

[30] London Borough Hillingdon Strategic Infrastructure Plan (SIP) May 2017, p9

Objective 1: Hillingdon will encourage and promote healthy travel behaviours.

Town centres and residential streets will be assessed against the Healthy Streets guidance and barriers to active travel will be addressed through projects and programmes contained within Local Implementation Plan 3.

Key Performance Indicator 1a: Londoners to do at least the 20 minutes of active travel they need to stay healthy each day

Measure: Londoners to do at least the 20 minutes of active travel they need to stay healthy each day by 2041

Metric: London Travel Demand Survey (LTDS) borough residents. Proportion of London residents doing at least two x 10 minutes of active travel a day (or a single block of 20 minutes or more)

London objective: All Londoners to be doing a healthy level of activity through travel demonstrated by 70% of people reporting two periods of ten minutes spent walking or cycling on the previous day

Borough objective: By 2041, 70% of Hillingdon residents to be reporting two periods of ten minutes spent walking or cycling on the previous day

A minority (only 22%) of Hillingdon residents report doing at least two x 10 minutes of active travel a day in 2016/17 as evidenced the LTDS. By 2021 the aim is that this rises to 31% and by 2041 to 70%.

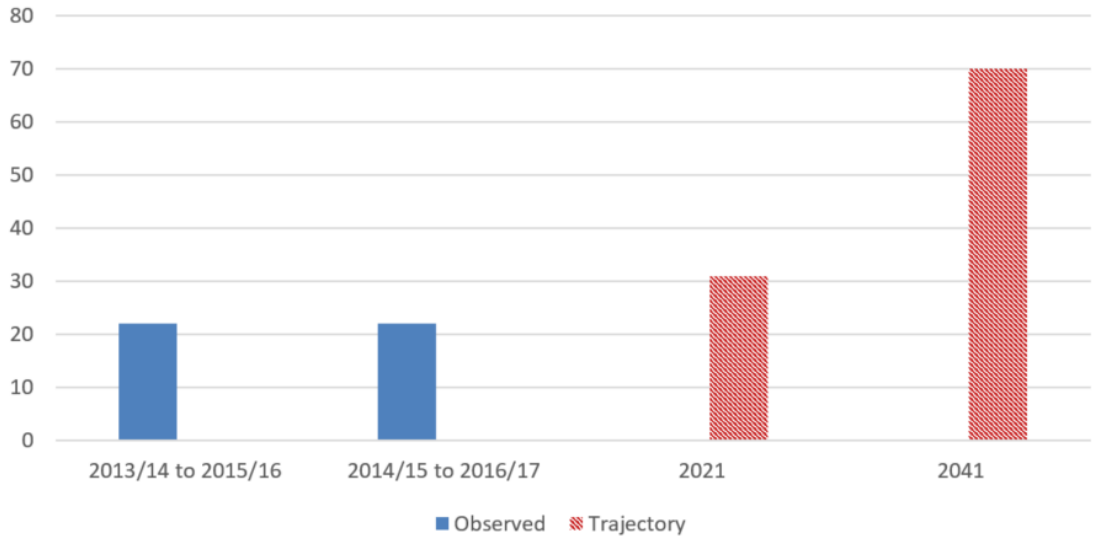


Figure 15: Percentage of residents doing at least twice 10mins active travel per day.
Source: LIP3 MTS outcomes borough data pack v1_1s

Key Performance Indicator 1b: Londoners have access to a safe and pleasant cycle network

Measure: Londoners living within 400m of the London-wide strategic cycle network by 2041

Metric: GIS special analysis and Strategic Cycling Analysis

London objective: 70% of Londoners will live within 400m of the London-wide strategic cycle network by 2041

Borough objective: 46% of Hillingdon residents will live within 400m of the strategic cycle network by 2041.

According to the TfL MTS data pack, no Hillingdon residents currently will live within 400m of the strategic cycle network measured via GIS analysis of the cycle network. By 2021, 4% of residents will live within 400m of the strategic cycle network and 46% by 2041 (see Figure 17).

Hillingdon aspires to provide improvements to active travel and air quality through the following mission/policy statements:

- Hillingdon will implement improvements assessed against the 10 Healthy Street indicators
- Hillingdon will increase the length of tow paths available to residents and visitors, including completing the Grand Union Canal Quietway between where it enters the borough in the south to where it leaves in the north.
- Work with stakeholders to implement a network of north-south and radial cycle routes, with the MTS aim to have 4% of the population within 400m of a strategic cycle route.
- Hillingdon will continue to work with schools to create child-friendly streets for commuting and play, adopting the Healthy Streets indicators to create 'Healthy Routes' to school.
- Hillingdon will invest in local shopping centre upgrades to improve public realm environments and become places that are easily accessible through walking and cycling.
- Hillingdon will review street design to shift priority towards active modes, and provide infrastructure, i.e. improved pedestrian crossings and protected cycle lanes to facilitate behaviour change.
- Accessible design will be incorporated as per the streets toolkit.

Projects are however not limited to these realms, and improvements will be considered as part of projects where possible.

Error! Reference source not found. below outlines the location of the Hillingdon cycle network proposals which will require TfL investment to support their

implementation. Three distinct sections have been identified for cycle routes within the borough; North of A40 total consisting of 12.6km in length, South of A40 total of 17.8km and Southern Hillingdon total of 9.4km. Overall more than 40km of cycle routes are proposed.

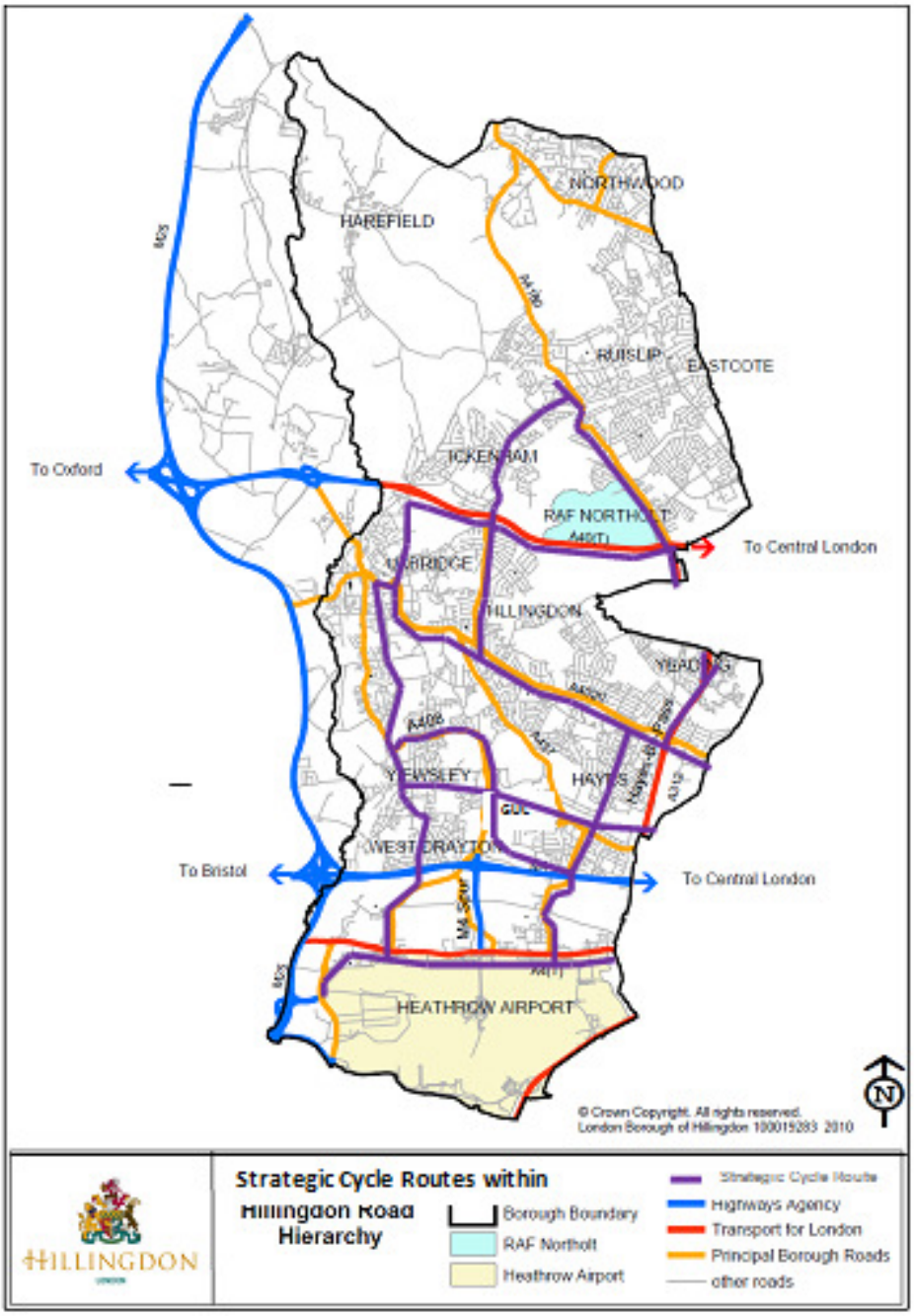
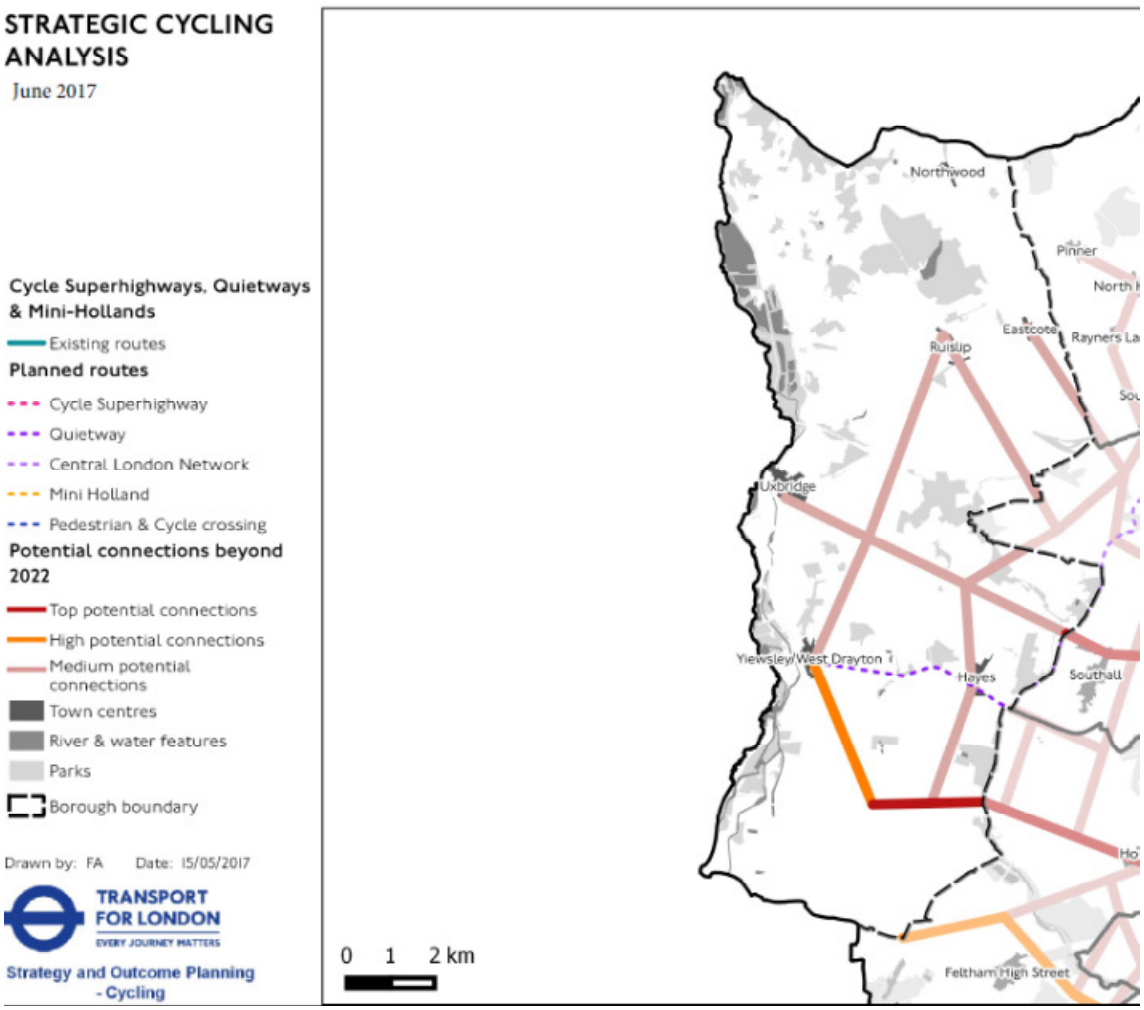


Figure 16: LIP cycle network proposals

As per the TfL Cycling Action plan December 2018, Hillingdon will work with stakeholders to deliver the strategic cycle network within the borough. The strategic cycle link which the Council is supporting delivery of is the 'Quietway' along the Grand Union Canal.

Local routes will be prioritised where current infrastructure can be maximised and that addresses the gaps within the local cycle network. For example, an immediate priority is to complete the link between High Street, West Drayton and Station Road, Hayes.

The image below, taken from the TfL Strategic Cycling Analysis shows the top, high and medium priority potential links.



Hillingdon will use this analysis to prioritise future route aspirations and funding submissions. These routes have the highest potential to increase levels of cycling and feasibility studies along these corridors will be allocated LIP funding where possible. The development of local cycle routes will also be considered based on the best routes to link into the strategic routes as identified in the TfL's Cycle Analysis. A key strategic route which has been identified is connecting the south and the north of the borough, Hayes to Ruislip via Uxbridge.

The Council has already committed to improvements to the cycleways along Stockley Road and Uxbridge Road which link into the identified strategic cycling network. Funds have also been earmarked to review local level cycle routes to link to the large, strategic network.

Cycle route locations are also developed in a manner that is responsive to Cycle Rangers' requests and suggestions as well as demand for locations. We intend to develop routes and schemes that meet the MTS aspiration of residents living within 400m of a strategic cycle network.

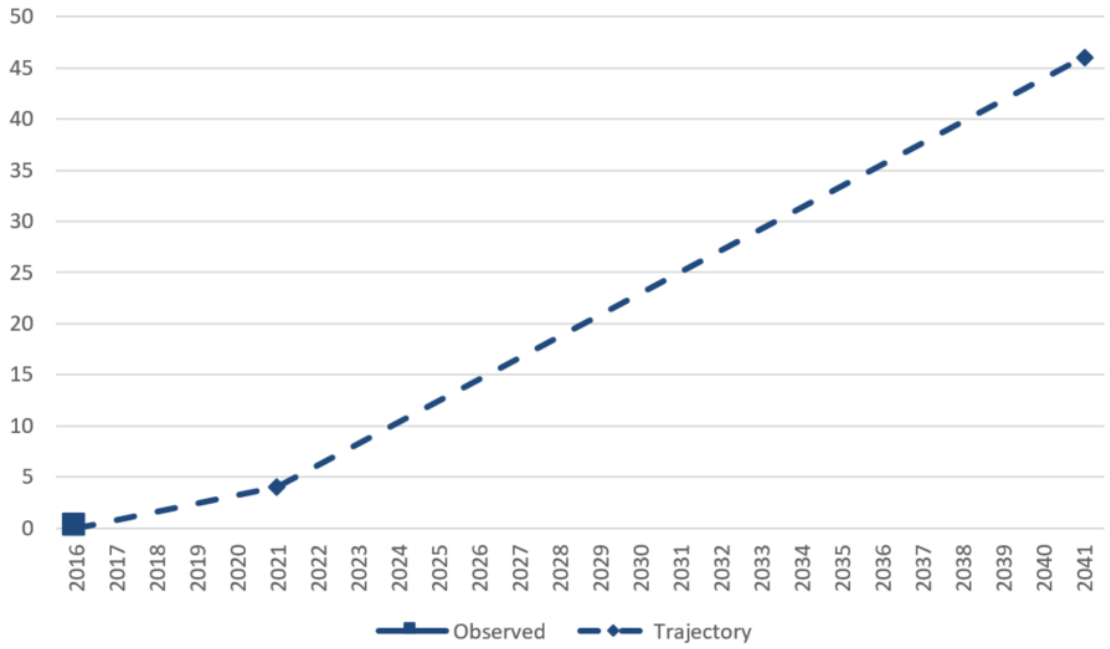


Figure 17: Percentage of population within 400m of strategic cycle network in Hillingdon.
Source: LIP3 MTS outcomes borough data pack v1_1

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

Challenges and opportunities

Vision Zero

Every year more than 2,000 people are killed or seriously injured on London's streets. In London in 2016, more than 30,000 people were injured in road collisions. People from more deprived areas, some ethnic minorities, disabled people, children and older people are disproportionately affected by road danger. People are more at risk per journey when walking and cycling in outer London boroughs such as Hillingdon than in central London.

Main roads pass through some of the most deprived communities, creating environments that are not inclusive to all, with roads that are intimidating and difficult to cross. 80% of all deaths and serious injuries occur to people walking, cycling or riding motorcycles. 73% of collisions resulting in death or serious injury for those on foot, bike or motorbike in London take place at road junctions[31].

There has been a significant shift in approach to safety on the roads which is recognised in the Mayor's Transport Strategy, and which we wish to act upon - a shift from 'road safety' to 'road danger reduction'. This must not be a simple switch of terminology, but a fundamental shift in approach, policy and action. As highlighted in the Mayor's Vision Zero action plan:

"For too long these tragic road incidents have been accepted as inevitable events. This would be unthinkable on other transport modes. We must change this mindset"

[31] Vision Zero action plan: Taking forward the Mayor's Transport Strategy'. Transport for London, July 2018

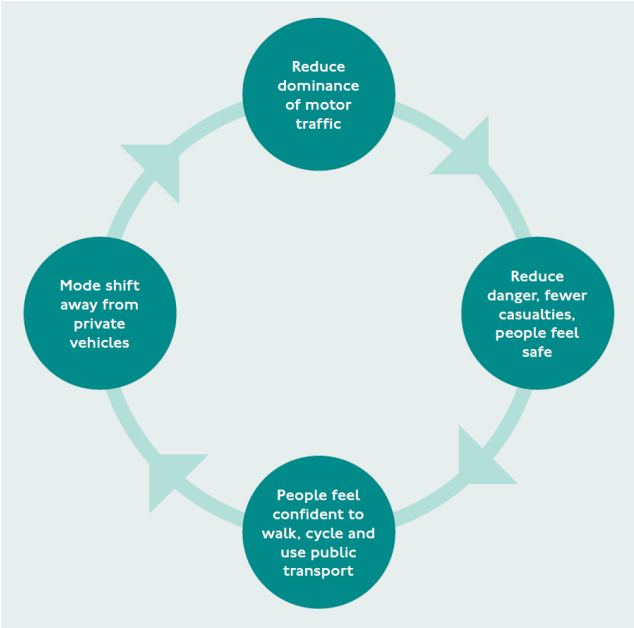


Figure 18: Road danger reduction as part of the Healthy Streets Approach.
Source: Vision Zero action plan: Taking forward the Mayor's Transport Strategy'. Transport for London, July 2018

One of the criticisms of the traditional road safety approach is that it has tended to implement measures which effectively accommodate poor driving behaviour and even law-breaking driver behaviour[32]. In practice, these measures have often been at the expense of freedom of movement, or convenience, of those on foot or bicycle.

Road danger reduction focuses on motor vehicles, targeting the danger at source. It means reducing the number of motor vehicles, reducing their speed and designing roads to prioritise walking and cycling. This approach tallies with the ambition to reduce motor traffic and increase walking and cycling and Healthy Streets as set out in the Mayor's Transport Strategy. To help achieve this, there will be provision of more Santander bikes to encourage people to use bikes for the first and last mile of their travel.

TfL's KSI data has been seriously limited since December 2016 due to restricted data supply by the Metropolitan Police. The Metropolitan Police introduced a new input database back in November 2016 which involves individual officers inputting their own records rather than the collision report books being sent off to a central team. This has resulted in problems with the quality of the data and compatibility issues which means LBH can no longer provide a description of how the collision occurred making it harder to measure casualties in detail. This may impact on the delivery of the Mayor's Zero Road Safety Vision.

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[32] Davis, R., (1993). 'Death on the Streets: cars and the mythology of road safety'.

Drivers are least likely to crash driving through Hillingdon of all London boroughs with 48 crashes per 100 million miles driven compared to say 300 per million miles driven in City of London. Drivers are 8 times more likely to be involved in a crash while driving a mile in City of London than in Hillingdon.

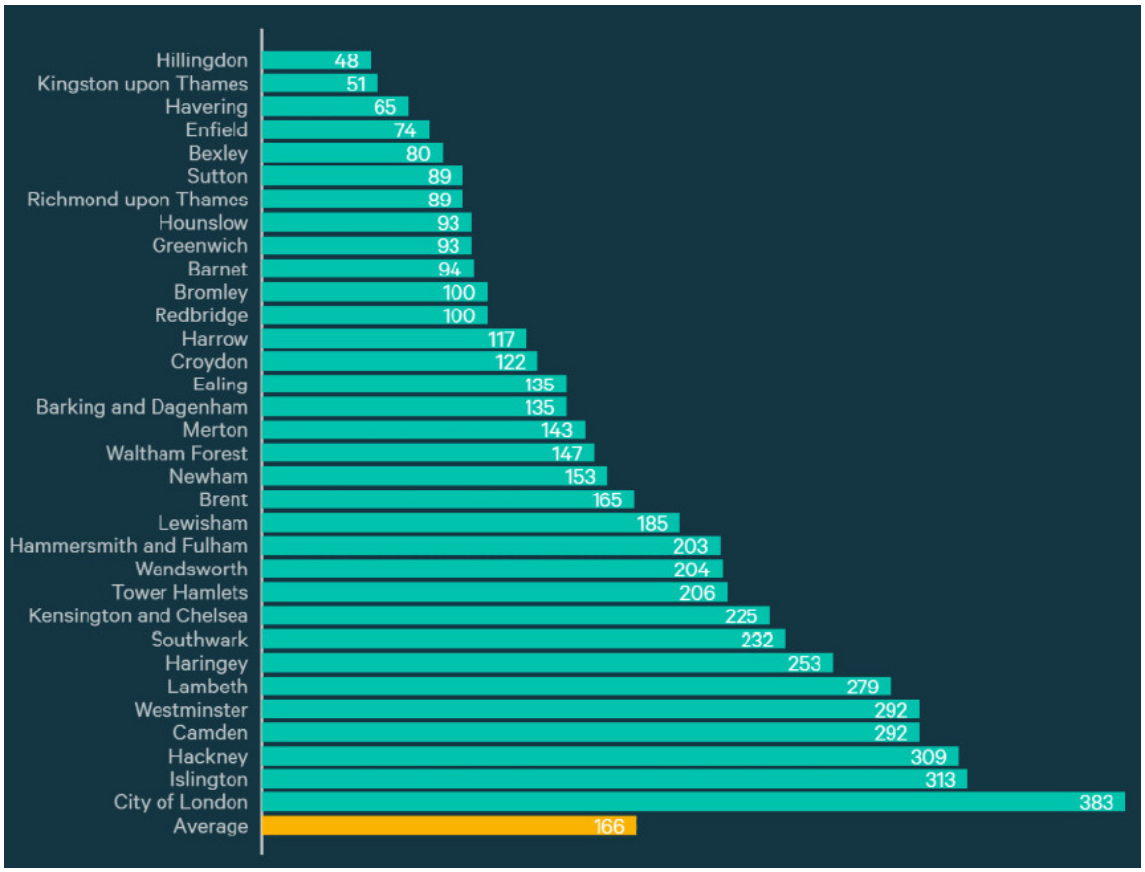

Figure 19: Number of collisions per 100 million miles driven on borough roads

- Danger posed to pedestrians by respective modes in Hillingdon

• Vehicle Type (Banded)	• No. of Casualties by Severity			
	• 1 Fatal	• 2 Serious	• 3 Slight	• Sum
• 1 Pedal cycle	• 0	• 2	• 2	• 4
• 2 Powered Two-Wheeler	• 1	• 7	• 6	• 14
• 3 Car	• 2	• 91	• 433	• 526
• 4 Taxi	• 0	• 3	• 15	• 18
• 6 Bus/coach excluding minibus	• 0	• 5	• 22	• 27
• 7 Goods vehicles	• 1	• 9	• 37	• 47
• 8 Other	• 0	• 1	• 4	• 5
• Sum	• 4	• 118	• 519	• 641

Table 3: Pedestrian casualties Hillingdon 2013-17 showing vehicle in conflict with pedestrian

Year	ONS LA Name	PTWs	Cars and Taxis	Buses and coaches	Goods Vehicles	All Motor vehicles	Pedal Cycles
2017	Hillingdon	27,133 (1.3%)	1,703,192 (80.3%)	22,330 (1%)	63,088 (HGV) 305,595 (LGV) (17.3%)	2,121,338	32,688 (1.5%)

Table 4: Traffic Volumes in London by Borough 1993 - 2017 (in thousands Vehicle Kilometres)

However, car drivers are involved in 82% of road crashes which cause injury or death to pedestrians and make up approximately 80% of vehicle traffic in kilometres.

PTWs are disproportionately harmful as measured per kilometre, being involved in 2.2% of pedestrian road injuries and fatalities, but travelling only 1.3% of all vehicle kilometres in Hillingdon. PTWs are also proportionately more likely than car drivers to be involved in collisions which cause serious or fatal injuries to pedestrians. Goods vehicles are involved in 7.3% (47 in number) of reported crashes which cause pedestrian injuries or deaths. The measurements for goods vehicles in this category vary from table to table so cannot be accurately compared[33].

Cyclists make up 1.5% of vehicle kilometres travelled in Hillingdon but are responsible for only 0.6% of injuries to pedestrians, making them the most benign/harmless vehicle mode of transport to pedestrians per kilometre in Hillingdon.

For every 100 million miles driven in Hillingdon there will be approximately 5 people killed or seriously injured. This is the lowest rate for any London borough. This is perhaps not surprising given Hillingdon also has the lowest active mode share in London (TfL factsheet).

[33] Transport for London on request

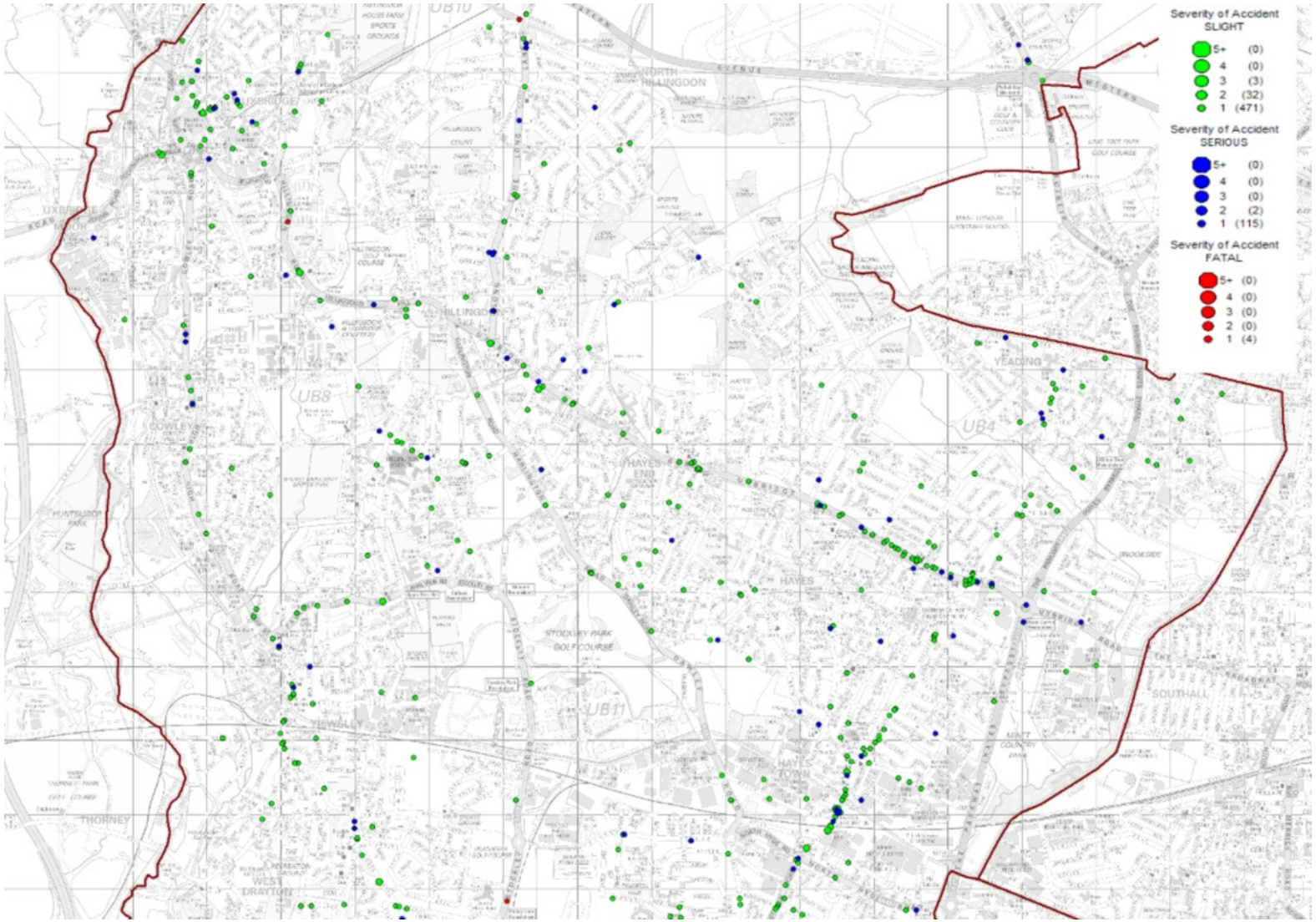

Figure 20: Pedestrian casualties in central Hillingdon. Years 2013-2017. Key not to scale

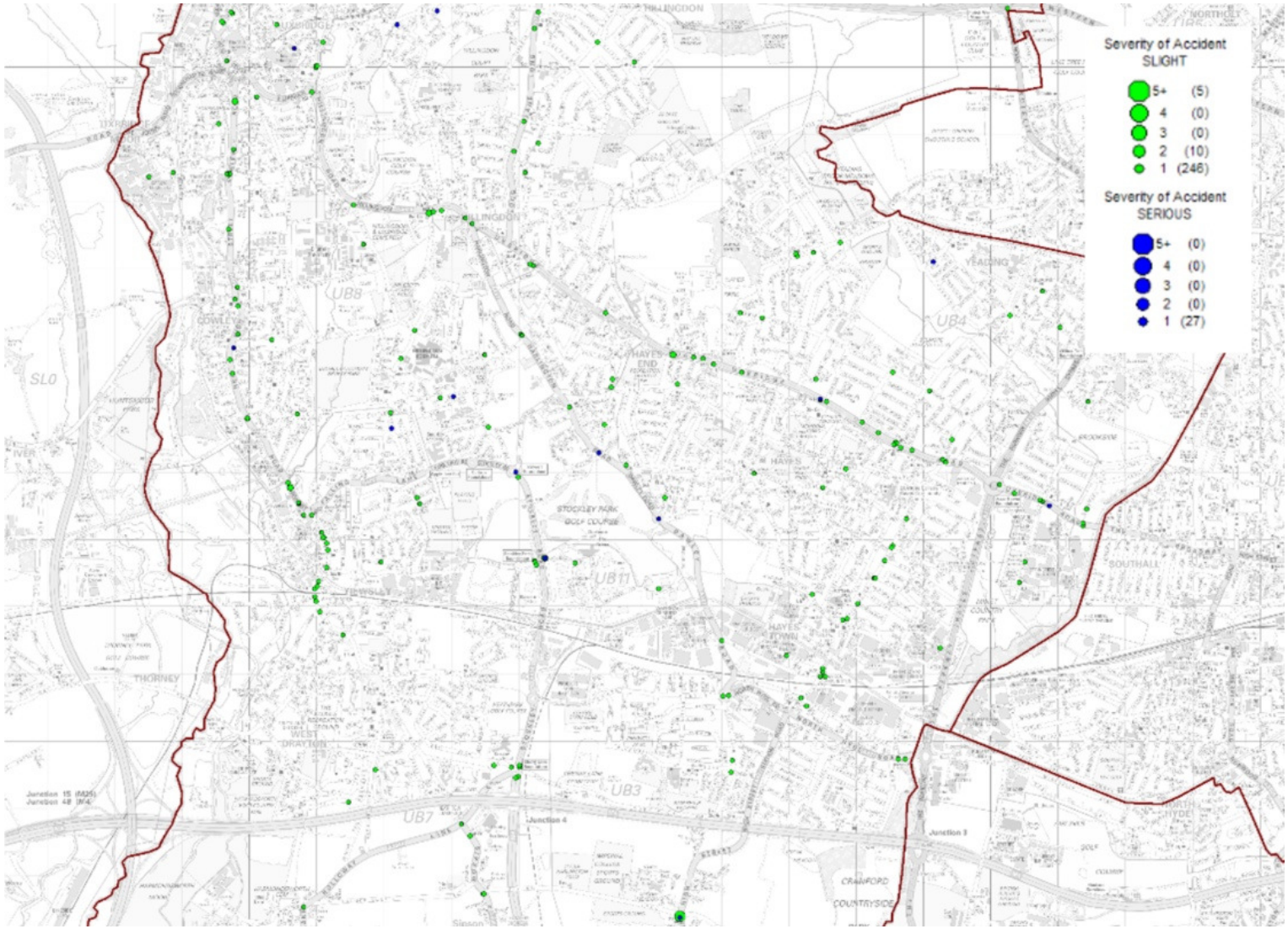

Figure 21: Cycle casualties in central Hillingdon. Years 2013-2017. Key not to scale

Reducing danger near schools

Schools are an excellent starting point for promoting safe and active travel. 50% of children would like to cycle to school (Sustrans) yet only 2% do so nationally. However, as discussed in more detail below it's critical that the roads are designed to be suitable for children (and others) to use.

LB Hillingdon has a team of School Travel Advisors linked to school communities. However, the local population remains concerned about walking and cycling for everyday journeys. There is a car culture supported by car-dominated road networks. LBH aims to engage all schools within the borough to find out what is required by way of protected cycle routes, crossings, modal filters and traffic free routes to enable children to walk and cycle to school and for other activities.

Many schools have a wide catchment area, attracting pupils from outside the borough so are less likely to cycle. Nevertheless, most children are travelling a distance which could be cycled, given the right road environment.

Road danger by income, ability, age and gender

Low-income residents, disabled people and children suffer disproportionately when it comes to injuries caused by road crashes. For every mile walked, a low-income pedestrian is three times more likely to be injured by a motor vehicle compared to someone from a high-income household. Disabled people are five times more likely to be injured than non-disabled people[34]

Conventional road safety practice has not adequately provided for the needs of children, who, by nature, will make unpredictable and spontaneous movements, run out unexpectedly and wobble as they learn to ride a bicycle. Children are also less able to judge vehicle speeds and negotiate with drivers. To be safe for all, road environments must not require behaviours and skills which are outside the cognitive, developmental, behavioural, physical or sensory development of the youngest in our society.[35]

Power dynamics tend to dictate that those in more powerful vehicles dominate. For children, the power imbalance is even greater since they may not have developed the communication skills required to negotiate with adult drivers (e.g. via eye contact

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[34] Aldred, R. *Road injuries in the National Travel Survey: under-reporting and inequalities in injury risk.* Project Report. Department of Planning and Transport, University of Westminster, London. April 2018

[35] Schieber, R.A. and Thompson, N.J., 1996. Developmental risk factors for childhood pedestrian injuries. *Injury Prevention*, *2*(3), p.228.

or hand movements) about who is going to cross first. Lack of clear side-road priority is particularly problematic for children who "may not be able to detect vehicles approaching at speeds in excess of 20 mph"[36].

People are most likely to be injured between the ages of 10 and 14. Speeds and traffic volumes on roads where children live or might live need to be substantially reduced through design and enforcement.

While training programmes can go some way to encouraging children to cross at crossings and so on, the approach should be that it is the road users who pose the harm whose activities should be curtailed though design and not the activity of benign road users. The nature of children will not change. Therefore, the approach we take in this strategy is that the road environment, and driver behaviour, must be adapted.

Figure 22 indicates that children aged between 10 and 15 years old is the age band most at risk from being involved in a collision whilst walking in Hillingdon. This is probably because children begin to walk to school by themselves at about 10 or 11 years old to go to secondary school but the road environment is often not designed for children to walk independently. Children are less able to judge speeds than adults and less able to communicate with drivers or judge vehicle movements: crossings which give legal and design priority to those crossing – zebra crossings and continuous footways - should be used where children are likely to be walking (rather than for example dropped kerbs or refuges which offer no legal priority to pedestrians over those driving).

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[36] Wann, J., Poulter, D. and Purcell, C. 2011. Reduced Sensitivity to Visual Looming Inflates the Risk Posed by Speeding Vehicles When Children Try to Cross the Road. Psychological Science 22(4). Department of Psychology, Royal Holloway, University of London, pp.429–434

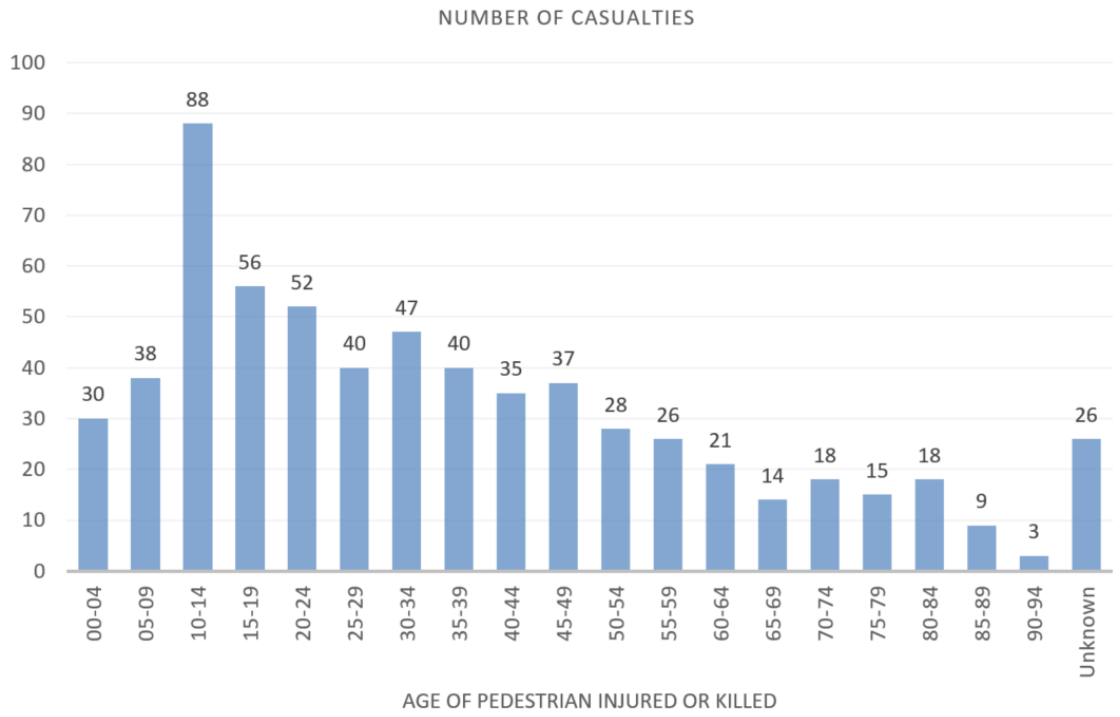

Figure 22: Pedestrian casualties Hillingdon 2013-17 by age band

Figure 23: Continuous footway offering design priority to pedestrians.

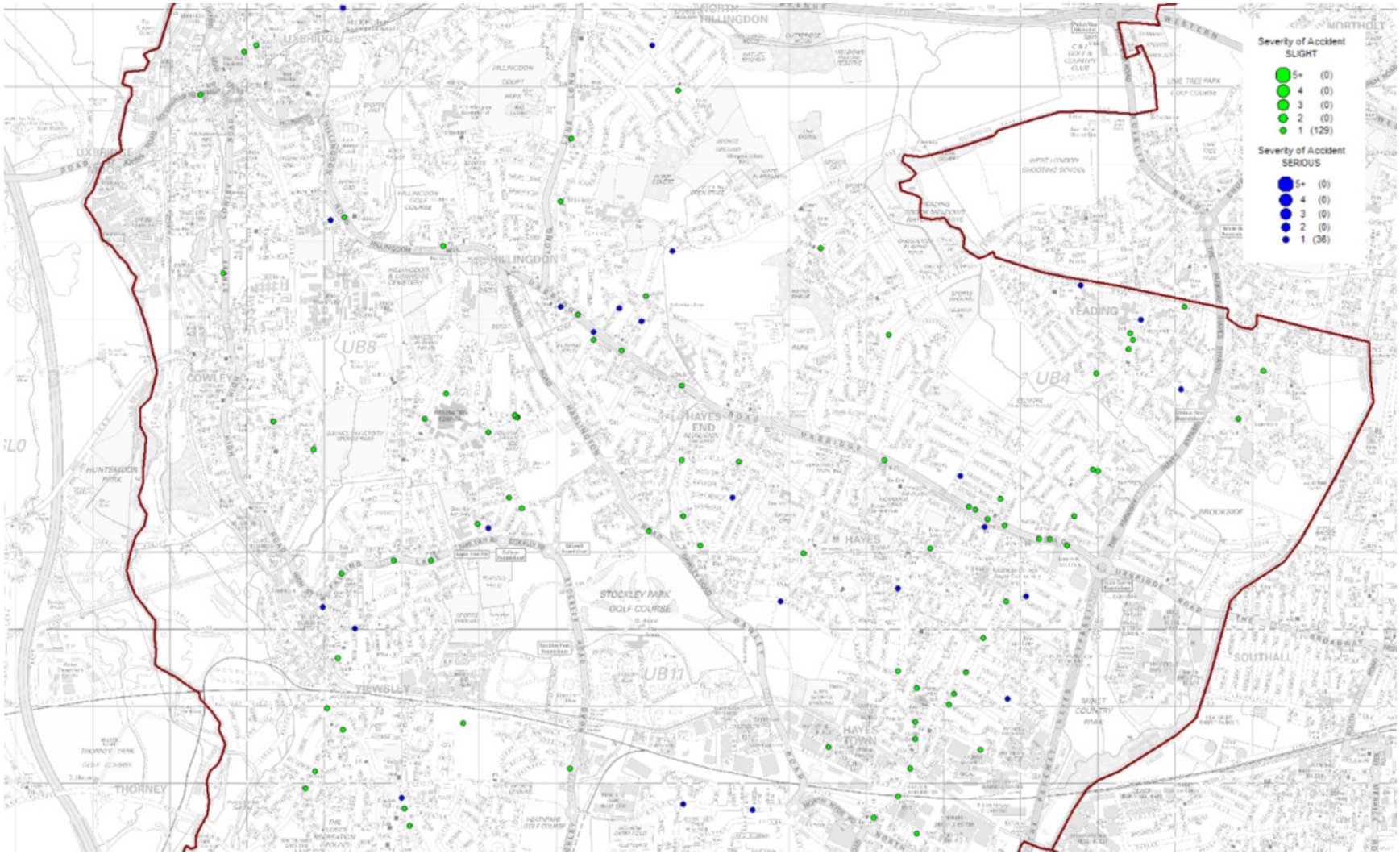

Figure 24: Child pedestrian casualties in central Hillingdon. Years 2013-2017. Key not to scale

Perceptions of security also vary according to age, gender and ability. Hillingdon recognise that feelings of security amongst residents hold a strong link to social inclusion. Those who feel vulnerable are less likely to go out, or travel by active modes. This eliminates opportunities for socialising and interaction with the local environment and can lead to residents feeling isolated, with older generations particularly at risk.

Individuals experience environments in different ways, women who cycle report more incidents of unsafe passes[37] and adult males are more likely to take physical risks[38.] Women also express stronger preferences than men for infrastructure separated from motor traffic[39] particularly if accompanying children so protected cycle routes are crucial to increasing cycling uptake among women.

LB Hillingdon aims to be an inclusive Borough. The Council recognises the links between safety, security and social inclusion. It will make new developments, public spaces and refurbished train stations feel safe by 'designing out crime' with improved lighting, maintenance, accessibility and dealing with vandalism.

Opportunities will be used wherever possible for collaborative working with the Metropolitan Police, especially with the Safer Transport Team. The borough will continue to develop joint initiatives to address issues such as overcrowding at bus stops, safety by design and complementary policing.

Initiatives will be developed to reverse the rise in motorcycle theft through secure parking and maintaining focus on disrupting criminal gangs. Reassurance will be nurtured to the most vulnerable by addressing drivers rather than victims through open and responsive means of communication.

LB Hillingdon will adopt the MTS Healthy Streets design approach to make our streets appealing places to spend time and assist people from all walks of life to feel safe and secure within the Borough's transport network. Key to this will be providing legal and design priority to people walking or cycling where footways, footpaths and cycle routes intersect with motor vehicle traffic. By working collaboratively, issues such as rough sleeping and terrorist threats will be tackled.

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[37] Aldred, R. 2015. Investigating the rates and impacts of near misses and related incidents among UK cyclists. Journal of Transport & Health, Volume 2, Issue 3, September, pp 379–393

[38] Byrnes, J., Miller, D., and Schafer, W. 1999. Gender Differences in Risk Taking: A Meta-Analysis. Psychological Bulletin, Vol. 125, No. 3, American Psychological Association, University of Maryland, pp 367-383

[39] R. Aldred, B. Elliott, J. Woodcock, A. GoodmanCycling provision separated from motor traffic: a systematic review exploring whether stated preferences vary by gender and age Transp. Rev., 37 (1) (2017), pp. 29-55

Measuring ‘safety’

The traditional road safety approach is based on analysis of existing casualties. But the presence or absence of collisions is not necessarily a good barometer for safety. For example, if a road environment is excessively hostile that nobody cycles, there will be no cycle casualties.

Levels of harmful, polluting transport and levels of activity – walking, cycling, children playing, people talking to their neighbours – are needed for a clearer picture. (If nobody cycles, there will be no casualties, but it doesn’t necessarily mean the roads are safe.) The most accurate measure of a road’s safety is whether people, in all their diversity, can use their roads.

Hillingdon road casualty data will therefore be monitored in conjunction with walking and cycling rates, including reviewing levels of walking and cycling by income, age, gender, and ability/disability.

Road Safety Programme

Each year the Council dedicates funding from its own resources to address road safety issues of local concern. The Council recognises that there is a wealth of knowledge amongst local residents of sites or situations where road users feel vulnerable. In response, the ‘Road Safety Programme’ budget has been established to tackle what might be thought of as ‘accidents waiting to happen'.

Local residents can bring their road safety concerns or ideas to the Council's attention by phone, letter or email or complete a Road Safety Suggestion form (see Appendix D). They may be motivated to do this if, for example, they witness a pattern of 'near misses'. Hillingdon receives around 300 requests through the Road Safety Programme each year, covering issues such as speeding, obstructive parking, roads that are difficult to cross, and general road safety issues. All suggestions are investigated and then discussed with the Cabinet Member for Planning, Transportation and Recycling. If supported, measures are then developed and implemented to help reduce the risk of collisions occurring in the first place.

One of our main focuses in the Road Safety Programme is to improve and promote road safety amongst the most vulnerable road users in the community including elderly people, young children, cyclists and pedestrians.

Hillingdon are a Vision Zero ambassador, along with four other boroughs.

Liveable neighbourhoods

LB Hillingdon is committed to implementing Liveable Neighbourhoods which will require TfL investment. These are area-wide treatments characterised by the 10

Healthy Streets Indicators tackling issues such as rat running, poor air quality, crime and fear of crime and speeding traffic.

Objective 2: Hillingdon will prioritise road safety and work towards achieving the Mayor's Vision Zero.

London Borough of Hillingdon will work will stakeholders to collect, collate, analyse and interpret road traffic collisions casualty data and crime statistics to help understand real and perceived threats to residents' personal safety.

Key Performance Indicator 2: Vision Zero - Deaths and serious injuries from all road collisions to be eliminated from our streets

Measures:

65% reduction in KSIs by 2022 on the 2005-09 baseline
70% reduction in KSIs by 2030 on the 2010-14 baseline
0 KSIs by 2041

Metric: Casualties Killed or Seriously Injured (KSIs) according to STATS19 data

Both London and Borough Objective: By 2041, there will be no deaths or serious injuries from road collisions within Hillingdon's road network.

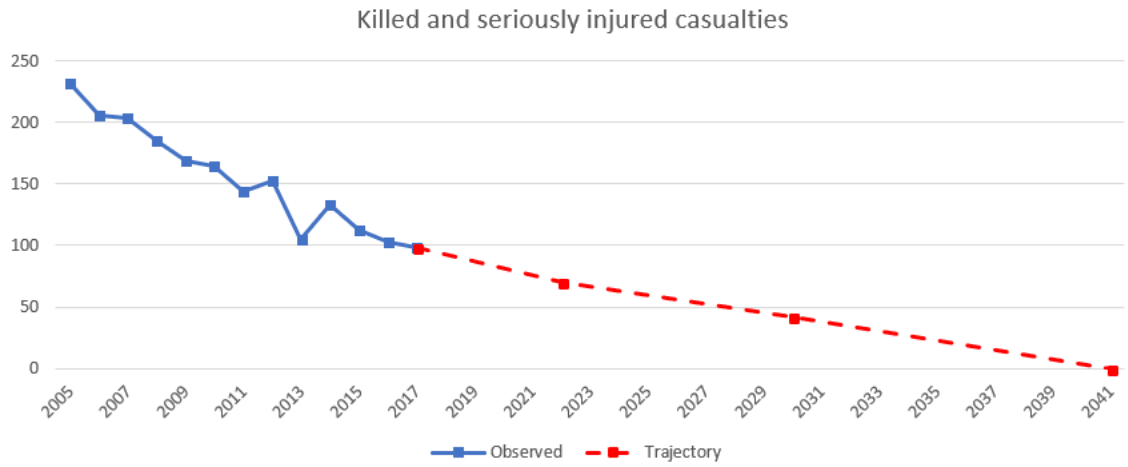

Figure 25: Killed and seriously injured casualties.
Source: LIP3 MTS outcomes borough data pack v1_3

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

Under the new systems, officers use an 'injury-based assessment' in line with DfT STATS 20 guidance and online self-reporting is available. Both of these changes are expected to provide a better assessment of injury occurrence

and severity but have made data collected from November 2016 onwards difficult to compare with earlier data.

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

LB Hillingdon will work with stakeholders to collect, collate, analyse and interpret road traffic accident and crime data to help understand real and perceived threats to residents' personal safety.

A package of Road and Personal Safety measures have been drafted and contained in the LIP3 delivery programme to address the issues identified. The following areas have been recognised for improvements and continuity:

- Hillingdon aims to engage all schools within the borough to determine requirements for protected cycle routes, crossings, modal filters and traffic-free routes to enable children to walk and cycle to school and for other activities
- In response to the receipt of Road Safety Suggestion Forms, petitions, requests from the police, the review of road casualty data, issues raised in School Travel Plans and the like Hillingdon will assess and explore roads suitable for traffic calming measures, including 20 mph zones. Using LIP3 funding these schemes will be implemented, monitored and reviewed.
- Hillingdon will liaise with stakeholders, including Metropolitan Police to gather information on accident history to help develop mitigation measures and priority areas for intervention.

Educating children and adults to know the dangers of the road, and consequences of their actions is as important as road calming and traffic reduction measures for Hillingdon. Public realm improvements and using Hillingdon's roads more effectively as identified in outcomes 1 and 3 will also help in prioritising safety. Hillingdon see safety as being essential to all schemes. The borough will continue to develop joint initiatives to address issues such as overcrowding at bus stops, safety by design and complementary policing.

All proposals will be assessed against the elements of a Safe System approach. The Safe Systems approach seeks to encourage a common approach to road safety among the organisations involved in the management of the road transport

system in London. This approach will help to progressively eliminate all possible sources of risk by focussing on safe roads and junctions, safe road user, safe speeds and safe vehicles. However, it must be noted that there is a limit to the extent that infrastructure and vehicle design can accommodate crashes resulting from extreme road user behaviour, such as travelling at excessive speeds and taking drugs or alcohol before driving. Therefore, it is essential that other countermeasures continue to be used to influence road user behaviour. The Safe System approach recognises that human error is no longer the primary cause of accidents. Rather, a failure of the road system is the cause of many collisions that result in death or serious injury. It also shapes interventions to meet the long-term goal of zero deaths and serious injuries, rather than relying on traditional interventions to set the limits of any long-term targets.

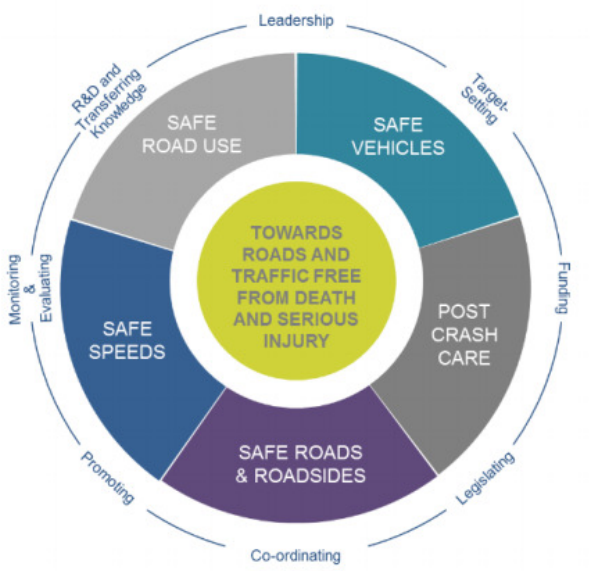

Figure 26: Five essential elements of the Safe System approach reflecting holistic view of road safety

Hillingdon will continue to work with the Metropolitan Police and other stakeholders to reduce crime and disorder in the borough. Hillingdon will utilise available data [such as IMD] to target areas of focus and investment in rolling programmes. Crime and disorder related to the transport network will be a high priority for this LIP3 and will concentrate on bicycle theft, lighting levels on the footways, incidents [and fear of incidents] on the public transport network and street crime in general.

Hillingdon will adopt a safe system approach to road danger reduction as set out in the TfL Vision Zero action plan. This includes;

Safe Speeds – Hillingdon will work with its stakeholders, through the road safety programme suggestion form [attached as appendix D to this LIP3] to identify where speed, or the perception of speed, is an issue for residents and businesses and work with them towards a solution which could include speed reduction measures, both physical and psychological. Key to the Councils strategy for attaining the target of Vision Zero is the implementation of 20 mph Zones. These can be delivered as Local Road Safety Schemes, School Travel Plan Road Safety schemes or as part of Healthy Neighbourhoods.

Safe vehicles – Through our supply chain Hillingdon will work with contractors and consultants to provide state of the art vehicle technology to the borough including low emission technology. The construction of HS2 will bring many freight trips to and through the borough and we welcome working with their supply chain to ensure a safe working environment.

Safe behaviours – Hillingdon will continue and evolve its programme of education and enforcement across the borough re-framed around the vision zero approach. Our programmes with schools around the borough will continue to train the walkers and cyclists of tomorrow and instil in them the confidence to build active travel into their daily routine. Our enforcement powers are limit, however through tailored and consulted upon parking management schemes we can remove parking from unsafe parts of the highway and increase visibility both for and of pedestrians and cyclists.

Post-collision response – Hillingdon welcome the wider sharing of best practice and up to date road risk data across the industry. We work with the Metropolitan Police following certain incidents and meet with them on a regular basis to coordinate events and initiatives.

Safe Street Design -The Council recognises that there is a direct relationship between the design of the built environment and road safety. Through the development management process the Council will ensure that when new streets are being built that they are designed to reduce the risk posed to all road users. Road schemes being designed and implemented by the Council itself will also take into account the safety of all road users from the outset

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

Challenges and opportunities

As noted in a recent meeting with TfL, "Hillingdon is an outer London Borough where in parts population density is low making public transport more expensive to run. Services and facilities are more sparsely distributed resulting in residents being more reliable on the private car to satisfy their daily travel needs"[40]

The Borough is surrounded by three motorways (M4, M25, M40) and includes Heathrow airport. Residents and incoming workers from Home Counties tend to travel by car because it's cheaper and more direct than public transport. Rail and bus links are generally convoluted or absent, and so the car may be quicker and more attractive.

However, a large proportion of residents 43% work locally in Hillingdon. Of these local journeys to work, 58.8% are made by car or van as a driver or passenger.

The maximum journey length for these local commutes would be 18km (measuring Hillingdon as the crow flies north to south). But many of those journeys are likely to be much less, particularly since Hillingdon is a narrow borough with an approximate width of only 5km.

Only 2.6% of residents commuting within Hillingdon cycle (that is their journey begins and ends within the borough), suggesting that there is vast potential to increase cycling within the borough. 15.5% of residents who work in Hillingdon walk to work. A large proportion of these short, local journeys to work currently made by car or van could be done on foot or by bicycle, given the right road environment.

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[40] Meeting between Mike Brown MVO, Commissioner TfL and Cllr Ray Puddifoot MBE, Leader of the Council LB Hillingdon 23rd November 2017,

Journey to Work Origins / Destinations and Mode Share[41]

Top Mode of Travel

Rank	Local Authority	% of Commuters	Tube, Light Rail or Tram	Train	Bus, Minibus or Coach	Powered Two-Wheeler	Car or Van Driving or passenger	Bicycle	On Foot
1	Hillingdon	32.3%	3.0%	1.3%	17.8%	0.6%	58.8%	2.6%	15.5%
2	Hounslow	8.4%	11.5%	2.4%	26.1%	0.8%	55.8%	1.6%	1.5%
3	Ealing	8.2%	8.9%	5.4%	23.2%	0.7%	58.1%	1.4%	1.8%
4	Harrow	4.4%	13.8%	4.2%	12.0%	0.4%	65.5%	0.9%	3.1%
5	Slough	3.8%	0.3%	3.2%	11.1%	0.9%	81.5%	1.0%	1.6%
6	Spelthorne	3.0%	0.2%	0.9%	8.8%	1.6%	83.8%	3.1%	1.3%
7	South Bucks	2.4%	0.2%	1.0%	3.5%	1.0%	90.1%	1.6%	2.0%
8	Windsor & Maidenhead	2.0%	0.1%	2.9%	1.4%	1.2%	92.8%	1.0%	0.4%
9	Wycombe	1.8%	0.1%	1.2%	2.3%	1.2%	94.0%	0.3%	0.6%
10	Brent	1.7%	26.7%	10.0%	8.3%	0.8%	52.8%	0.5%	0.9%

Table 5: Top 10 Origins of Commuters to Hillingdon

Top Mode of Travel

Rank	Local Authority	% of Commuters	Tube, Light Rail or Tram	Train	Bus, Minibus or Coach	Powered Two-Wheeler	Car or Van Driving or passenger	Bicycle	On Foot
1	Hillingdon	43.0%	3.0%	1.3%	17.8%	0.6%	58.8%	2.6%	15.5%
2	Ealing	8.9%	6.7%	4.6%	16.7%	1.0%	67.5%	1.6%	1.4%
3	Westminster	7.3%	66.1%	15.9%	3.3%	1.2%	12.0%	0.5%	0.8%
4	Hounslow	5.8%	3.9%	1.9%	20.8%	1.3%	69.3%	1.3%	1.2%
5	Harrow	4.1%	12.7%	3.5%	10.4%	0.6%	68.4%	1.6%	2.6%
6	Brent	2.9%	17.2%	5.8%	8.1%	0.8%	66.2%	1.0%	0.7%
7	Slough	2.8%	1.2%	4.8%	8.7%	0.7%	81.9%	1.4%	1.1%
8	Hammersmith & Fulham.	2.3%	45.2%	9.8%	8.5%	1.4%	33.5%	0.8%	0.6%
9	Camden	2.1%	66.2%	13.0%	3.4%	0.9%	15.1%	0.4%	0.5%
10	South Bucks	1.9%	2.1%	2.2%	9.7%	1.1%	80.2%	1.3%	2.9%

Table 6: Top 10 Destinations of Commuters from Hillingdon

Approximately 20% of Hillingdon residents travel to work in neighbouring boroughs including Ealing (8.9%), Hounslow (5.8%), Harrow (4.1%) and Slough (2.8%). Again, these are likely to be journeys of 2-10km which could be made by bicycle or on foot. These figures indicate substantial potential to reduce traffic, by redesigning the road environment, so that walking and cycling is as convenient and attractive as driving a car.

[41] Census 2011, WU03EW – Location of usual residence and place of work by method of travel to work (MSOA level)

Car Availability

Car ownership in Hillingdon is high, 44% of households own at least one vehicle. The average ratio of cars of vans per household is 1.214 across the Borough, compared to:

- Outer London: 0.984 cars/household
- Greater London: 0.812 cars/household
- England: 1.156 cars/household

However, car ownership rates vary across the Borough. The highest rates of car ownership occur in the east of the Uxbridge North ward (1.902), and the lowest occurs in the north of the Uxbridge South ward (0.572). Differing car ownership throughout the Borough is shown in Figure 27.

Hillingdon has higher car ownership than other outer London boroughs. 77% of residents own a car or van compared to 68% for the whole of Outer London. See Table 7.

Car or Van Availability[42]	**Hillingdon**	**Outer London**	**London**	**England**
No cars or vans in household	23%	32%	42%	26%
1 car or van in household	44%	44%	41%	42%
2 cars or vans in household	25%	19%	14%	25%
3 cars or vans in household	6%	4%	3%	5%
4 or more cars or vans in household	2%	1%	1%	2%

Table 7: Car or van availability in households by location

Only 23% of people in Hillingdon do not have access to a vehicle. See Figure 27.

[42] Census 2011, KS404EW - Car or van availability

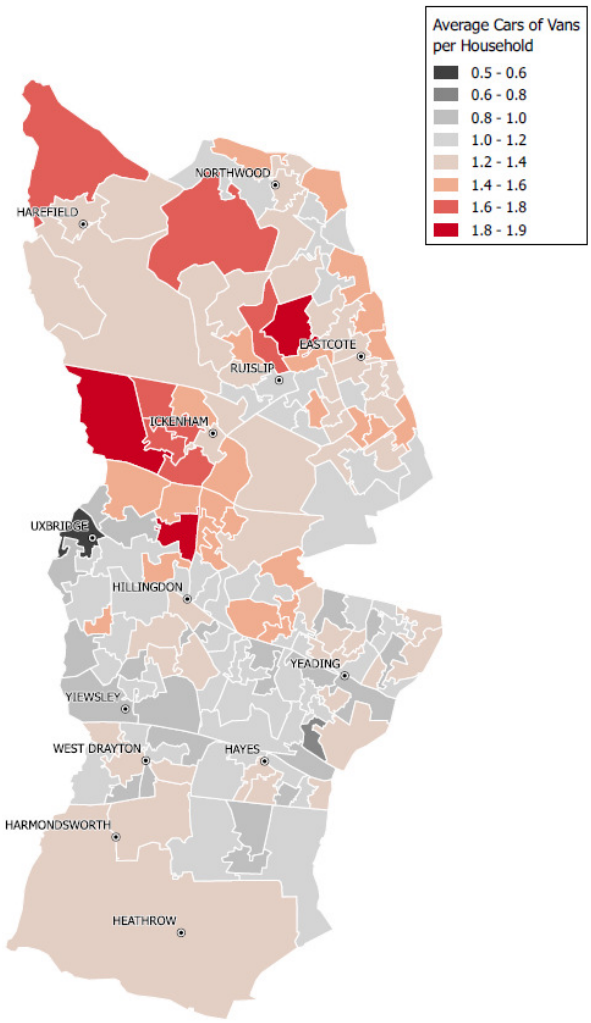

Figure 27: Average Number of Cars of Vans per Household

However, high levels of vehicle ownership do not necessarily translate into high car use. Germany and the Netherlands have higher levels of car ownership but lower levels of car use than in the UK[43]. The costs of car ownership and use (insurance, fuel prices), land use patterns (more dispersed activities mean driving further), population densities, demographics, and the availability of alternative modes are all factors which influence car use for car owners[44].

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[43] Pucher, J. and Buehler, R., (2008). 'Making cycling irresistible: lessons from the Netherlands, Denmark and Germany'. Transport Reviews, 28(4), pp.495-528.

[44] Guiliano, G., and Dargay, J., (2006). 'Car ownership, travel and land use: a comparison of the US and Great Britain'. Transportation Research Part A: Policy and Practice. Volume 40, Issue 2, February 2006, pp. 106-124.

The high vehicle use within the Borough is partly due to the lack of sufficient infrastructure to support walking and cycling and the lack of a more connected public transport network, hence the LBH aspiration for direct north-south bus services. Reducing car ownership and use will be a challenge without a better-connected bus network, a borough-wide strategic cycle network, and streets designed to enable people to walk and cycle for local journeys.

Our objectives therefore focus on the Healthy Streets approach to highways design, prioritising those walking and cycling, and reducing road danger. The Healthy Streets approach also gives an opportunity to improve air quality resulting from the successful implementation of schemes such as:

- Projects to improve the public realm and reduce car-dominance;
- More continuous footways and crossings which give legal priority to those crossing such as zebra and signal-controlled crossings;
- Speed and traffic reduction measures such as modal filters;
- More tree planting and soft landscaping as part of highways and public realm maintenance/improvement schemes;
- Sustainable drainage for highway improvement and maintenance schemes; and
- Improved public transport, most notably the Elizabeth Line (Crossrail), provides an opportunity not only for better public transport connectivity but also transport hubs which can be mixed use, permeable, and sustainable. The 278 and 140 Bus route improvements are tailored to the opening of the Elizabeth Line (Crossrail) stations to promote sustainable rail access.
- Supporting Transit Orientated Development (TOD) such as the Nestles scheme, where the developer has agreed to contribute towards the provision of a new bus service along Nestles Avenue. A contribution from the developers has also been negotiated to support bus services along Nestles Avenue. To help pedestrians find their way from the site into town, and vice versa, the developers have agreed to contribute towards the provision of Legible London wayfinding maps and figure posts. To make trips to Hayes town centre by means other than the driver-only private car as attractive as possible, there will be a direct pedestrian and cycle route through the site accompanied by 2,186 cycle parking spaces.

Powered two-wheelers

One of the challenges comes from the Mayor's Transport Guidance for Boroughs which encourages boroughs to permit motorcycles to use bus lanes. This approach conflicts with other MTS aims such as discouraging/reducing motor vehicles use and reducing casualties. In urban areas, Powered two-wheelers (PTWs) are a cause of specific environmental annoyance for pedestrians when low background noise levels

and sparse traffic flow allow identifying the PTW[45]. Allowing PTWs into bus lanes could also deter people from cycling particularly those who particularly dislike mixing with motor traffic (women, older people).

[45] Paviotti, M. and Vogiatzis, K., 2012. On the outdoor annoyance from scooter and motorbike noise in the urban environment. *Science of the Total Environment*, *430*, pp.223-230.

Objective 3: Hillingdon will promote sustainable travel to encourage a reduction in car use.

With support from TfL investment, streets in Hillingdon will operate efficiently through proper design, management and maintenance. Land use/transportation planning policies will be applied to reduce the need to travel and measures will be put in place to encourage and enable travel by public transport, cycling and walking – helping Hillingdon's streets to become places for people. The schemes to be delivered in pursuance of this Objective complements and support the TfL Business Plan.

Hillingdon recognise that prioritising different road users may be the most efficient way of managing streets and reducing congestion. Hillingdon will continue, through its town centre upgrade programmes to review and assess pedestrianisation, modal filters and emerging road-space reallocation policies and approaches. As with all projects in Hillingdon community support for road space allocation will be sought and where this can be achieved projects can be implemented.

Travel Plans will continue to be required in support of new planning applications, delivery of these will continue to be monitored. The Council will implement, monitor and review actions in the Delivery Plan aimed at reducing the volume of road traffic using Hillingdon's roads.

Key Performance Indicator 3a: Reduce the volume of traffic in London

Measure: reduction in vehicle kilometres by 2041 (targets based on annual million vehicle kilometres)

Metric: DfT road traffic statistics

London objective: By 2041, traffic will fall by 10-15 % and congestion kept in check, allowing more efficient operations

Borough objective: By 2041, Hillingdon will have measured a 5% to 10% reduction in annual vehicle kilometres

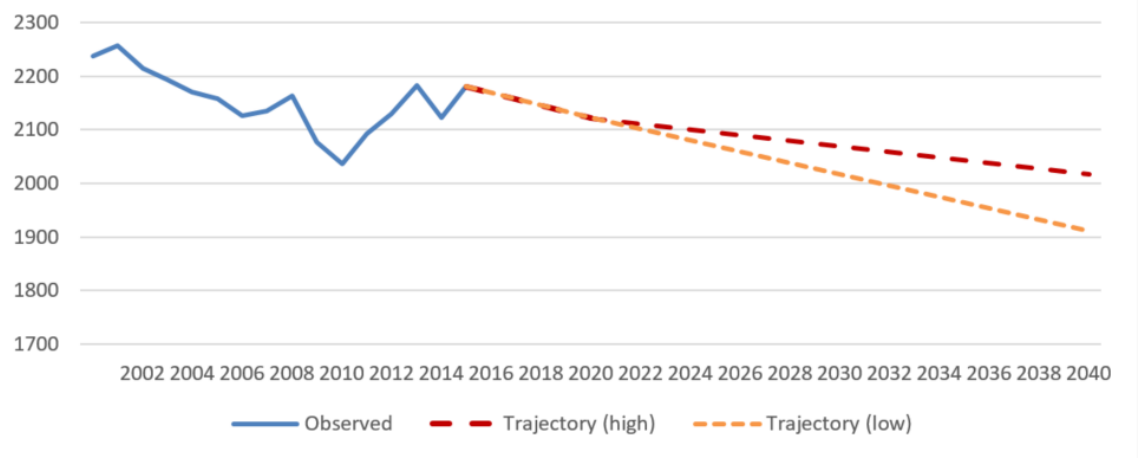

Figure 28: Annual Vehicle Kilometres (millions).

Source: LIP3 MTS outcomes borough data pack v1_1

Key Performance Indicator 3b: Reduce car ownership in London

Measure: Household car ownership. 250,000 fewer cars owned in London by 2041

Metric: Number of licensed vehicles by borough

London objective: 250,000 fewer cars owned in London by 2041

Borough objective: 330 fewer cars owned in Hillingdon London by 2041

The Hillingdon MTS Borough objective stipulates that households will own 3,030 fewer cars by 2021, but only 330 fewer by 2041. This will be measured by the number of licensed vehicles in the Borough.

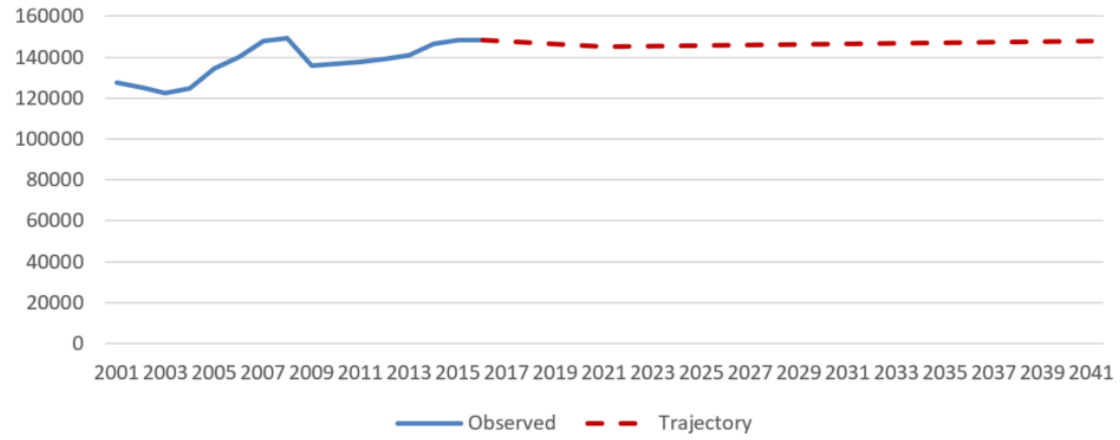

Figure 29: Number of Licensed Cars Owned in Hillingdon
Source: LIP3 MTS outcomes borough data pack v1_1

Key areas Hillingdon have identified in managing the Road Network, including but not limited to:

1. Through effective planning and management, the borough will aim to ensure that effects of the increase in construction traffic do not impact negatively on the attractiveness of walking and cycling. This will be achieved by requiring that Construction and Logistic Plans are submitted as part of planning applications for all developments where construction traffic is likely to present a risk to the road safety of road users.
2. Hillingdon will aim to ensure appropriate wayfinding is provided on Hillingdon streets, creating awareness of active travel options.
3. Hillingdon's priority is to tackle congestion, parking and reduce rat running within the borough. All new schemes will be considered against this and the nine MTS outcomes. The Council recognises that the most effective way of achieving this is to encourage and enable a mode shift away from the driver only private car to travelling by public transport, walking and cycling for example. This will be achieved by undertaking measures such as active travel promotion, cycle training and improvements to the sustainable travel transport network to increase safety and usability.
4. Hillingdon will work with Car Club operators to expand their presence and encourage uptake and use to reduce car ownership in the borough. This will be complemented with the reduction in availability of private parking.
5. Hillingdon will develop a traffic reduction strategy with the assistance of TfL, including measures for local and freight traffic to tackle congestion and improve air quality on London roads.
6. Parking Management Schemes will be developed to help improve road safety by reducing vehicle conflicts.

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

Challenges and opportunities

Figure 30 and *Figure 31* illustrate the concentrations of NO_2 and PM_{10} emissions throughout the borough[46]. As shown, these pollutants are concentrated along Hillingdon's major road links. The annual mean of NO_2 in particular is modelled to be above the legal limit on Hillingdon's major road network with Heathrow Airport shown as a major contributor to NO_2 emissions.

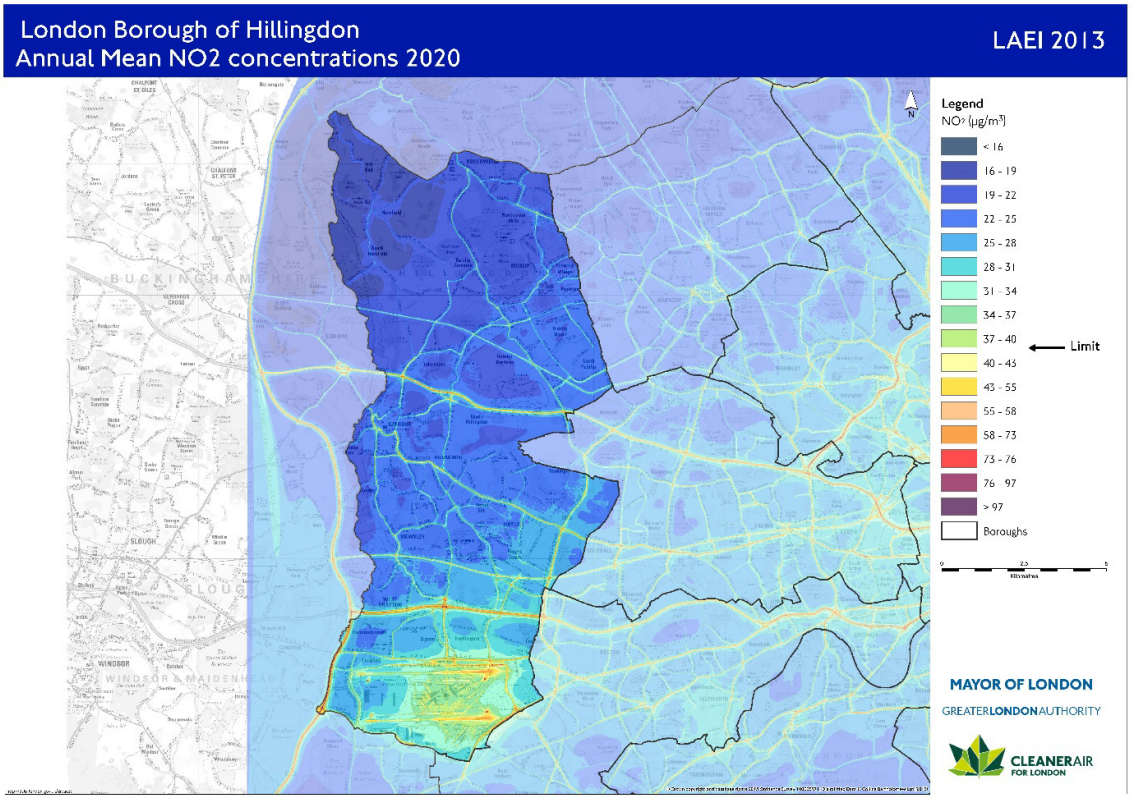

Figure 30: Annual Mean NO_2 Concentrations 2020

[46] Modelled NO2 and PM10 2020 concentrations from the London Atmospheric Emissions Inventory (LAEI) April 2017

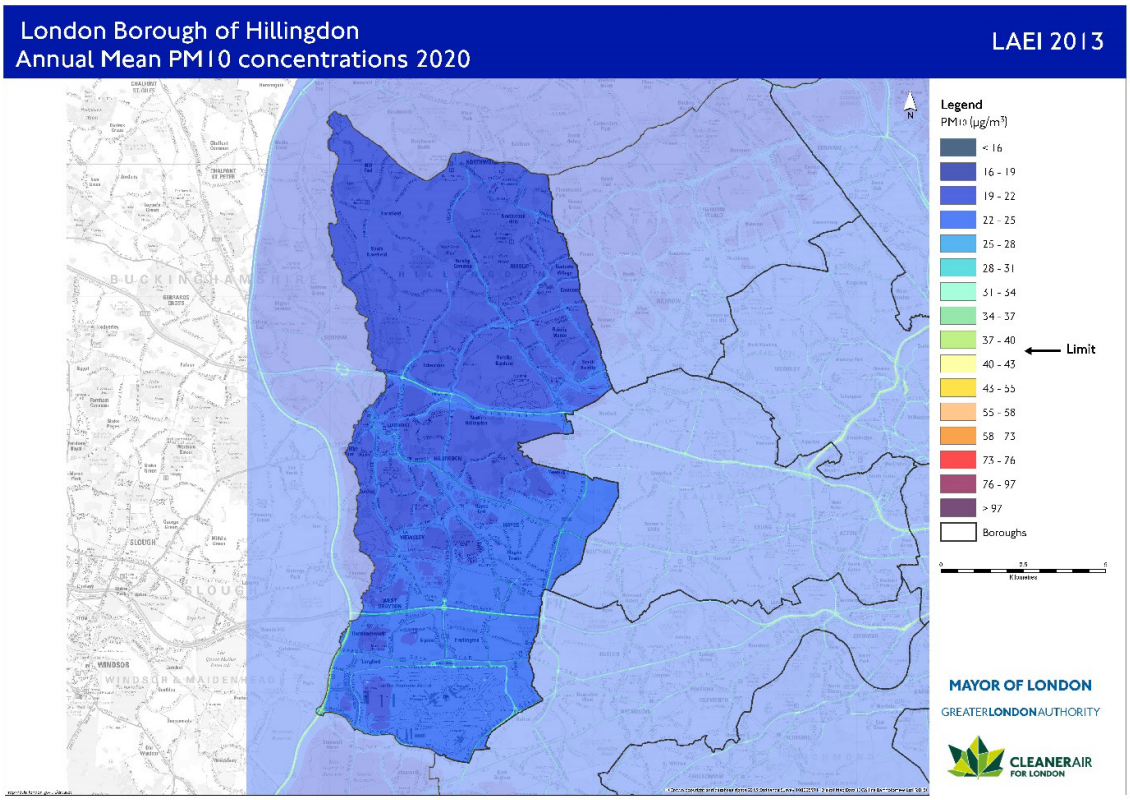

Figure 31: Annual Mean PM_{10} Concentrations 2020

New road building and traffic capacity increase

A number of schemes are in the pipeline designed to accommodate construction traffic associated with major developments and to ease any resulting congestion. While construction routes are necessary, there is the potential that easing congestion is likely to make driving more attractive and induce additional traffic onto the network with a resulting deterioration in air quality levels. These projects will most likely increase the number of motor vehicle journeys in the borough. Proposed road building projects with current permission are outlined in Table 8.

Location	Lead	Aim	Works	Timescale
M4 J3-J12 Smart Motorway	Highways England	Provide more reliable traffic flow / journey time along M4	M4 hard shoulder running between junctions 3-12 involving localised widening	2017-2022
Bulls Bridge roundabout and M4 J3 junction upgrades	Southall Gasworks & Hayes Housing Zone de-velopers	Facilitate the development	Increase capacity at the junction	2020-2022
Bulls Bridge roundabout and M4 J3 junction upgrades	TfL	Accommodate significant cumulative growth across Hillingdon, Ealing, Hounslow and wider London. Particularly Hayes Town Centre	Redesign and rebuild of Bulls Bridge roundabout and M4 J3.	2021-2031
HS2 Construction Routes	TfL	Swakeleys Roundabout circulatory capacity and associated works along Swakeleys Road to accommodate vehicles to HS2 railway tracks	Works to provide construction route capacity whilst maintaining TLRN capacity	7year programme of HS2 construction works

Table 8: Proposed road building and capacity increase projects for the Borough of Hillingdon

Railway Bridges

Amongst one of the worst examples of a pedestrian environment is the area underneath railway bridges. They are often poorly lit, have damp walls, can be the target of graffiti artists and are prone to the build-up of litter and bird droppings. Bird droppings left by pigeons roosting underneath railway bridges in particular is an ongoing cause of complaint by local residents and ward members. More often than not, the Council is the first point of contact, but as these bridges are owned by third parties - usually London Underground and Network Rail, addressing the cause of complaint is not always straight forward. The Council prides itself on the outcome of work to improve the environment under the London Underground railway bridge in Ruislip Manor and West Drayton. A variety of treatments have been successfully used including better lighting, footway resurfacing, public art, pigeon proofing and signing to make the bridge stand out as a point of reference and local landmark. There remain many more bridges in Hillingdon in need of attention, these will be treated as part of the Councils roll out of schemes characterised by the 10 Healthy Streets indicators.

Air Quality

In London, road traffic is a significant source of pollution arising mainly from exhaust emissions and wear, tyre and brake wear and dust from road surfaces. Long-term exposure to poor air quality can contribute to the development of chronic diseases and can increase the risk of respiratory illness. The Mayor's Environment Strategy[47] cites a City Hall commissioned report which estimated that over 9,000 Londoners died prematurely from long-term exposure to air pollution in 2010[48].

In 2004, following the declaration of an Air Quality Management Area based on predicted exceedances of pollution levels, the Council published the 'Hillingdon Air Quality Action Plan. This outlines a number of methods in terms of road transport management for tackling air pollution including: the use of targeted Travel Plans to help ameliorate the traffic impact of new developments, supporting the building of enhanced walking and cycling facilities, the promotion of cleaner vehicle technologies, the inclusion of the objective of improving air quality into the programme of safer routes to schools, the consideration of 20mph residential areas, and measures to smooth traffic flow and reduce congestion at air quality hotspots. Not all the interventions needed are in the control of the Council and will require TfL support and investment:

"To achieve more the Council needs further help from TfL and Highways England. This is because many of the places with the worst air quality are caused by emissions from traffic on the Transport for London Road Network. Measures need to be put in place to tackle congestion at pinch points on the TfL network for example Bulls Bridge roundabout where the A312 intersects North Hyde Road."[49]

This Plan is currently being reviewed and an updated Air Quality Action Plan is expected in 2019. This will incorporate the relevant LIP3 objectives. The LIP3 represents a mechanism by which actions to improve air quality will be delivered.

Hillingdon recognises there are large numbers of vulnerable people present at the south of the borough exposed to poorer levels of air quality, with less active travel options, housing construction and Heathrow rat runs. To focus on improving air quality for vulnerable residents, Hillingdon are developing active travel corridors in Hayes and West Drayton, along the canal and between Cranford Park to A408-B365.

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[47] https://www.london.gov.uk/sites/default/files/london_environment_strategy_0.pdf
[48] Walton, H., Dajnak, D., Beevers, S., Williams, M. & Hunt, A. (2015) Understanding the Health Impacts of Air Pollution in London
[49] Meeting between Mike Brown MVO, Commissioner TfL and Cllr Ray Puddifoot MBE, Leader of the Council LB Hillingdon 23rd November 2017,

Electric Vehicles

Hillingdon is mindful of the year on year increase in uptake of EV's in the capital. This increase in demand has not resulted in a surge in demand for on street charging solutions in the borough, when compared to that in central and inner London. One reason for this may be the housing stock in Hillingdon and the small number of flats.

However as more flats are built and public appetite grown for EV, Hillingdon are reviewing on street opportunities and technology to be able to meet the demand should it materialise.

As seen in the Nestles Avenue development Hillingdon are securing active and passive provision for EV within developments and are entering a commercial contract with a supplier to provide charging facilities in our off-street car parks.

Car clubs

Car club services provide an alternative to private car ownership, helping reduce pressure on kerbside parking space, reduce car dependency and unnecessary car use. TfL's ULEV Delivery Plan has a target for at least 50% of car club fleets in London to be electric by 2025.

Objective 4: Hillingdon will improve the environment to be vibrant, attractive and well-connected places to be enjoyed with good air quality.

Hillingdon's streets will be safe, clean and green and places for people. This will be achieved through the development management process, maintenance and investment in the measures identified in the Healthy Streets Guidance. Air quality will be monitored and using a priority-based approach, the Council will devise a package of LIP3 measures to reduce public exposure to air pollution. The Council will be early adopter of new technology and innovation. The schemes to be delivered in pursuance of this Objective complements and support the TfL Business Plan.

Key Performance Indicator 4a: Reduced CO_2 emissions

Measure: Reduction in CO2 emissions (in tonnes) from road transport

Metric: CO2 emissions (in tonnes) from road transport within the borough, base year 2013

London objective: 72% reduction in carbon dioxide (CO2) emissions from transport (excluding aviation) by 2041

Borough objective: Hillingdon will have reduced its CO_2 emissions produced by road transport by 62% from 402,900 to 153,700 tonnes by 2041.

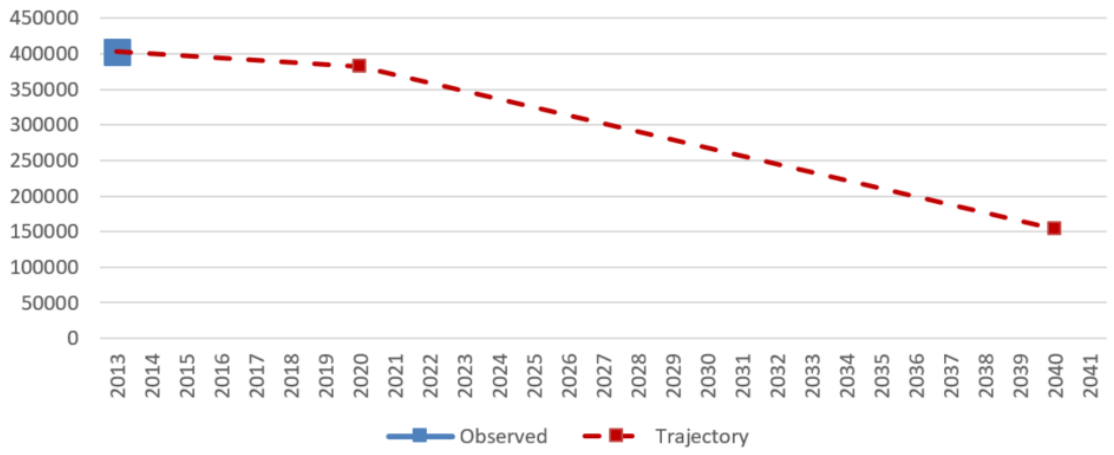

Figure 32: CO2 emissions (in tonnes) from road transport
Source: LIP3 MTS outcomes borough data pack v1_1

Key Performance Indicator 4b: Reduced NO_x emissions

Measure: Reduction in NOx emissions (in tonnes) from road transport

Metric: NOx emissions (in tonnes) from road transport within the borough, base year 2013

London objective: 94% reduction in road transport NOx emissions by 2041

Borough objective: Hillingdon will have reduced its NO_x emissions produced by road transport by 92% from 1,320 to 110 tonnes by 2041.

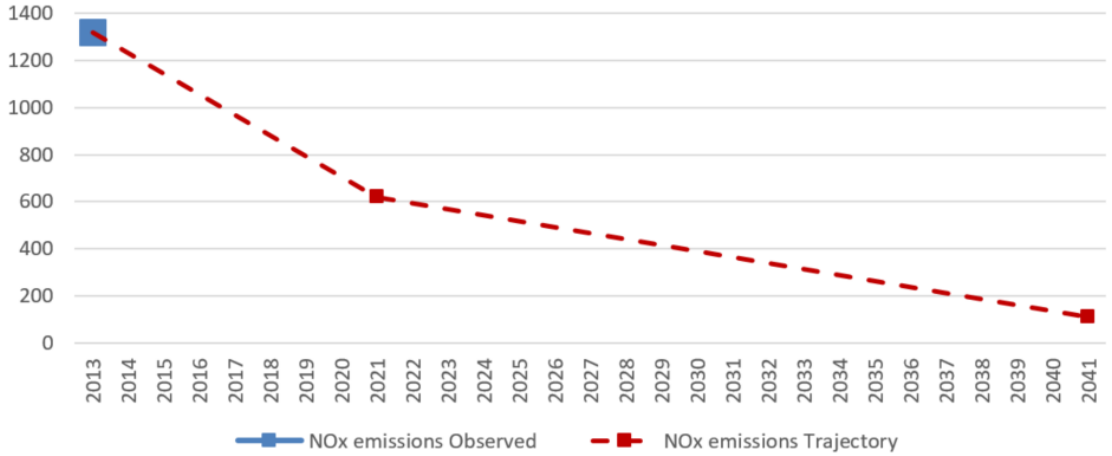

Figure 33: NOx emissions (in tonnes) from road transport.
Source: LIP3 MTS outcomes borough data pack v1_1

Key Performance Indicator 4c: Reduced particulate emissions (PM_{10})

Measure: Reduction in PM10 emissions (in tonnes) from road transport

Metric: PM10 emissions (in tonnes) from road transport within the borough, base year 2013

London objective: A 45% reduction in road transport PM10 emissions by 2041

Borough objective: Hillingdon will have reduced its PM_{10} emissions produced by road transport by 29% from 128 to 91 tonnes by 2041.

Outcome 4d: Reduced particulate emissions ($PM_{2.5}$)

Measure: Reduction in PM2.5 emissions (in tonnes) from road transport

Metric: PM10 and PM2.5 emissions (in tonnes) from road transport within the *borough, base year 2013*

London objective: A 53% reduction in road transport PM2.5 emissions by 2041

Borough objective: Hillingdon will have reduced its $PM_{2.5}$ emissions produced by road transport by 40% from 74 to 45 tonnes by 2041.

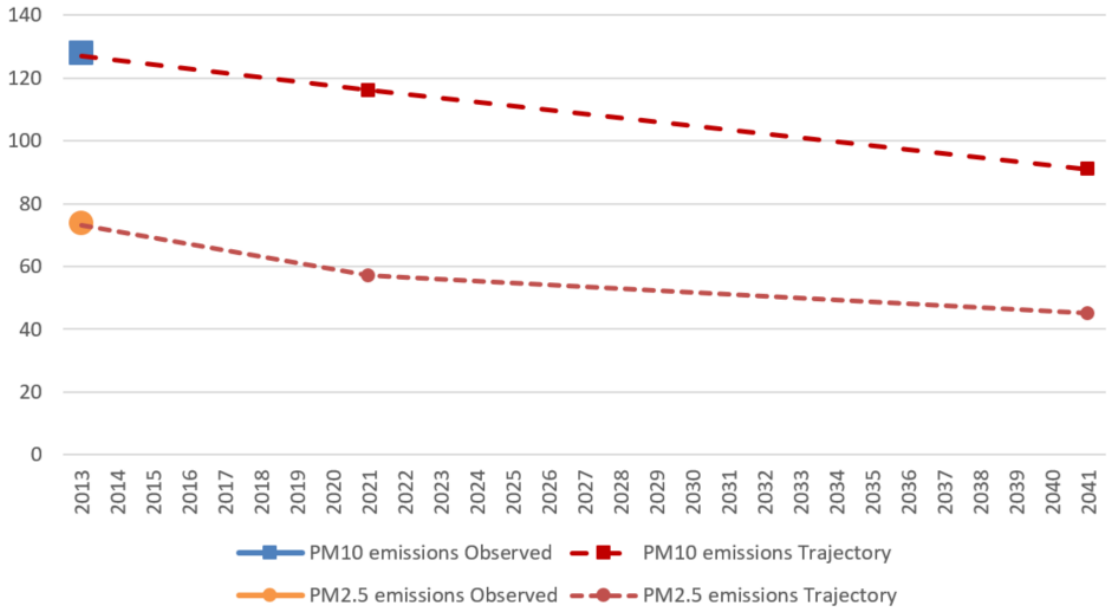

Figure 34: Reduced particulate emissions (in tonnes) from road transport.
Source: LIP3 MTS outcomes borough data pack v1_1

The Council will use the Go Ultra Low City Scheme Procurement Framework to appoint a company to manage, maintain and develop the network of electric vehicle charging points in Hillingdon. Electric vehicle charging points will be required at new

development in accordance with the standards set out in the Mayor's Transport Strategy 2018.

Transport and the Environment projects will be integrated to include but not be limited to:

1. The health of young children is particularly vulnerable to poor air quality caused by road traffic. To help reduce children's exposure to harmful vehicular emissions, air quality screens will be provided at receptors where children are particularly at risk of inhaling harmful emissions.
2. The Council will use the Go Ultra Low City Scheme Procurement Framework to appoint a company to manage, maintain and develop the network of elective vehicle charging points in Hillingdon
3. SuD's will be explored in line with the TfL Streets toolkit to manage wider public areas to reduce flood risk and provide other environmental benefits, including air quality improvements.
4. Hillingdon aims to create healthy neighbourhoods by undertaking studies to understand problems, issues and opportunities within estates and residential areas in Hillingdon, to exhibit the ten Healthy Streets indicators.
5. Support the continued development of Quietway along Grand Union Canal and improving links to public space where possible. Implementation of measures in indentified air quality focus areas to improve air quality such as introduction of street trees; school streets; cycle improvements or pocket parks.

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

Challenges and opportunities

When the Elizabeth Line (Crossrail) is fully open by 2020, it will offer new high frequency services and capacity linking Reading and Heathrow in the west, through central London, to Shenfield and Abbey Wood in the east[50]. Heathrow T5, Heathrow Central, Heathrow T4, West Drayton and Hayes and Harlington are five stations in Hillingdon that are part of the Elizabeth Line (Crossrail). As part of the development of the Elizabeth Line (Crossrail), West Drayton and Hayes and Harlington stations are to benefit from upgrades and public realm enhancements around the stations[51].

The Elizabeth Line (Crossrail) will reduce direct train journey times significantly from Heathrow to London City (Liverpool Street). While the railway supports a growing London, it will increase more demand for the service, which has the potential to generate more traffic at Heathrow and surrounding roads. Changes to local bus services in Hillingdon have been identified to further benefit from the Elizabeth Line (Crossrail). To do so, the north-south public transport connectivity is crucial, and Hillingdon Council is keen on working with TfL to develop this opportunity.

Hillingdon Council welcome the investment of new rolling stock, signalling and track improvements set to be introduced on the Piccadilly Line by 2023[52]. These improvements will improve journey times, reality and comfort, thus improving customer satisfaction. A new modern fleet will also help attract more new customers. Local Board of Hillingdon still see merit in extending the Central Line to Uxbridge and welcome the opportunity to work with TfL on it. The council believe it would vastly improve connectivity between Hillingdon and the rest of London.

There is considerable political aspiration for better north-south public transport within the borough. The population is set to increase by 17% (from 310,900 to 377,600) by 2041[53]. Housing growth in Hillingdon will predominantly take place in the south adding to the pressure for better southern public transport connections within and outside of the Borough. Developer contributions will help fund the infrastructure necessary to meet the needs of a growing Hillingdon.

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[50] A World-Class Railway for London and the South East; http://www.crossrail.co.uk/route/

[51] Crossrail, London Borough of Hillingdon; http://www.crossrail.co.uk/route/property-developments-and-urban-realm/urban-realm-proposals/london-borough-of-hillingdon

[52] New Piccadilly rolling stock will be delivered by 2023, http://www.railtechnologymagazine.com/Rail-News/khan-new-piccadilly-rolling-stock-will-be-delivered-by-2023-

[53] Central Trend Based Projection age range creator; Greater London Authority (GLA) Intelligence Unit

The main mode of transport in Hillingdon is the car, and vehicle congestion is increasing[54]. Hillingdon wishes to improve transport interchanges, in terms of bus services, public realm, walking and cycling access. For example, the Hillingdon Hospital bus hub.

Although residents of Hillingdon make trips to various areas within London, the majority of trips (55% of commuter's travel by car or van to work within the borough) have their origin and destination within the borough and the sub-region (see Table 6). Commuting trips are the most likely to be made outside of the borough, particularly to Westminster, Camden and Hammersmith & Fulham via the London Underground. This reinforces the need for a well-functioning transport network that can support the huge range of local trips, particularly by bus, walking and cycling, as well as the need for a network that supports both orbital and radial movements[55].

Hillingdon currently has 38 daytime routes operating in the borough and 6 night bus routes[56]. To increase public transport uptake, the council agree it needs to be available throughout the day. London Borough of Hillingdon sees an opportunity and benefit in increasing night bus and tube services to appeal to more users and increase patronage. Central and Piccadilly line services have some night time services, but they do not serve Hillingdon town centres and only go to Heathrow within the Borough of Hillingdon. Having night time services helps unlock the night time economy and improves one's sense of security at night through increased footfall.

Hillingdon Council would like the Central Line extended from West Ruislip to Uxbridge. The Council believes the extension will reduce traffic on the A40 and Uxbridge Road. Uxbridge is currently served by the Metropolitan and Piccadilly lines and for the Council extending the Central Line terminus in West Ruislip to Ickenham station would be the next logical step. Reducing traffic is a Borough and MTS objective, along with growth aspirations, Hillingdon believe this extension to the Central Line will reduce traffic significantly along a key transport corridor to Ealing and bring more employment and housing development opportunities to the town.

The location of Heathrow Airport brings with it increased the numbers of people travelling through the London Borough of Hillingdon. This adds to congestion on the road network and increases the pressure to upgrade the number and quality of bus services and other public transport networks. TfL has reviewed bus services ahead of the opening of Crossrail (Elizabeth Line) and has proposed one change to existing local services, a new 'route 278' between Ruislip and Heathrow Airport, Central Bus

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[54] Hillingdon Design and Accessibility Statement (HDAS) Supplementary Planning Document, Transport Interchanges (July 2006).
[55] West London Sub-Regional Transport Plan, 2016 Update, Transport for London
[56] WestTrans Demand Responsive Bus Options for Outer West London, May 2018, pg. 19

Station via Hayes and Harlington station. The Council supports this proposed addition as it would provide Ruislip with a connection to Hillingdon, Hayes, Elizabeth Line (Crossrail) and Heathrow.

Working with the neighbouring Home Counties, Hillingdon aspires to create compatible public transport fares across the borough boundary, to help increase modal shift to public transport and help alleviate the level of traffic currently on Hillingdon's borough boundary roads, such as Cowley Road.

TfL and WestTrans commissioned the study to identify and consider longer term bus rapid transit (BRT) infrastructure and limited stopping services. Two of these corridors lead through Hillingdon, namely Corridor A: Uxbridge-Heathrow via Hayes and Corridor B: Harrow-Heathrow via Hayes.

The Corridor A BRT service would serve the Heathrow Opportunity Area with 9,000 new houses and 12,000 new jobs, and would provide an interchange with the Great Western Main Line and Elizabeth Line in Hayes. It would benefit from existing bus priority infrastructure along Bath Road (A4) and new supplementary measures along Uxbridge Road (A4020). Approximately 10% of the new infrastructure for Corridor B would lie in Hillingdon, and the route would provide further interchanges with the Piccadilly, Central and Metropolitan lines.

Hillingdon support these new BRT routes and consider they would provide a significant improvement to the lacking north-south transport links, and would support and facilitate growth within the Heathrow OA.

The potential for a new bus services to be introduced in the borough (primarily operating along north-south routes) will help to improve north-south public transport connectivity, which is currently limited. LB Hillingdon can also assist bus services with physical measures such as bus lanes. In addition, there are plans to introduce bus measures including:

1. New bus routes serving the Elizabeth Line, A4020 Uxbridge Road Uxbridge-Heathrow and Hayes-Uxbridge corridors.
2. Direct and fast services between the north of the borough and Heathrow Airport (A30 and 724 commercial services).
3. Demand responsive bus services.
4. Bus priority / emergency services: congestion on hospital access road could be reduced, making space for emergency and other important services. Hospital access by public transport is increasingly important as Ealing residents increasingly rely on Hillingdon Hospital services.

As mentioned, although commercial bus services are more expensive, they offer potential for direct limited stop service between the north of Uxbridge and south of the borough. Commercial services provide under used opportunities (A30 & 724).

However, there remain additional bus challenges, such as:

- Commercial bus services are more expensive than TfL services making their offer less attractive. For example, high fares discourage bus use along routes such as Langley- Hillingdon Hospital, Iver-Uxbridge and Uxbridge- Heathrow;
- Lengthy bus journey times on routes between the north and south of the Borough. North-south capacity is hampered by unnecessary car traffic from neighbouring villages, and underused express bus services between Uxbridge and Heathrow;
- Several parts of the borough still need direct public transport connections to the Metropolitan Town Centre and direction connection with the Borough's main hospitals. Services have to be viable commercially. People from areas in the north and east of the borough have no realistic means of travel to Hillingdon Hospital other than by car;
- Coordinating Borough aspirations with those of TfL and HAL; TfL Multi-modal transport model is weak in monitoring change in north-south corridor; and
- Securing support from TfL / London Councils / Private Sector (HATF) and Home Counties.

When complete, High Speed Two (HS2) will run through the borough, south of Ruislip; the majority of which will be via the twin bored Northolt tunnel. The area has a mixed land use pattern of residential properties, industry, water features, recreational facilities, farmland and road and rail links. The HS2 route will enter the Borough in tunnel from the London Borough of Ealing to the South-East and will travel North-West parallel to the Northolt Rail Corridor. The tunnel will ascend via a portal west of Ickenham Road and the route will continue through a series of cuttings and embankments to Harvil Road. The route will then pass on viaduct over the Colne Valley before moving into South Buckinghamshire57. Although the line is unlikely to be operational within the period of this LIP3 plan, it may have significant construction impacts on existing infrastructure within the borough within the next five years.

"Modelling of the wider network is urgently required to understand where traffic will reassign to when Swakeleys Road becomes saturated by HS2 construction traffic and what measures are needed elsewhere to accommodate reassigned traffic."[58]

The Council is taking its commitment to safe construction traffic very seriously and supports the Mayor's Vision Zero for Road Safety as well as his plans and initiatives making it mandatory that all HGVs over 12 tonnes hold a Safety Permit to enter or

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[57] HS2 Context Report, Prepared for London Borough of Hillingdon, May 2017

[58] Meeting between Mike Brown MVO, Commissioner TfL and Cllr Ray Puddifoot MBE, Leader of the Council LB Hillingdon 23rd November 2017,

operate in Central London. Transport for London's research which shows that between 2015 and 2017, heavy goods vehicles were disproportionately involved in fatal collisions with cyclists (63 per cent) and pedestrians (25 per cent), despite only making up four per cent of the overall miles driven in the Capital. The London Borough of Hillingdon always seeks reassurance that the risks associated with construction traffic will be reduced to an absolute minimum. Planning applications are expected to be supported by a Construction and Logistics Plan. FORS Silver accreditation is a standard prerequisite when considering construction and logistics plans.

Objective 5: Hillingdon will improve connectivity at transport interchanges to enable more trips; and work with stakeholders to identify and deliver public transport opportunities.

New and existing bus service start points, final destinations and places en-route will include facilities for both the operation of public transport and improving passenger experience. The Council will gather quantitative and qualitative data through a range of means to help develop public transport projects. Every opportunity will be taken to secure developer contributions to provide public transport infrastructure for both the passenger and operator which will also require the support of TfL investment. The Council will be an early adopter of new models for delivering public transport.

Key Performance Indicator 5: Increase Public Transport Use

Measure: Increased number of trips per day by public transport

Metric: Trips per day by borough of residence. Reported as three-year moving average. Base year 2013/14-2015/16

London objective: Between 14 and 15 million trips will be made by public transport every day by 2041

Borough objective: Hillingdon will increase numbers of daily public transport trips by 64%, from 129,000 to 212,000 by 2041.

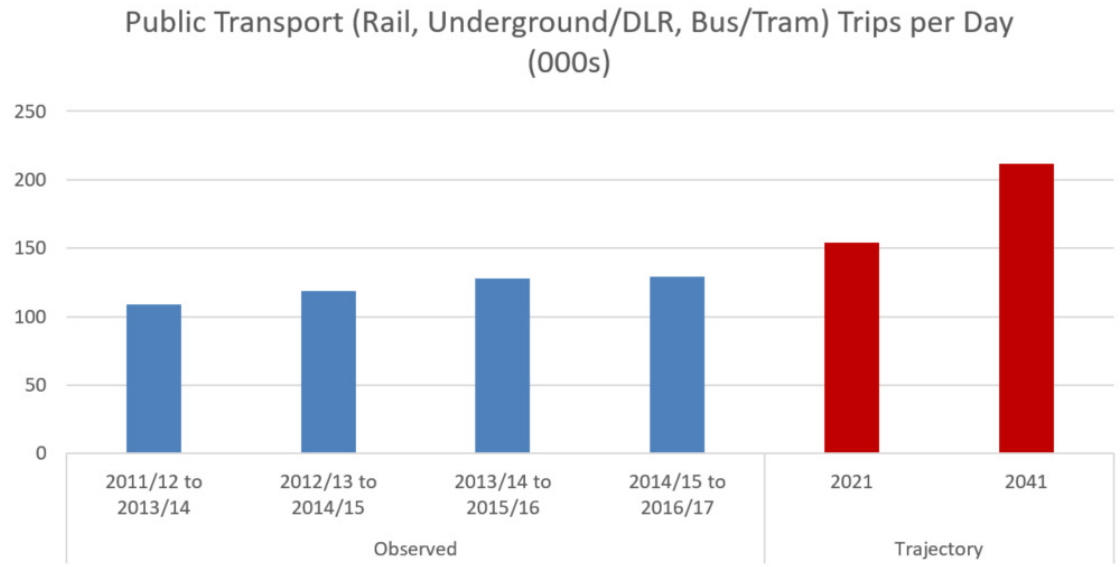

Figure 35: Public Transport (Rail, Underground/DLR, Bus/Tram) Trips per Day (000s)
Source: LIP3 MTS outcomes borough data pack v1_1

New and existing trip, origins, destinations and point's en-route will include facilities for both the operation of public transport and improving passenger experience. The Council will gather data through a range of means to help develop public transport projects including the Annual Disabled Accessibility Workshop, the Council's Street Champions, the quarterly Traffic Liaison Meetings and feedback from residents and their representative organisations. Every opportunity will be taken to secure developer contributions to provide public transport infrastructure for both the passenger and operator. Where appropriate the Council will be an early adopter of new models for delivering public transport such as demand responsive bus services.

Hillingdon have identified the following areas for Public transport development including but not limited to:

1. Hillingdon wishes to improve transport interchanges, in terms of bus service, public realm, walking and cycling access. It is an opportunity Hillingdon see to work with TfL and other stakeholders to deliver bus priority measures and extend north/south bus connections. Hillingdon will work in improving access to transport interchanges, providing adequate way-finding to transport interchanges and infrastructure improvements, i.e. benches to rest along walking routes.

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

Challenges and opportunities

The mode share of car trips in Hillingdon (56%) is the highest in London (see

Figure 10). Most people travel by car, especially in the north west of the borough.

However, between 2001 - 2011 there was significant growth in bus trips, mainly around Heathrow and east of the borough. Train and tube patronage increased to the west and north-east areas around Ruislip.

Public transport accessibility levels (PTAL) are based on the walk distance to the nearest public transport service and the wait time for that service[59]. It is a method used to measure connectivity to public transport. An extensive bus network will play a vital role in providing public transport connectivity throughout Hillingdon, including north south connections, journeys to town centres and key amenities, with rail supporting mostly radial journeys. Poor accessibility levels are present throughout the Borough, particularly in the northern half of the Borough as it is more rural. Ickenham, Ruislip, Eastcote and Northwood are the only areas in the north that score a 3 (WestTrans info) and are areas with access to train stations.

The south of Hillingdon, Hayes and Heathrow Airport are the most accessible, helped by the provision of frequent rail services to these areas. Edges of Uxbridge town centre, parts of Heathrow and areas along the M4 have higher total population and employment density than expected for the PTAL level[59]. In these areas, enhancing public transport accessibility will enable faster journeys for those already using public transport thereby reducing private vehicle use and congestion.

Public transport accessibility

Hillingdon has an ageing population. Public transport services must be made accessible to all including older people and those with disabilities which reduce mobility. Step-free access reduces journey times for people with mobility issues. There are 15 train stations in Hillingdon making it the London Borough with the 4th highest total number of stations. Ten of these stations (67%) offer no accessibility to wheelchair users[49]. Hillingdon Council intends, through TfL funding and developer contributions, to make all stations where it is possible step-free, beginning with Ruislip and Ickenham, and provide more accessible bus stops and shelters.

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[59] Hillingdon Design and Accessibility Statement (HDAS) Supplementary Planning Document, Transport Interchanges (July 2006).

Street design should also be considered.[60] Removing physical barriers and increasing pedestrian and cycle priority encourages people with disability to use public transport. Improved technology and information can also help improve public transport accessibility.

Improving accessibility to public transport can contribute greatly to social inclusion. Those who don't own or cannot afford a car are reliant on alternative modes. When public transport is impractical due to unreliability, cost or lack of services, people are left isolated and severely restricted in employment and education opportunities.

Those who struggle to afford fares or who struggle to access public transport because of age or disability are most likely to experience social exclusion. Sustrans defines this as Transport Poverty[61], and highlights that the increasing lack of affordable housing in London is placing new importance on transport in tackling social exclusion.

Hillingdon hosts an Annual Accessibility Workshop which is attended by mobility and visually impaired people and their representative organisations. The seminar enables liaison between impaired people, Members and officers and concludes with a list of wishes and suggested schemes. Any suggestion made is investigated in detail and implemented where feasible. Through this platform, suggestions such as improved shelters and seating at bus stops, new bus routes and step-free access to stations have been raised and will be pursued by the borough and TfL.

The borough of Hillingdon has well established Dial-a-Ride demand responsive bus scheme which is well received by the residents of Hillingdon. With new technology, demand responsive transport (DRT) could work well in more sparsely populated parts of Hillingdon. DRT is a more flexible approach to providing public transport than conventional, scheduled buses[62]. This is an area which the council could explore further, as there are benefits in using DRT to increase mobility for those with restricted mobility.

LB Hillingdon would also urge TfL to revise its ticket prices (especially with regard to rail and underground zoning) to address social exclusion concerns. We urge TfL to expand the bus network in London as a means of effectively improving transport provision in areas of highest need and with lower incomes. For example, one-way it costs £4.50 for a 2.2mile journey, between Iver Heath and Uxbridge Town, as it crosses the county boundaries; compared with £1.50 one-way trip within London. Hillingdon require TfL's support in negotiating public transport prices with neighbouring counties.

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[60] 'A guide to inclusive cycling; First edition – November 2017' Wheels for Well-Being
[61] Locked Out: Transport Poverty in England, 2012, Sustrans
[62] The rise of demand responsive transport, Andrew Fish, Trapeze, 2015.
http://www.trapezegroup.co.uk/blog/article/the-rise-of-demand-responsive-transport

The lack of orbital and north south public transport services in Hillingdon affects everyone, not least older and disabled people. This issue is worsened by the low number of step-free stations. High demands on, and the unreliability of, door to door services exacerbate the situation, leaving travel by car in many cases the only reliable travel option for older and disabled people.

Taxi's and private hire vehicles offer older and disabled people convenient door to door transport. But the supply of availability of taxi's and private hire vehicles in Hillingdon is limited significantly due to the high demand at Heathrow Airport. Another issue is Hillingdon's geography. Taxi journeys tend to be longer than average in Hillingdon given the Borough long and narrow shape, the borough's length is more than 20km. Disabled people are entitled to a concession when using the Taxi Card service but the run-in charge is currently so high that the concession expires within a short distance of travel, rendering this mode of transport too costly for many.

Hillingdon wishes to make TfL aware that its Access & Mobility Forum members consider the Capital Call scheme to be the single most useful door to door service, certainly when compared with the Dial-a-Ride and Taxicard service. The Capital Call scheme (2,000 members) was established in 2003 in response to concerns about poor availability of London Taxis in boroughs such as Hillingdon. Approximately 1 in 5 journeys currently made by disabled people is through the Capital Call scheme.

Objective 6: Public transport will be safe, accessible and a viable transport option in Hillingdon

From the outset, every opportunity will be taken to ensure that public transport in Hillingdon is inclusive to all. Supported by TfL investment, bus stops, railway stations and taxi ranks will be well lit, clean and maintained and any physical barriers to accessibility removed. Use will be made of the TfL model, iBus data and the findings of the WestTrans Strategic Bus Corridor Studies to prioritise the implementation.

Key Performance Indicator 6: Everyone will be able to travel spontaneously and independently

Measure: Average difference between total network and step-free network journey times

Metric: Average journey time using the full and step-free network (minutes)

London objective: Reduce on average, the difference between total network and step-free network journey times by 60% by 2041 so everyone will be able to travel spontaneously and independently

Borough objective: By 2041, Hillingdon will have reduced the difference between the full and step-free networks from 11 minutes to 7 minutes in average journey times thereby reducing the travel time by 39%.

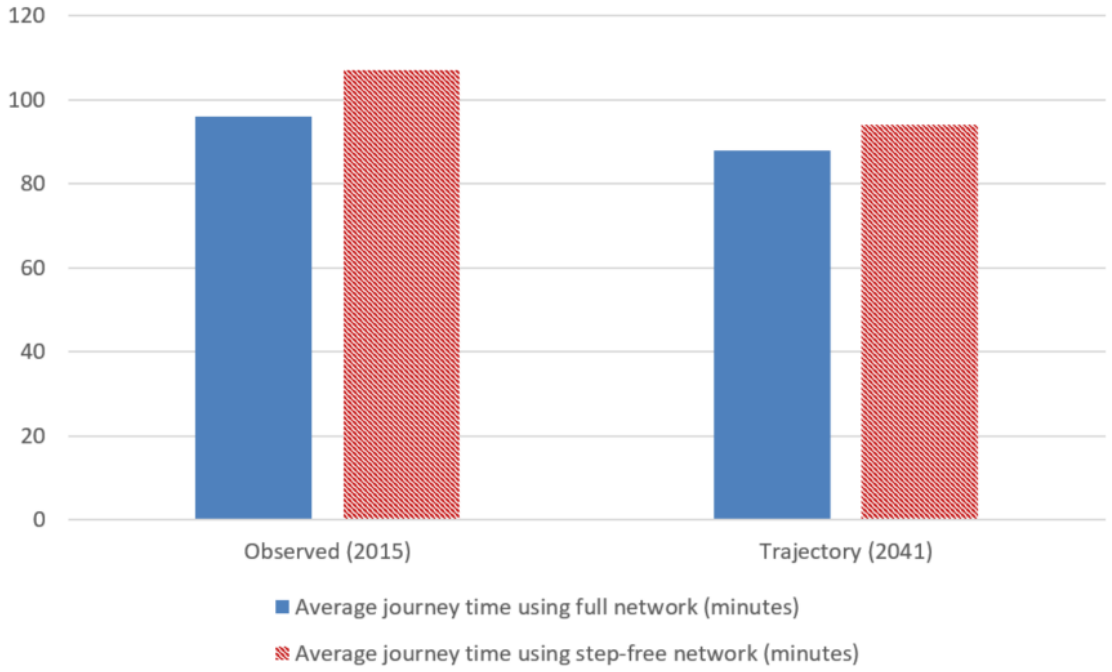


Figure 36: Average journey time using the full network versus the step-free network.
Source: LIP3 MTS outcomes borough data pack v1_1

Following areas have been identified to improve Public Transport Use, including but not limited to:

1. Hillingdon Council intends, through TfL funding and developer contributions, to make all stations where it is possible step-free, beginning with Ruislip and Ickenham.
2. Provide more accessible bus stops and shelters at all locations where it is possible.
3. Working with stakeholders, Hillingdon will look to improve first and last mile options, to make the 'whole' journey more convenient and pleasant for people.

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

Challenges and opportunities

With the exception of settlements in the north of the Borough, Hillingdon is generally well served by the London Underground and National Rail services along the radial routes leading towards central London. There is sufficient capacity on the rail network at present and little by way of over-crowding until trains approach central London on the Metropolitan, Piccadilly and Central lines[55]. Crowding levels are also low on National Rail services that have suburban stops, due to services not being as frequent as the Underground. Frequency is a key component of the overall perception of the quality of service and low levels of frequency can make an area seem less connected[55]. Improving the frequency and quality of service of National Rail lines will be vital in reducing car use. There are, however, significant gaps in the public transport provision. Direct north-south public transport services are fundamentally lacking. This lack of services makes it very difficult to promote public transport within Hillingdon, which is essentially an Outer London Borough with orbital orientation.

The lack of orbital public transport provision is of particular concern with regard to mobility impaired people. It is not only the stations which lack accessibility; it is also the manner in which they are hampered in travelling within the borough. Deficient access to taxi and private hire services exacerbates the situation for them leaving travel by car often as the only feasible travel option. The availability of taxi and private hire for disabled people is suffering reduced due to the demand at Heathrow Airport.

Another issue is Hillingdon's geography. Taxi journeys tend to be longer than average within the borough. Disabled people are entitled to a concession, currently up to £10.80 when using the Taxi Card service. The running charge starts at £6.00 which means that the concession has expired after approximately 2 miles whilst the borough's length is more than 20km.

Another significant gap in the service provision is the total absence of a direct public transport connection between South Ruislip and Uxbridge, the borough's Metropolitan Town Centre.

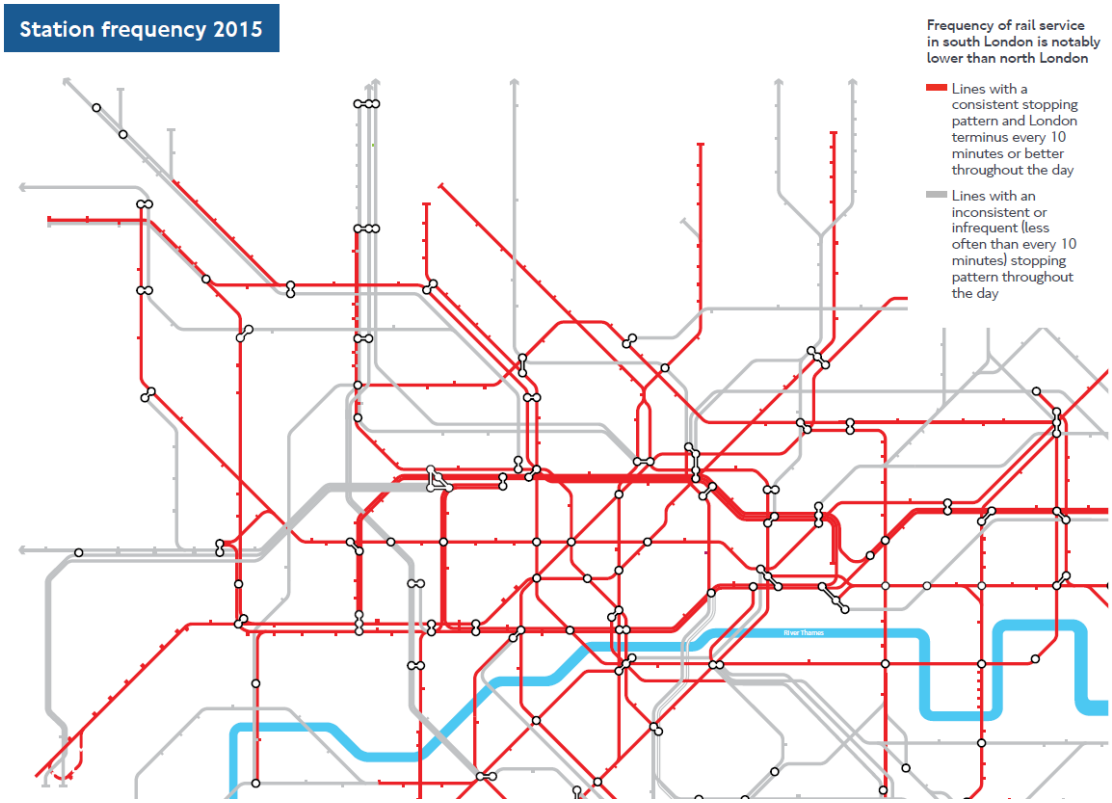


Figure 37 Rail Service Frequency by Station 2015

Hillingdon is surrounded by main roads M40, M4, A40 with significant traffic flows. The operation of Heathrow Airport with passengers, staff, freight and deliveries all requiring access increases road congestion, which decreases journey time reliability including bus wait times. Bus speeds are hindered in the morning peak through Uxbridge, West Drayton, Hayes, and Sipson[69] Highway and junction delays affect access to a few key radial and orbital routes. This can constrain public transport growth and restrict customer use. LB Hillingdon aims to improve bus priority to allow faster journey times by bus and maintain an attractive, reliable bus service for customers.

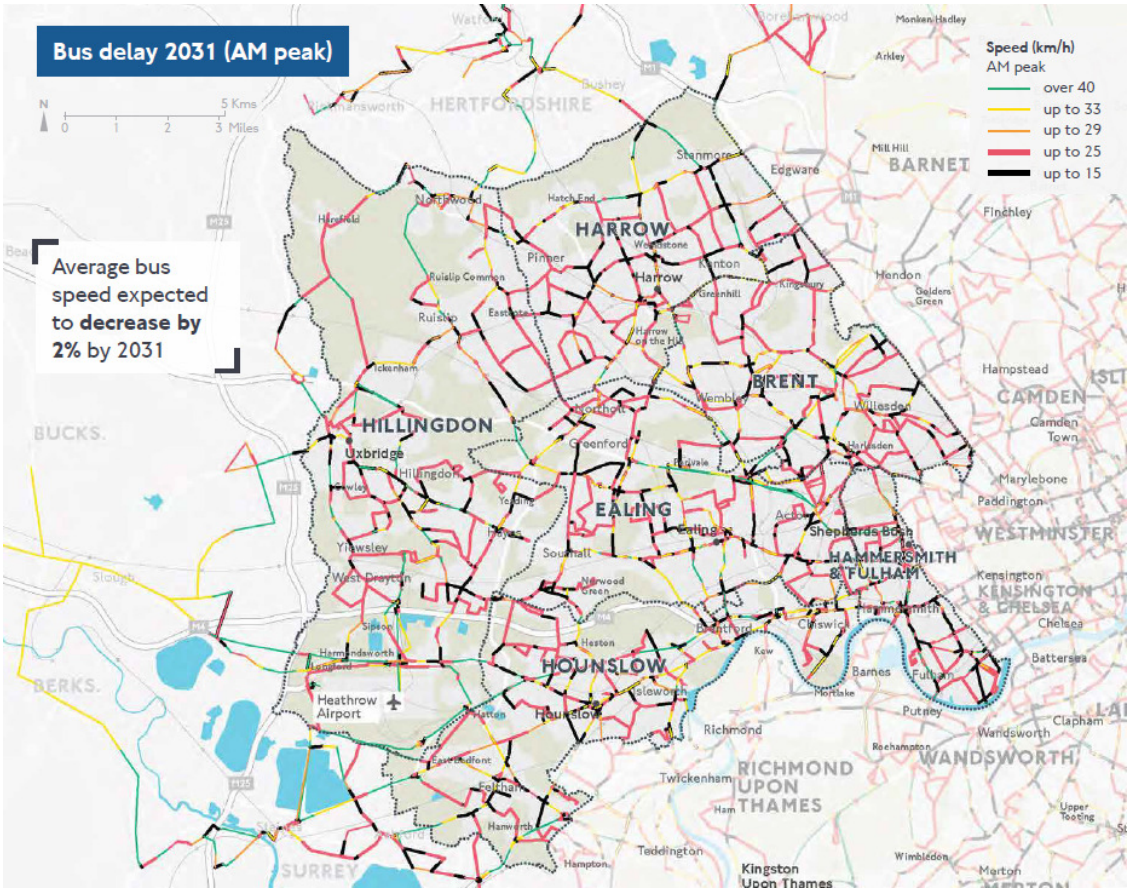


Figure 38: Bus Delay by Location 2031 (AM peak)
Source: London sub-regional transport update 2016

Travel choices vary according to an individual's age, income, gender, journey purpose and time of travel[63]. However, convenience, attractiveness, journey time and reliability are consistent influential factors. Currently public transport journeys from Hillingdon to certain Metropolitan centres are well over an hour, usually slower than the equivalent journey by car, so not an attractive option. According to the 2016 sub-regional transport update, trips by public transport from Uxbridge to Heathrow can take up to 55 minutes, whereas by car it can take up to 27 minutes[55]. This helps explain why cars are the dominant mode in Hillingdon.

Along with improving bus journey times, LB Hillingdon wishes to improve the public realm at bus interchanges to help increase public transport access and use.

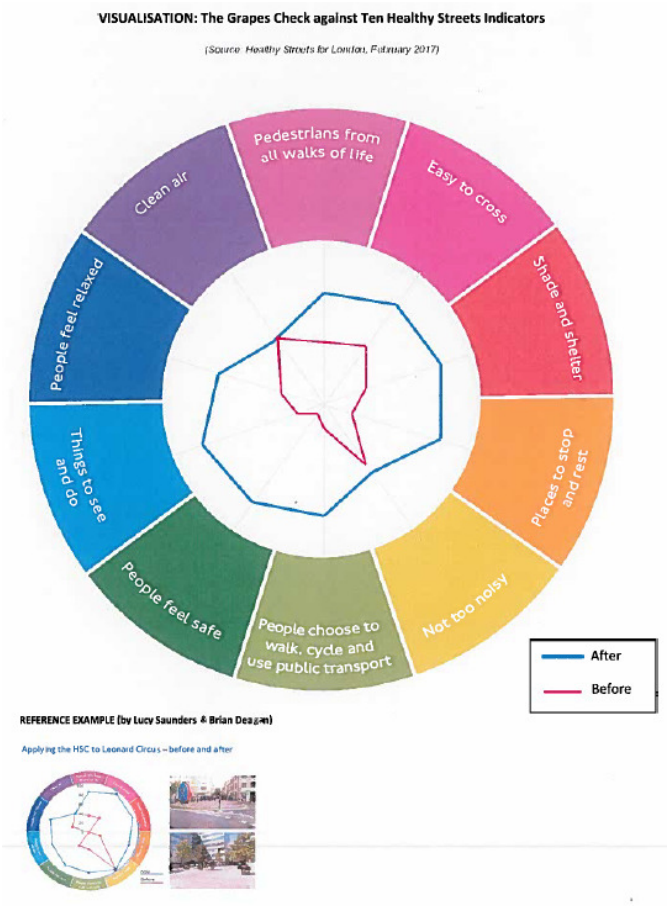
The MTS mentions that new tube trains will be introduced from the mid-2020s on the Piccadilly Line and these new trains will be complemented by signalling and track improvements to enable faster and more frequent services. This investment is

[63] Exploring factors related to users' experience of public transport route choice: influence of context and users' profiles, E. Grison, V. Gyselinck and J-M Burkhardt, 2015

welcomed but considered long overdue. Taking into account the growth in Hillingdon and the contribution this makes to the London economy, this investment should be prioritised and accelerated.

LB Hillingdon would like the Central Line to be extended to Uxbridge in order to vastly improve connectivity between Hillingdon and the rest of London which will require TfL investment.[64]

In addition, The Grapes junction transformation to create a north-south/east-west bus interchange will significantly improve the speed and reliability of bus journeys. This will also be complimented by a continuous cycle route in each direction to make the transfer between modes easier. This upgrade has been assessed against the ten Healthy Streets' indicators as can be seen in Figure 39.



[64] Meeting between Mike Brown MVO, Commissioner TfL and Cllr Ray Puddifoot MBE, Leader of the Council LB Hillingdon 23rd November 2017,

Healthy Streets Indicator	Comments on Existing	Comment on Proposal
Pedestrians from all walks of life • Welcoming place to walk, • Spend time in and • Engage in community life	• Traffic dominated junction with underused carriageway and numerous guardrails • Unloved junction area with numerous hiding spaces	• ✓ Direct crossings on desire lines • ✓ Bus waiting facilities are in better locations • ✓ More surveyance and connected spaces
People choose to walk, cycle and use public transport • Inviting space to walk and • Cycle more often	• Car dominance, discontinuous cycling facilities, lack of enclosure and remoteness of bus stops create off-putting environment • Junction is top on Police's ASB list	• ✓ Junction forms integral part of adjacent shopping centres and public house • ✓Continuous and connecting segregated cycle paths
Clean air • Improving air quality	• Junction is located within air quality management area	• ✓ More active travel will be encouraged from the start in Hayes Housing Zone (less pollution)
People feel safe • The whole community should feel comfortable and • Safe on our streets at all times • People should not feel worried about road danger	• Bus shelter on north arm is particularly poorly lit and obscured from CCTV coverage resulting snatching and other ASB at night with associated fears • Numerous especially young people cross Uxbridge Road in uncontrolled sections to/from bus stops • The green space on the southwest corner suffers from drug use • The junction is among the borough's top PIA's for vulnerable road users	• ✓ The bus stops will be located much closer, enhancing the north-south interchange • ✓ The proposals actively address the Police's main problems namely snatching (across A4020) and drug dealing (SE green spaces) on the borough's No.1 ASB Hot Spot • ✓ Random crossing will be minimised by locating the bus stops in more logical and safe positions
Not too noisy • Reducing the noise impacts of traffic will directly benefit health and • Improve the ambience of our streets	• Redundant carriageway encourages drivers to drive fast with associated noise issues • Civic pride in the public realm is totally lacking	• ✓ New design will be less attractive for high speed drivers with minor noise benefits • ✓ Increase in footway space and directness of crossings / paths will improve ambiance
Easy to cross • Making streets easier to cross is important to encourage more walking and • to connect communities	• All junction arms have multi-part crossings pedestrian crossings and none of the arms has cycle crossings • The junction forms a barrier to vulnerable road users east-west and north-south	• ✓ Crossings will become easier to use, e.g. four-part crossing on south arm will become 1-part crossing • ✓ Traffic dominated environment will be transformed into more people friendly place
Places to stop and rest • Resting places • Mobility for certain groups of people	• No resting places are offered • Mobility impaired people find it difficult to cross the junction	• ✓ Seating areas will be provided where feasible and • ✓ Public House will be incentivised to make active use of forecourt facing junction area
Shade and shelter • Providing shade and shelter	• The junction forms a bleak environment without significant protection against the elements	• ✓ Junction scale reduction and extension to retail park will create more enclosure
People feel relaxed • More people will walk or cycle if our streets are not dominated by motor traffic, and if • Pavements and cycle paths are not overcrowded, • Not dirty or in disrepair	• The junction design stems from a previous era when everything was designed for the car. • It is very large and traffic dominated with inconsistent provision for pedestrians, cyclists and public transport users • Hillingdon has no direct north south bus services and TfL has been encouraging LBH to provide north-south interchanges	• ✓ The traffic dominated junction which was primarily designed to provide capacity for the car during a previous era will be transformed into a people friendly place • ✓ Footways and cycle path will be designed to full standard, direct, attractive and clutter free • ✓ Street furniture will be overhauled and local champions to be engaged during the design and construction period are likely to take pride in the new locality
Things to see and do • Interesting and stimulating place • Attractive views • Buildings • Planting and • Street art	• The public realm outside the public house offers tremendous potential but has suffered from neglect from many years • The Grapes junction, public house and other frontages provide an excellent under used opportunity for creating a bold bus interchange • Properties facing green space to south west have high turn-over & lack of civic pride	• ✓ The Grapes junction forms a gateway to both Hayes town centre in the south and Uxbridge in the west • ✓ The land to be added to the Lombardy Retail Park could become a real landmark together with the Grapes Public House • ✓ The opportunity will be used to plant as many trees as possible e.g. in the central reserve along A4020 Uxbridge Road

Figure 39.

Healthy Streets Indicator	Comments on Existing	Comment on Proposal
Pedestrians from all walks of life • Welcoming place to walk, • Spend time in and • Engage in community life	• Traffic dominated junction with underused carriageway and numerous guardrails • Unloved junction area with numerous hiding spaces	• ✓ Direct crossings on desire lines • ✓ Bus waiting facilities are in better locations • ✓ More surveyance and connected spaces
People choose to walk, cycle and use public transport • Inviting space to walk and • Cycle more often	• Car dominance, discontinuous cycling facilities, lack of enclosure and remoteness of bus stops create off-putting environment • Junction is top on Police's ASB list	• ✓ Junction forms integral part of adjacent shopping centres and public house • ✓Continuous and connecting segregated cycle paths
Clean air • Improving air quality	• Junction is located within air quality management area	• ✓ More active travel will be encouraged from the start in Hayes Housing Zone (less pollution)
People feel safe • The whole community should feel comfortable and • Safe on our streets at all times • People should not feel worried about road danger	• Bus shelter on north arm is particularly poorly lit and obscured from CCTV coverage resulting snatching and other ASB at night with associated fears • Numerous especially young people cross Uxbridge Road in uncontrolled sections to/from bus stops • The green space on the southwest corner suffers from drug use • The junction is among the borough's top PIA's for vulnerable road users	• ✓ The bus stops will be located much closer, enhancing the north-south interchange • ✓ The proposals actively address the Police's main problems namely snatching (across A4020) and drug dealing (SE green spaces) on the borough's No.1 ASB Hot Spot • ✓ Random crossing will be minimised by locating the bus stops in more logical and safe positions
Not too noisy • Reducing the noise impacts of traffic will directly benefit health and • Improve the ambience of our streets	• Redundant carriageway encourages drivers to drive fast with associated noise issues • Civic pride in the public realm is totally lacking	• ✓ New design will be less attractive for high speed drivers with minor noise benefits • ✓ Increase in footway space and directness of crossings / paths will improve ambiance
Easy to cross • Making streets easier to cross is important to encourage more walking and • to connect communities	• All junction arms have multi-part crossings pedestrian crossings and none of the arms has cycle crossings • The junction forms a barrier to vulnerable road users east-west and north-south	• ✓ Crossings will become easier to use, e.g. four-part crossing on south arm will become 1-part crossing • ✓ Traffic dominated environment will be transformed into more people friendly place
Places to stop and rest • Resting places • Mobility for certain groups of people	• No resting places are offered • Mobility impaired people find it difficult to cross the junction	• ✓ Seating areas will be provided where feasible and • ✓ Public House will be incentivised to make active use of forecourt facing junction area
Shade and shelter • Providing shade and shelter	• The junction forms a bleak environment without significant protection against the elements	• ✓ Junction scale reduction and extension to retail park will create more enclosure
People feel relaxed • More people will walk or cycle if our streets are not dominated by motor traffic, and if • Pavements and cycle paths are not overcrowded, • Not dirty or in disrepair	• The junction design stems from a previous era when everything was designed for the car. • It is very large and traffic dominated with inconsistent provision for pedestrians, cyclists and public transport users • Hillingdon has no direct north south bus services and TfL has been encouraging LBH to provide north-south interchanges	• ✓ The traffic dominated junction which was primarily designed to provide capacity for the car during a previous era will be transformed into a people friendly place • ✓ Footways and cycle path will be designed to full standard, direct, attractive and clutter free • ✓ Street furniture will be overhauled and local champions to be engaged during the design and construction period are likely to take pride in the new locality
Things to see and do • Interesting and stimulating place • Attractive views • Buildings • Planting and • Street art	• The public realm outside the public house offers tremendous potential but has suffered from neglect from many years • The Grapes junction, public house and other frontages provide an excellent under used opportunity for creating a bold bus interchange • Properties facing green space to south west have high turn-over & lack of civic pride	• ✓ The Grapes junction forms a gateway to both Hayes town centre in the south and Uxbridge in the west • ✓ The land to be added to the Lombardy Retail Park could become a real landmark together with the Grapes Public House • ✓ The opportunity will be used to plant as many trees as possible e.g. in the central reserve along A4020 Uxbridge Road

Figure 39 - The Grapes check against the ten Healthy Streets indicators

Objective 7: Hillingdon will support on improving bus journey times and reliability with stakeholders, to make journeys pleasant, faster and more reliable.

How the public transport network is managed, and investment prioritised, will be in response to user demand and benefit. Measures will provide for the needs of public transport operators and facilities for passengers. Developer contributions will be a key source of funding for this investment.

Key Performance Indicator 7: Bus journeys will be quick and reliable, an attractive alternative to the car

Measure: Bus speeds will improve by approximately 5% to 15% London-wide by 2041, with particular improvements expected in inner London

Metric: Average bus speeds from ibus in mph

London objective: Bus speeds will improve by approximately 5% to 15% London-wide by 2041, with particular improvements expected in inner London. Bus journeys will be quick and reliable, an attractive alternative to the car

Borough objective: Bus speeds will increase by approximately 5% to 15% in Hillingdon by 2041 from 13mph to 14.9mph

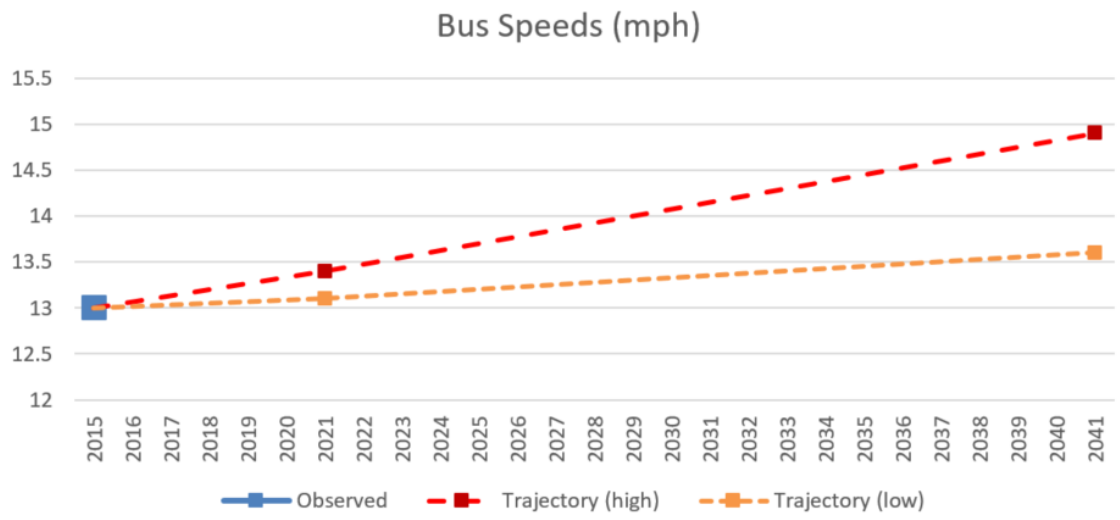


Figure 40: Bus Speed Targets by Year (mph)
Source: LIP3 MTS outcomes borough data pack v1_1

Key areas Hillingdon have identified in improving public transport infrastructure, but not limited to:

- Hillingdon support the improvement of bus priority within the borough, to allow faster journey times by bus and maintain an attractive, reliable bus service for customers. Hillingdon will work with TfL to progress and implement the WestTrans' BRT Corridor study that will serve the Heathrow Opportunity area. Junction improvements to address bus delays and removal of parking to create bus priority measures will be explored by Hillingdon.

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

Challenges and opportunities

Hillingdon is susceptible to rat running and gridlock as soon as surrounding motorways are congested. In some ways, congestion can help to get people out of the car if the alternatives such as cycling or public transport offer faster or more reliable journey times.

Strategic sustainable transport projects should be able to provide reliable journey times, even during gridlock so people can complete their journeys within the borough despite external traffic congestion.

LB Hillingdon will liaise with Highways England and HAL to minimise risks of the borough becoming prone to rat running by Motorway traffic, especially in cases of traffic incidents and congestion.

Hillingdon's development management policies are contributing towards the promotion of sustainable travel in new developments. Hillingdon's Local Plan Part 2 is currently under development which will include the borough's new Development Management Policies[65]. These will replace the Saved Unitary Development Plan (Saved UDP) policies[66] that are adopted at the time of writing this LIP.

The overarching aim of both the adopted and emerging policies is to ensure development in Hillingdon is adequately managed and integrated with its transport networks, including public transport, pedestrian and cycle networks, to enable it to accommodate growth in a sustainable manner.

Policies from the emerging LP2, which will contribute towards sustainable travel in new development include;

- Locating new development where access by public transport, walking and cycling is possible to serve the developments anticipated needs;
- Requirement of developers to mitigate transport impacts, such as improving public transport facilities;
- High quality pedestrian and cycle facilities;

[65] Local Plan: Part 2 Development Management Policies - Revised Proposed Submission Version, 2015, LB Hillingdon

[66] Saved Unitary Development Plan Policies, 2007

- A restrained and balanced approach to car parking, based on the London Plan standards[67] with some variance to reflect local circumstances;
- Travel Plans, where required, following TfL good practice guidelines; and
- Delivery and Service Plans and Construction and Logistic Plans to aim the efficient and consolidated movement of goods with minimum disruption to local amenity.

When complete, High Speed Two (HS2) will run through the borough, south of Ruislip. Major construction is set to begin in 2018, and with it there is expected to be an increase in construction traffic during certain periods. Hillingdon will face a challenge to mitigate HS2 construction impacts, whilst at the same time encouraging active travel. Construction traffic will dominate Ickenham, Harefield and Ruislip for at least seven years. An increase in HGV traffic will have an impact on the walking and cycling amenity of the areas, with the potential to increase feelings of severance and intimidation amongst pedestrians and cyclists. This will be mitigated through construction traffic management planning[68], and TfL works to provide construction route capacity (see Table 6). The borough will aim to ensure that the effects of the increase in construction traffic do not impact negatively on the attractiveness of walking and cycling.

In addition, Hayes town centre is now the focus of many new developments, partly in response to the opening of the Elizabeth line (Crossrail). One example is the redevelopment of the former Nestle factory along Nestles Avenue to provide 1,386 new dwellings, 22,663sqm of commercial floor space, as well as office, retail, community and leisure uses. The development was granted planning permission towards the end of 2018. It provides a good example of a transit-oriented development in which the Council has taken a holistic view to satisfying the travel demands of the new residents and a pragmatic approach to the amount of car parking required to support a development.

The planning permission requires the developer to provide 829 car parking spaces – this represents a space to dwelling ratio of 0.6. This is considerably lower than the standards of the local plan and more aligned with the Local Plan. Furthermore, those residents without access to a car parking space will be unable to park on-street as there is a residents' Parking Management Scheme along Nestles Avenue. As none of the new residents will be able to join this scheme, this will prevent them from parking on-street. Without anywhere to park within the development, or on the surrounding streets, these residents will be discouraged from owning a car, choosing instead to cycle, walk or travel by public transport instead.

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[67] London Plan, Parking Addendum to Chapter 6, GLA, 2016

[68] High Speed Two Phase One: Route-Wide Traffic Management Plan

Twenty percent of the car parking spaces provided will be served by electric vehicle charging points, with an additional 20% having the electricity supply in situ ready for the installation of a charging point sometime in the future.

Five car parking spaces will be allocated as Car Club spaces, and there will be provision to increase this number to 10 in response to demand. Such a scheme will be attractive to residents of the new development as not everyone will have access to a car at all times. To encourage residents to join the Car Club and make use of the facility, the developers have agreed to offer residents free membership of the scheme and credits to encourage people to give the initiative a "first try".

The developer has agreed to contribute towards the provision of a new bus service along Nestles Avenue. For this to happen, it will be necessary to widen Nestles Avenue so the road is wide enough for two buses to pass. To facilitate this, the developers have agreed to release a strip of land at the front of the site allowing the road to be widened. There will be one bus stop midway along Nestles Avenue as well as a bus turning circle and bus stop at the eastern end of the road. As part of the road widening, a new off-road cycle lane and footway will be provided.

A contribution from the developers has also been negotiated to support bus services along Nestles Avenue. This funding will be used to subsidise the new bus service for 5 years by which time the service should be carrying enough passengers to be commercially viable from the income generated.

To help pedestrians find their way from the site into town, and vice versa, the developers have agreed to contribute towards the provision of Legible London wayfinding maps and figure posts. This money will also be used to update the existing Legible London signs, so they include the Nestle development.

To make trips to Hayes town centre by means other than the driver-only private car as attractive as possible, there will be a direct pedestrian and cycle route through the site accompanied by 2,186 cycle parking spaces. Hillingdon will support car-free and car-lite development in areas within the borough that are well connected to sustainable travel options, i.e. Uxbridge station, Hayes and Heathrow. Car-free development facilitates behaviour change for residents from the onset of occupying a dwelling or working in an area that has limited or no parking provision. As such, car free and car-lite development will enable more ‘social streets’ in new development areas, supporting Hillingdon’s objectives and the Mayor's Vision to make London streets more active. Supporting such developments, will not only address issues of congestion and pollution, but help reduce noise pollution and long-term maintenance of highways.

Hillingdon will move towards parking standards for new development in line with the draft London Plan once it is formally adopted where applicable. Hillingdon, as an Outer London borough, has areas of low PTAL, where minimum residential parking standards may not be achievable and need to deviate from a borough-wide parking standard treatment.

Where sites are redeveloped, existing parking requirements for the site will be assessed to see if the demand for parking can be reduced and sustainable travel options can be increased. Where parking is provided in new developments, Hillingdon will support the infrastructure required for electric or other Ultra-Low Emission vehicles.

Objective 8: Hillingdon will support new development environments that prioritise sustainable travel

Through the development management process, new developments will be situated in locations accessible by walking, cycling and public transport and will include facilities to encourage and enable travel by these modes.

There are no specific outcome indicators for MTS Outcome 8. However, Hillingdon will achieve the aim to make active, efficient and sustainable travel the best option in new developments through its development management policies, both adopted and emerging.

To support and complement increased development in the borough, Hillingdon, in conjunction with TfL, will explore opportunities for improved bus frequencies and new routes particularly in a north-south direction. It will also aim to supplement the gap in transport provision with active travel infrastructure to encourage walking and cycling which will require TfL investment support.

Key areas Hillingdon have identified for sustainable transport provision in new developments:

- Through Hillingdon's development management process, new developments will be required to make provisions for walking, cycling and public transport. These to include cycle facilities, footpaths, environments accessible to all, including providing for disabled travellers' requirements and road layouts that support bus priority.

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

Challenges and opportunities

Good transport connectivity, as well as frequency and quality of service are key to unlocking housing and other types of development. Accessible places are more attractive, and therefore increase the viability of housing and commercial development. Investment in the existing network, as well as extensions to the network, can help to unlock significant levels of housing [69]. All new housing developments will need good public transport access.

Delivery of new homes has been identified at several sites in the south of the borough, as outlined in the proposed submission version of the Hillingdon Local Plan Part 2 (LP2)[70]. The largest proposed site allocations, that are currently under construction or expected to be delivered within the plan period (up to 2026), are as follows;

LP2 Site	Location	Potential Capacity (dwellings)
SA2	The Old Vinyl Factory and Gatefold	642
SA3	Eastern end of Blyth Road, Hayes	273
SA5	Land to the south of railway including	707
SA32	Former NATS Site, Porters Way, West Drayton	775

In 2016, Hayes Town Centre was designated as a Housing Zone under the London Plan[71]. The area will bring accelerated housing development and will be supported by funding of approximately £39.1m, made available by the GLA, and a range of planning and financial measures. The area has the potential to deliver approximately 2,788 homes, including 847 affordable homes. The main transport focus of the development is improved north-south bus connection, however, to support this growth, other sustainable transport infrastructure and planned projects have been identified[72];

[69] West London Sub-Regional Transport Plan, 2016 Update, Transport for London, pg 114.

[70] Local Plan: Part 2 Site Allocations and Designation Revised Proposed Submission Version, 2015, LB Hillingdon

[71] The London Plan, https://www.london.gov.uk/what-we-do/housing-and-land/increasing-housing-supply/housing-zones

[72] Hayes Housing Zone: Development Infrastructure Funding Study, 2017

Needs

- Infrastructure to connect the significant expected growth in the south of the borough to the Elizabeth Line (Crossrail) developments;
- Address lack of north-south bus links;
- Improvements to bus provision in Hayes Town Centre;
- Provide direct public transport capacity between east and west London;
- Increase walking and cycling levels and decrease private vehicle dependence;
- Increase connectivity between blue ribbon network and between green spaces and Hayes Town Centre; and
- Ensure growth in the south of the borough can be accommodated sustainably.

Planned Projects

- DfT and Elizabeth Line (Crossrail) will improve station access in Hayes, on the prerequisite of the Great Western Main line electrification which is in progress;
- TfL and LBH will implement: 1) A4 Harlington Corner accessibility improvements for interchange between buses, cycle and walking environment, 2) bus improvements at Hayes Town Centre, including bus priority measures, increasing bus services, and providing bus facilities needed to support growth;
- GLA, TfL and Canal and River Trust and LBH are implementing Quietways and other projects to increase cycling along key corridors in line with GLA and WestTrans targets;
- HE and TfL are implementing: 1) Harlington Corner accessibility works to improve interchange between buses and cycle and walking environment;
- LBH are implementing improvements to cycling and walking connectivity, particularly to and from development areas, the district centre and rail and bus services;
- LBH are in process of Hayes Town Centre Major scheme to improve public realm and transport accessibility to facilitate growth and town centre access;
- Developers of large development sites in Hayes Housing Zone are also providing additional walking and cycling connectivity infrastructure through S106 contributions, such as the Old Vinyl Factory providing 16,722sqm of landscaped public space; and
- Upgrading of the Central Line under the DTUP programme, commencing in 2025. LB Hillingdon would like the Central Line to be extended to Uxbridge by making use of the connecting spur that runs adjacent to the Ruislip depot between Ickenham on the Metropolitan/Piccadilly Lines and Ruislip Gardens on the Central Line.

Although LB Hillingdon is opposed to the Heathrow expansion, it could provide job opportunities for local residents. Projects like Heathrow Radial cycle routes and north-south bus services could be attractive. Enabling Hillingdon residents to cycle and travel by bus to the airport is a challenge largely due to lack of bus services and

protected cycle routes and crossings. Less driving and more walking and cycling could be achieved with a different approach to highways design.

According to the sub-regional growth transport plans, only 3% of the sub-region's resident's work at Heathrow, however, it is the largest single employment location in the Borough with over 50,000 employees[54]. Currently, very few Hillingdon residents who work at Heathrow use public transport to get to work. Potentially, with the Heathrow expansion, there may be further employment opportunities for local Hillingdon residents so public transport access to Heathrow from Hillingdon will be increasingly important. The Elizabeth Line (Crossrail) will help make Heathrow more accessible both within and outside of the borough, and better bus links will provide access to a greater range of employment opportunities, particularly in Southern Hillingdon.

The borough will also work with Heathrow Airport Limited (HAL), Sustrans[73] and other key stakeholders to implement a network of north-south and radial cycle routes, and to encourage Heathrow employees who live within a cyclable distance to commute by bike.

These investments, supported by TfL, will help to encourage greater numbers of Hillingdon residents to cycle and travel by public transport to the airport, and support Hillingdon's aim that there will be no additional Heathrow-bound vehicles on its roads[74].

Heathrow Opportunity Area

Heathrow is of significant economic importance to the national, London and local economy. Heathrow has been identified as an opportunity area by the Mayor within the London Plan, and supports an integrated approach to the distinct environmental and growth issues facing the area around Heathrow. In Hillingdon, Heathrow 'north' (including the A4 corridor) will continue to benefit from airport-related growth, particularly with regard to transport and logistics, business and hotels and leisure/tourism. Stockley Park has a particular draw for a diverse range of offices. Uxbridge is set to grow significantly with the redevelopment of the RAF Uxbridge site, together with potential support services in the Uxbridge Business Park.

The Hayes-West Drayton corridor contains redevelopment opportunities for a range of potential uses, including small business parks, logistics and mixed-uses. These opportunity areas have significant capacity for development, which will benefit

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[73] https://www.sustrans.org.uk/our-services/projects/london-heathrow-cycling-airport

[74] Airports National Policy Statement, 2018, Department for Transport

Hillingdon in being able to provide housing, commercial use and improve existing public transport access to the area.

Pump Lane Link Road / Southall Gas Works

The proposal to redevelop former Southall Gas Works, will have substantial adverse impacts on Hillingdon. It will cause harm to the highways network, result in the loss of ecological wildlife, future residents of the scheme will intensively use land and facilities within London Borough of Hillingdon. It will also cause harm to the setting of the Green Belt and Grand Union Canal.

Objective 9: Hillingdon will support and secure transport investments that unlock employment and housing opportunities.

Using the Local Plan, the opportunities to deliver new homes and jobs will be identified and LIP3 funds will be used for investment in measures to unlock site constrained by poor transport accessibility. There will be projects to improve the public realm in turn giving business the confidence to invest.

There are no specific outcome indicators for MTS outcome 9. However, the borough will fulfil the outcome of unlocking the delivery of new homes and jobs through investment in both public transport and active travel infrastructure.

Strategic areas of improvement Hillingdon have identified for transport growth, further to that of outcomes 5, 6 7 and 8:

- Hillingdon, in conjunction with TfL, will explore opportunities for improved bus frequencies and new routes particularly in a north-south direction, to supplement the gap that exists in transport provision in the north of the borough. Hillingdon will support more transit orientated development, such as the Hayes housing area, more specifically the Nestles site. Hillingdon will continue to identify strategic transport investments required, such as access to the Elizabeth line to improve the borough's connectivity with wider London.

Other Mayoral Strategies

London Environment Strategy, May 2018

The Environment Strategy outlines the Mayor's aspiration to turn London into a zero-carbon city, and to have the best air quality of any major world city by 2050.

With road traffic being the biggest contributor to air pollution, this LIP's aspiration to reduce car ownership and use will support other local strategies in achieving these aims.

London Housing Strategy, May 2018

As part of the Mayor's vision for good growth, the Housing Strategy outlines five priorities:

- Building homes for Londoners;
- Delivering genuinely affordable homes;
- High quality homes and inclusive neighbourhoods;
- A fairer deal for private renters and leaseholders; and
- Tackling homelessness and helping rough sleepers.

The objectives set through this MTS will contribute towards the first three priorities, as LB Hillingdon works to unlock opportunities for new development through investment in its walking and cycling network and creating new links and capacity on its public transport network.

The Borough's aims to make Hillingdon's streets accessible to all will support new development in creating inclusive neighbourhoods, and creating a Borough where pleasant, reliable and attractive transport options are available without the need to own a car will create an inclusive network where everyone can access the goods, services and opportunities they need to thrive.

Draft London Economic Development Strategy, December 2017

The Draft Economic Development Strategy centres on a vision to create a fairer and more inclusive economy, where 'no one finds themselves locked out from opportunity'.

This vision will be supported in Hillingdon, where the Council aims to tackle social inequalities by creating better links from the Borough's most deprived areas to town centres and services. This will help in tackling levels of 'Transport Poverty', where residents may feel cut off from services, employment or education opportunities through lack of transport options.

The Strategy recognises the role that London's transport plays in encouraging economic growth, and the pressures this growth puts on the network. It identifies the current capacity and crowding constraints on the public transport network, and the requirement to encourage a modal shift from private vehicle use. Solving these issues will aid in supporting economic growth in London and the objectives set out within this LIP will support in achieving this.

Draft London Culture Strategy, March 2018

The Mayor's Vision for culture is based on four priorities:

- Love London: more people experiencing and creating culture on their doorstep;
- Culture and Good Growth: supporting, saving and sustaining cultural places and spaces;
- Creative Londoners – investing in a diverse creative workforce for the future; and
- World City – maintaining a global powerhouse in a post-Brexit world.

LB Hillingdon aims to create a street network that is appealing to active travel, which in itself is a more social activity than alternative transport modes. These modes enable people to experience their surroundings at a more intimate level and engage with local cultural places and spaces.

Draft Health Inequalities Strategy, August 2017

One of the Mayor's key ambitions for this Strategy is to create Healthy Places. The Strategy aims to create healthy, pleasant streets and green spaces with good air quality.

This directly aligns with both the MTS outcomes and those of this LIP, which aims to make Hillingdon's streets clean and green with reduced air pollution from road traffic and more street trees.

The Delivery Plan

Introduction

This chapter sets out our Delivery Plan for achieving the Outcomes of the MTS and the LBH Objectives of this LIP:

- Linkages to the Mayor's Transport Plan
- TfL Business Plan
- Three Year - Delivery Plan Funding
- Long Term Interventions to 2041 Funding
- Three Year - Delivery Plan Programmes
- Year One 2019/20 Delivery Plan Schemes
- Three Year - Delivery Plan Risk Assessment

Linkages to the Mayor's Transport Plan

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

Table 9 outlines the linkages between the projects and proposals included in the Delivery Plan, and the MTS outcomes that they contribute towards achieving.

Table 9: Linkages to the Mayor's Transport Strategy priorities 2019/20

Project / Programme	**MTS mode share**	**MTS outcomes**							
	Improving active, efficient and sustainable mode share	No 1:-Active	No 2:- Safe	No 3:-Efficient	No 4:- Clean & Green	No 5:- Connected	No 6:-Safe, affordable, accessible	No 7:- Quality	Nos 8 & 9 Sustainable Growth/ Unlocking
1. Transport Interchange & Healthy Streets									
Public Transport nodes - Hillingdon Hospital	✓	✓	✓	✓		✓	✓	✓	✓
North Hyde Road Shopping Parade improvements	✓	✓	✓	✓	✓				✓
Oak Farm Area improvements	✓	✓	✓	✓	✓				✓
Legible London	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hillingdon Station forecourt improvements	✓	✓		✓	✓	✓	✓	✓	✓
2. North South Links and Supporting Growth									
Cycle / pedestrian link between Grand Union Canal & Cranford Park	✓	✓	✓	✓	✓				✓
Springfield Road Phase II	✓	✓	✓		✓	✓	✓		
3. Vision Zero School Travel Plan and Local Road Safety Schemes									
School Travel Plan safety schemes	✓	✓	✓						
Vision Zero Local safety schemes	✓	✓	✓	✓	✓				
Harvil Road Speed Reduction			✓	✓			✓		
4. Accessibility and Mobility for All									
Boroughwide Accessibility schemes (dropped kerbs, tactile paving)	✓	✓	✓				✓		
Bus stop accessibility	✓					✓	✓	✓	✓
Annual Accessibility and Mobility Workshop	✓	✓	✓				✓		

Project / Programme	MTS mode share	MTS outcomes							
	Improving active, efficient and sustainable mode share	No 1:-Active	No 2:- Safe	No 3:-Efficient	No 4:- Clean & Green	No 5:- Connected	No 6:-Safe, affordable, accessible	No 7:- Quality	Nos 8 & 9 Sustainable Growth/ Unlocking
5. Parking Management Schemes									
Parking Management Schemes			✓	✓					✓
Car Park Signage improvements				✓					✓
6. Public Footpaths & Cycleways									
Cycle Infrastructure - cycleways	✓	✓		✓	✓				✓
Public Right of Way Network and connectivity upgrades	✓	✓	✓	✓	✓	✓		✓	✓
7. Transport Impacts									
Air Quality Screening Projects	✓			✓	✓				
Air Quality Focus Area Projects	✓			✓	✓				
School Air Quality Projects	✓			✓	✓				
Noise Mitigation	✓			✓	✓				
Residential Amenity	✓			✓	✓				
Ultra Low Emission Vehicles	✓			✓	✓				✓
Rapid Electric Vehicle Charging Points	✓			✓	✓				✓
Street Trees	✓			✓	✓				
8. Road Safety Education, Training and Publicity and Travel Awareness									
Road safety education, training and publicity at schools	✓	✓	✓						
Support West Trans in region-wide initiatives	✓	✓	✓	✓	✓	✓	✓	✓	✓

Project / Programme	MTS mode share	MTS outcomes							
	Improving active, efficient and sustainable mode share	No 1:-Active	No 2:- Safe	No 3:-Efficient	No 4:- Clean & Green	No 5:- Connected	No 6:-Safe, affordable, accessible	No 7:- Quality	Nos 8 & 9 Sustainable Growth/ Unlocking
Travel awareness, Active Travel and Public Health campaigns and events	✓	✓		✓	✓				✓
Cycle Training / Bikeability	✓	✓		✓	✓				✓
Pedestrian Training	✓	✓		✓	✓				✓
Cycle Instructor Support	✓	✓		✓	✓				✓
Dr Bike	✓	✓		✓	✓				✓
Guided Cycle Rides	✓	✓		✓	✓				✓
Cycle Parking and Theft	✓	✓		✓	✓				✓

TfL Business Plan

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

The following TfL projects have implications for the borough.

Bus

- Bus priority; and
- Zero emission buses, by 2037 all buses across London will be low emission

Underground

- Modernisation of the Circle, District, Hammersmith & City and Metropolitan lines;
- Step-free access/increasing accessibility; and
- Reducing our energy use and carbon footprint – electrified transport.

Bus Priority

Hillingdon will be affected by the Mayor's aspirations of having more bus priority on London's streets to make public transport appealing by improving bus journey times and reliability, making it a practical choice for Londoners[75]. Implications for Hillingdon will include prioritising bus priority as part of their delivery programme, changes in the road layout when delivering bus priority, providing for and achieving a balance with multiple modes along the same corridors. Additional monitoring infrastructure will be required to enforce bus lanes.

Low Emission Buses

The roll out of the green bus fleet will help the residents in Hillingdon to breathe cleaner air, provide quieter buses and deliver a more comfortable bus journey experience. Hillingdon will be seeking support from TfL to deliver low emission bus routes as a priority through the poor air quality areas of the borough. Implications for

[75] Press Releases, Strategy for the future of London's transport, https://www.london.gov.uk/press-releases/mayoral/strategy-for-the-future-of-londons-transport

the borough if this was not delivered would include no improvement or increasing deterioration in air quality if implementation timelines slip or bus companies are unable to invest in low emission buses.

Tube Line modernisations

Population growth for Hillingdon is expected to rise by 21% between 2018 and 2041[76] increasing demand on London Underground's links to wider London[77].

Two of the three Underground lines serving Hillingdon are scheduled for modernisation. Proposal of the new rolling stock and re-signalling will increase service levels, provide more capacity, which is currently needed especially at peak, increase passenger comfort with more interior space and reduce journey times. For Hillingdon to gain these benefits from the modernisation programmes, the enabling and construction impacts such as interference with accessibility at stations, surrounding network and station closures are recognised by the borough. During the period of construction and implementation, a dip in patronage numbers could occur, if people are inconvenienced beyond their expectation.

Circle, District, Hammersmith & City and Metropolitan lines

TfL are modernising the Circle, District, Hammersmith & City and Metropolitan lines. When the work is completed in 2023, increased capacity and boosted reliability will make journeys faster and more comfortable. A programme of signalling upgrades will allow the operation of 32 trains per hour, a 33% increase in peak-hour capacity. Installation work will require some line closures. Some of the benefits can be seen already such as the walk-through rolling stock, although the proposed improvements to the Metropolitan Line occur towards the end of the programme in 2023.

Piccadilly Line

Under the banner of the Deep Tube Upgrade Programme (DTUP), the MTS mentions that new tube trains will be introduced from the mid-2020s on the Piccadilly Line and these new trains will be complemented by signalling and track improvements to enable faster and more frequent services. This investment is welcomed but considered long overdue as the projected replacement of the rolling stock in 2014 has not yet happened. Reliability performance has declined in the last three years

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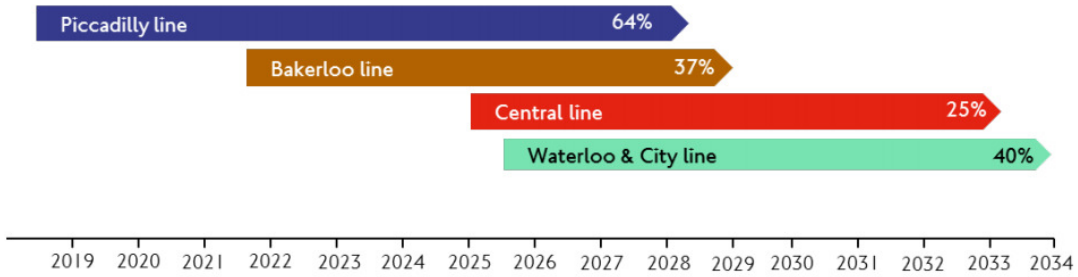
[76] 2016-based Trend Projections, Central Migration Scenario, Greater London Authority

[77] GLA Intelligence Unit, Greater London Authority

and is projected to deteriorate further in the final six to eight years of asset life as it becomes more challenging to sustain reliability and availability whilst addressing an increasing volume of repairs. Taking into account the growth in Hillingdon and the contribution this makes to the London economy, this investment should be prioritised and accelerated.

Central Line Extension to Uxbridge

The Central Line is also to be upgraded under the DTUP programme, commencing in 2025. LB Hillingdon would like the Central Line to be extended to Uxbridge, by making use of the connecting spur that runs adjacent to the Ruislip depot between Ickenham on the Metropolitan/ Piccadilly Lines and Ruislip Gardens on the Central Line. It would vastly improve connectivity and reduce congestion on other lines



between the northern part of the Borough of Hillingdon and the rest of London[78].

Figure 41: Proposed timeline for proposals under the DTUP line programme

Step-free access/increasing accessibility to the Underground

Of the 13 London Underground stations that are located in the borough, only 2 at Heathrow are step-free from street to train, 3 are step-free from street to platform, whereas the others are all not deemed easily accessible. This includes all stations serving urban centres east of Hillingdon on the Metropolitan, Piccadilly and Central Lines. TfL's current published (until 2025) programme of upgrades to stations does not include any of them. This will continue to penalise disabled users in the borough and should be reviewed.

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[78] Meeting between Mike Brown MVO, Commissioner TfL and Cllr Ray Puddifoot MBE, Leader of the Council LB Hillingdon 23rd November 2017,

Dial-a-Ride

Transport for London delivers Dial-a-Ride services in Hillingdon and the Council welcomes TfL's commitment to do set out in the business plan. The borough recognises the importance and need to continue these services for people with mobility difficulty and/or disability, and for people who have difficulty in using public transport. Funding and resources therefore is pre-allocated these projects, which impacts the amount of funding and resources available to other projects.

Complementary works to be carried out by the borough

Hillingdon will develop a traffic reduction strategy with the assistance of TfL, including measures for local and freight traffic to tackle congestion and improve air quality on London roads. Priority will be initially given to the air quality and congestion hotspots in the borough.[79].

Hillingdon will support the review of bus services, bus priority and a traffic reduction strategy, provided it leads to an overall more effective, efficient and reliable transport network. The LIP provides an opportunity for Hillingdon to work with TfL, the government, GLA, private developers, operators and network rail to achieve public transport outcomes for the Borough, especially for better services in underserved areas.

Hillingdon will complement the TfL Business Plan aspirations to increase bus priority on London's streets as part of their delivery programme through the commissioning of a bus study, exploring and supporting the necessary changes to road layouts to deliver bus priority, and supporting the required additional enforcement infrastructure.

The Council will conduct continued engagement with stakeholders, residents and businesses within Hillingdon to understand public views and make sure public money is spent in the most effective way.

[79] Business Plan 2018/19 to 2022/26, TfL, page 22

Three Year Delivery Plan Funding

This section identifies the potential funding sources for delivering the transport initiatives contained within this LIP for the period from 2019/20 to 2021/22.

Table 10 below identifies potential funding sources, including the LIP funding allocation from TfL, contributions from the Borough's own funds, and funding from other sources.

The key source of funding is the Borough's LIP allocation. Figures provided by TfL indicate that the Borough will receive £2,373m per year for 2019/20 to 2021/22, a total of £7,120m. This is a reduced figure based on recent years. The value of the three-year delivery plan for the LIP2 was £8,212m which represents a reduction of 15%. The 2019/20 to 2021/22 figures are not guaranteed which makes it difficult to prepare and consult on a Delivery Plan.

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

The sums available from developer contributions are in the region of £3.66m over the three-year period; however it is assumed that additional site-specific S106 contributions will come in during the LIP period, the sums of which are not yet known.

Table 10: Three Year Delivery Plan Funding

Three year potential funding for LIP delivery 2019/20 to 2021/22				
Funding source	2019/20	2020/21	2021/22	Total
	£k	£k	£k	£k
TfL/GLA FUNDING				
Local Transport Fund	100	100	100	300
LIP Formula funding –Corridors & Supporting Measures	2,373	2,373	2,373	7,119
Discretionary funding (See 3 Year Programme)	1,540	1,270	1,270	4,080
Strategic funding	945	220	220	1,385
GLA funding	0	0	0	0
Sub-total	4,958	3,963	3,963	12,884
BOROUGH FUNDING				
Capital funding	120	120	120	360
Revenue funding	0	0	0	0
Parking revenue	Not applicable	Not applicable	Not applicable	Not applicable

Workplace parking levy	Not applicable	Not applicable	Not applicable	Not applicable
Sub-total	120	120	120	360
OTHER SOURCES OF FUNDING				
S106	1,220	1,220	1,220	3,660
CIL	0	0	0	0
European funding	0	0	0	0
Sub-total	1,220	1,220	1,220	3,660
Total	6,298	5,303	5,303	16,904

Long Term Interventions to 2041 Funding

In the medium to long-term the borough believes that several significant, but currently unfunded, investments will be required to ensure the economic and social vitality of the borough. These are shown in Table 11 below with indicative funding and indicative but uncommitted timescales.

These projects have been taken from Hillingdon's Local Plan and developed through the cross departmental officer workshops dedicated to the development of this LIP.

They are not assigned to a LIP outcome or objective as such, however they are all deemed to be essential in delivering the wide-ranging benefits and targets set out in the MTS.

All the projects are unfunded, and Hillingdon are actively engaging with service providers, transport authorities and developers to secure the necessary funds to deliver these projects.

It should be noted these investments are on the assumption of no expansion at Heathrow Airport. Should this be taken forward, despite the objections of both the

Mayor of London and the Council, this will require an extensive review and substantial further investment.

Table 11: Long-term Interventions to 2041 Funding

Project	Approx. date	Indicative cost	Likely funding source	Comments
Uxbridge Bus and Underground Station	Indicative start date 2021/22	£7.5m	TBC	Revamp Uxbridge Station with appropriate level of bus stand provision making best use of local planning developments
Civic Centre/Vine Street Uxbridge	Indicative start date 2021/22	£4m	Developer Contribution and TfL	Permanent rerouting of London Buses via Chippendale Way to facilitate Health Streets environment within Uxbridge town centre
Hillingdon Circus	Indicative start date 2021/22	£1.5m	Developer Contribution and TfL	Using developer contributions from the Master Brewer provide facilities to protect vulnerable road users and measures to alleviate queuing
The Grapes junction	Indicative start date 2020/21	£2m	Sale of highway land and TfL	Transform The Grapes junction into north-south/east-west bus interchange with seamless cycle route continuity in each direction
Step Free Access Ruislip Manor Station	Post 2021/22	£10m	TfL	Lifts and associated works to make the station accessible for all
Step Free Access Eastcote Station	Post 2021/22	£10m	TfL	Lifts and associated works to make the station accessible for all

Project	Approx. date	Indicative cost	Likely funding source	Comments
Step Free Access Northwood Station	Post 2021/22	£10m	TfL	Lifts and associated works to make the station accessible for all
Step Free Access Northwood Hills Station	Post 2021/22	£10m	TfL	Lifts and associated works to make the station accessible for all
Step Free Access West Ruislip	Post 2021/22	£10m	TfL	Lifts and associated works to make the station accessible for all
Step Free Access South Ruislip	Post 2021/22	£10m	TfL	Lifts and associated works to make the station accessible for all
Grand Union Canal Quietway Yiewsley to northern borough boundary	Ongoing	£500k per annum	TfL/Developer contributions	Rebuild canal towpath to Quietway standard

Three Year Delivery Plan Programmes

The Three Year Indicative Programme of Investment has been completed in the Table 12 below. The table summarises, at a programme level, the borough's proposals for the use of TfL borough funding in the period 2019/20 – 2021/22.

Table 12: Three Year Delivery Plan Programme of Investment

Three-year indicative programme of investment for the period 2019/20 to 2021/22			
London Borough of Hillingdon TfL BOROUGH FUNDING 2019/20 TO 2021/22	Programme budget		
	Allocated 2019/20	Indicative 2020/21	Indicative 2021/22
LOCAL TRANSPORT FUND	£k	£k	£k
Local transport initiatives	100	100	100
Sub-total	100	100	100
CORRIDOR, NEIGHBOURHOODS & SUPPORTING MEASURES	£k	£k	£k
Transport interchange and healthy streets	640	660	555
North-South links and supporting growth	109	89	157
Vision Zero school travel plan and local roads safety measures	460	472	497
Accessibility and mobility for all	157	157	157
Parking management schemes	116	104	116

Public footpaths and cycleways	230	230	230
Transport impacts	218	218	218
Road Safety Education, Training and Publicity and Travel Awareness	443	443	443
Sub-total	2,373	2,373	2,373
DISCRETIONARY FUNDING	£k	£k	£k
Liveable Neighbourhoods	0	0	0
Major Schemes	700	0	0
Principal road renewal	800*	800	800
Bridge strengthening	40	400	400
Traffic signal modernisation	0	70	70
Sub-total	1,540	1,270	1,270
STRATEGIC FUNDING	£k	£k	£k
Bus Priority	100	100	100
Borough cycling programme	0	50	50
London cycle grid	0	0	0
Crossrail complementary works	838	0	0
Mayor’s Air Quality Fund	7	30	30

Low Emission Neighbourhoods	0	40	40
Sub-total	945	220	220
All TfL borough funding	4,958	3,963	3,963

*Subject to confirmation

The programmes set out above will deliver schemes in pursuance of Hillingdon's LIP Objectives and the MTS Outcomes. Where appropriate, LIP funding will be supplemented with Council and developer funds, and many cases e.g. the Grand Union Canal Quietway developer funds can deliver entire projects without the need to call upon TfL or Council funding.

The Hillingdon three-year programme as set out above has been developed based on a comprehensive review of LIP project delivery over the last five years. Colleagues from across the council attended a series of workshops, facilitated by an external transport consultant, to review project work delivered under the previous LIP and to gain a familiarisation with the 2018 MTS and the LIP3 requirements for boroughs.

Hillingdon have an excellent track record with delivering innovative and well considered LIP projects and the focus of the latter workshop was how to maintain public confidence and performance indicator progress against a backdrop of significantly reduced LIP budgets.

A simple pro-rata ‘salami slice’ reduction across both the engineering and behaviour change programmes was tested and did not appear to meet the ambition of the 2018 MTS. Similarly, continuing the relatively traditional traffic engineering approach to project identification and prioritisation [based on LIP1 and 2 metrics] also fell short of the challenges faced in Hillingdon.

The full scheme breakdown of the three-year programme will be prioritised using a bespoke system designed to ensure the best alignment against the MTS outcomes and LIP objectives. A long list of projects was curated through the workshops and internal consultation within the Council, costed and packaged under Hillingdon's programme lines corresponding with the LIP objectives and MTS outcomes.

The long list of projects was then scored against their contributions to meeting the MTS outcomes and LIP objectives, to help inform the three-year programme. The programme was validated against the borough context and challenges data mapping to further ensure compliance with MTS and alignment with other funding streams.

Schemes have been grouped together under the following programme lines:

A. Transport interchange and Healthy Streets
B. North-South links and supporting growth;
C. Vision Zero school travel plan and local roads safety measures;
D. Accessibility and Mobility for all;
E. Parking management schemes;
F. Public footpaths and cycleways;
G. Transport impacts; and
H. Road Safety Education Training and Publicity and Travel Awareness.

Transport Interchange and Healthy Streets

Public Transport Nodes

Where bus routes intersect at key locations such as town centres, railway stations, Universities, colleges and business parks etc LIP3 funding will be used to improve how these nodes operate thereby improving the public transport offer to passengers; making travel by public transport a genuine alternative to trip making by the private car. The Council's immediate focus will be Hillingdon Hospital, where we will look to implementation measures to reduce congestion; reduce the delays to buses in this area and encourage sustainable travel by staff and visitors, in particular. The measures may include changes to junctions; installation of cycle parking and working with Hillingdon Hospital on the internal layout of their car park.

Hillingdon Hospital is rapidly developing its services and becoming of regional importance, both within West London as for the adjacent Home Counties. Visitors have to travel over a considerable length of local unclassified roads to reach the hospital placing further demand on a road network that at peak times is already at or approaching capacity. Around Hillingdon Hospital nearby junctions tend to get blocked due to vehicles queuing up to enter car parks which are full. This is causing significant delay to buses serving the hospital, particularly at peak times.

Opportunities will be explored to introduce real time information, bus priority and bus branding to encourage more people to travel by bus. The recently launched Santander Brunel University Bike Hire scheme already has docking stations at Hillingdon Hospital, the uptake of the use of these bicycle will be kept under review and expanded in response to demand. Though still in its infancy, the early signs are that the Santander Brunel University Bike Hire scheme will be a great success. Officers are also liaising with London Councils and TfL with a view to addressing significant differences between the TfL bus fares and those charged by the commercial operators between nearby places such as Iver and the hospital.

Local Target: Each year implement one improved public node project and carryout a study of a second node for delivery the following year

Source of data: TfL/Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Local Shopping Parades

The Council recognises the value of local shopping parades situated in the heart of residential areas; they are places that can be easily reached by walking or cycling; helping to keep people healthy and active. If people can be persuaded to use them as an alternative to driving to a large supermarket this also helps alleviate traffic congestion, improve air quality, contribute towards Vision Zero and much more besides. The LIP3 budget will be used to make local shopping parades as attractive as possible through measures such as cycle parking, benches, parking management, resurfacing to remove trip hazards/generally improve the appearance of the area, removal of street clutter and facilities' for elderly and disabled people. Details of the schemes to be implemented in 2019/20 are shown in the table below and Proforma A.

Local Target: Each year implement one improved local shopping parade and carryout a study of a second parade for delivery the following year

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C, Leader of the Council and Cabinet Member for Finance, Property and Business Services Capital Release Reports

Healthy Neighbourhoods

There are many large housing estates in Hillingdon. These are characterised by narrow streets, on-street parking stress, rat-running and road safety concerns generally. In some cases residential amenity is blighted by the passage of heavy vehicles. Using LIP3 funding studies will be undertaken to understand the problems, issues and opportunities within these estates and the interventions required for these estates exhibit the ten healthy streets indicators. This information will be collected by studying accident data, air quality measurements, patterns of complaints from residents, traffic counts and speed surveys and noise measurements etc. Based on

successful workshops already carried out elsewhere "planning for real" events will be organised to help collect qualitative data. Again using LIP3 funding the interventions identified will be implemented. These are likely to include traffic calming, 20 mph zones, parking restrictions, footway upgrades, traffic management such as access restrictions, new street lighting and accessibility/mobility measures for disabled and elderly residents. Details of the schemes to be implemented in 2019/20 are shown in the table below and Proforma A.

Local Target: Each year implement one improved healthy neighbourhood and carryout a study of a second parade for delivery the following year

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C, Leader of the Council and Cabinet Member for Finance, Property and Business Services Capital Release Reports

Legible London

Legible London is a pedestrian way-finding system that helps people finds their way around a local area. It consists of maps showing landmarks and key destinations mounted on plinths and directional finger post signs. Using TfL LIP funds, Legible London has already been provided in the town centres of Uxbridge, Yiewsley / West Drayton, Hayes, Ruislip Manor and Northwood Hills. The feedback received to date is very positive and indicates that it helps facilitate a convenient and pleasant walking experience. Using LIP3 funding the Council will continue to roll out Legible London across the Borough. Details of the schemes to be implemented in 2019/20 are shown in the table below and Proforma A.

Local Target: The provision of Legible London signs should keep a pace of the delivery of Town Centre Improvements, Local Shopping Parades, Healthy Neighbourhoods and implementation of the Grand Union Canal Quietway.

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting/Canal and Rivers Trust

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Hillingdon Station Forecourt

Hillingdon Station is an accessible station providing interchange between the Metropolitan Line, Piccadilly Line, U2, and the Oxford Tube/X90 London Victoria to

Oxford Express Coach Services. It is also centrally located near the Master Brewer planning development site. A new north south bus service is being planned for introduction to connect Ruislip with Heathrow via Hillingdon Station to coincide with the opening of the Elizabeth Line. The implementation of works to improve Hillingdon Station will be delivered in two phases. In Phase One 2019/20 works will be limited to providing for the operational requirements of the new bus services including a new island waiting refuge for passengers, bus flag and shelter. In Phase Two street trees, new hard and soft landscaping, real time passenger information, cycle parking will be provided. Furthermore consideration will be given to how the Oxford Tube/X90 westbound express bus services which currently calls at a sub-standard bus stop along Freezeland Way can be diverted to call at Hillingdon Station instead.

Local Target: In 2019/20 deliver Phase One which will include measures to accommodate the new north south bus route, in 2020/21 deliver Phase Two as described above..

Reporting Frequency: Annually

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Ruislip Station Forecourt

Ruislip is one of the borough's most important shopping centres, Ruislip station provides interchange between the Metropolitan Line, Piccadilly Line and numerous bus services. It is also centrally located within the local residential accessible by walking or cycling. However, the size of the station forecourt is now increasing unable to cope with the demand being places upon it. An immediate additional pressure is the need to accommodate the new north/south bus service being planned for introduction to connect Ruislip with Heathrow upon the opening of the Elizabeth Line. The need for an additional bus stop requires a full review of the station car park and forecourt area. As the station forecourt, car park and access road are owned by TfL this will be a joint sponsored project. The types of measures which may be implemented in this area could include: changes to the layout of the bus stands; improved footpaths; real time public transport information and provision of cycle parking.

Local Target: Implementation of works to increase the bus service capacity of the station forecourt.

Reporting Frequency: Annually

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

North South Links and Supporting Growth

As already mentioned above, the ease with which people can travel between the north and south of the Borough and transport goods movement of goods people between the north and south of the Borough is constrained by limited transportation links. Using LIP3 funding the North South Links and Supporting Growth programme will be used to deliver transport projects that make it easier to travel/transport goods between the north and south of the Borough thereby broadening the opportunities available for residents and businesses. The funding will also be invested in schemes that help deliver growth and support the release of housing land. This programme encompasses bus priority, corridor studies, A40 crossings and the Grand Union Canal Quietway.

Swakeleys Roundabout

Swakeleys Roundabout is the single most important junction for HS2 construction traffic. It provides access between the A40 and Swakeleys Road and is projected to carry 500 additional heavy goods vehicles per day until the construction works are complete. The Council has been liaising with HS2 Ltd and TfL regarding measures to mitigate the adverse impacts on local residents, pedestrians and cyclists. Options that have been explored include the partial signalisation of the roundabout combined with enhances crossing facilities for pedestrians and cyclists. Notwithstanding partial signalisation of the roundabout Hillingdon is committed to working with TfL and Highways England to secure safe and convenient crossing facilities for vulnerable road users across the slip roads. These works will be funded from the HS2 Road Safety budget.

Local Target: Secure the implementation of measures to protect pedestrians and cyclist using the roundabout

Source of data: Feedback provided at meetings with HS2, TfL and local residents/ internal monthly TfL LIP LB Hillingdon officers meetings

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Bus Priority Measures

The Council will work with TfL and bus operators to deliver measures that improve bus punctuality and reliability. The Council will apply for funding from the TfL Bus Priority budget to delivery of the works identified.

Local Target: Each year provide one junction/corridor with bus priority measures and carryout a study of a second junction/corridor for delivery the following year

Source of data: TfL's advice on locations where buses are travelling at a speed less than 5mph and 5-10mph. Feedback provided at internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Grand Union Canal Quietway

The Grand Union Canal crosses Hillingdon in a north/south alignment passing through Hayes, Stockley Park, West Drayton, Yiewsley, Cowley, Uxbridge and Harefield. Hillingdon Council in partnership with the Canal and Rivers Trust aspire to upgrade the full length of the canal towpath transforming it into a safe, convenient and direct off-road cycle route. Works involve laying a 2 metre wide bitumen macadam surface that is even and well drained for cyclists of all levels of ability and confidence to use. To date section of the towpath around the Hayes and Stockley Park have already been upgraded.

Using LIP3 funding it is proposed to improve access to the Grand Union Canal from the adjoining road network, unless residents are aware of and appreciate what a great asset the Grand Union Canal is it will not be used to its full benefit. Surveys that have already been completed have identified 33 key access points onto the Grand Union Canal. These access points are typically sub-standard for use by pedestrians and cyclists for example many have steep uneven steps that are overgrown with vegetation; this leaves cyclist with little option but to dismount and carry their bicycle to the towpath. Works to improve access to the Grand Union Canal Quietway will include rebuilding steps and the provision of channels so that cyclists can wheel their bicycle as opposed to carrying it, Legible London finger posts, entrance features and measures to stop access points becoming overgrown.

Small sums of LIP3 funding will also be used to supplement developer contributions, for examples situations where the money available from a developer falls slightly short of the sum required to complete a section between two access points.

In 2019/20 it is planned to complete the section from Stockley Park to Trout Road Yiewsley. If funding becomes available the section Trout Road to Packet Boat Lane

will be upgraded to tie in with a short section that has been completed as part of the Union Park development.

Local Target: To have completed the Grand Union Canal Quietway between the southern borough boundary and Packet Boat Lane by December March 2020

Reporting Frequency: Annually

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Access to Cranford Park

Nestles Avenue is undergoing significant change, the Nestles Factory has closed giving way to many new developments, planning permission has already been granted for over 900 new houses as well as elements of employment use. Whilst access to public open space from the Nestles Avenue is limited an opportunity has been identified to link the Grand Union Canal Quietway with Cranford Park passing by Nestles Avenue.

Cranford Countryside Park is a 144-acre public park bordered by the M4 Motorway to the north, the A312 to the east, Cranford Lane to the south and farmland to the west. Access to the Park is very difficult; it is vehicle accessible only by a small road before an entrance slip to the M4 motorway. However, there is a subway under the M4 providing access to the Park for pedestrians and cyclists. Using LIP3 funding a route will be created from the Grand Union Canal towpath to this subway. Phase II of this project will involve works to improve the subway itself.

Local Target: Implement the Grand Union Canal to Cranford Park link in 2019/20, undertake improvements to St Dunstan's Subway in 2020/2021.

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Vision Zero School Travel Plan and Local Road Safety Schemes

School Travel Plan and Local Road Safety Schemes

All schools in Hillingdon are encouraged to prepare School Travel Plans. The Council's School Travel Plan and Road Safety Team provides all the expert advice and resources needed by schools to complement this task. Where works to the

highway are identified as being beneficial to encourage walking and cycling and improve road safety the TfL LIP Vision Zero School Travel Plan Road Safety Schemes budget is used to deliver the works identified. Schemes may include crossing facilities, guard railings, upgraded street lighting and 20 mph zones.

In addition to School Travel Plan Road Safety measures, the Council will continue its ongoing development and implementation of local road safety schemes in response to Road Safety Suggestion Forms, petitions to the Council, reported near misses and collision data

Details of the schemes to be implemented in 2019/20 are shown in Proforma A.

Local Target: By 2041, all deaths and serious injuries will be eliminated from Hillingdon's transport network.

Source of data: LB Hillingdon/TfL

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Harvil Road

Harvil Road is a road which has the characteristics of a rural country lane but is being used by significant number of heavy goods vehicles. Harvil Road is very unsuitable for cyclist and pedestrians. The Council is currently identifying the scope of works that can be carried out to reduce the speed limit from 50mph to 40mph and make the new limit self-enforcing. The Council intends complement TfL LIP3 using a dedicated HS2 Road Safety fund which has been made available by HS2 Ltd.

Local Target: Introduce measures to support a reduction in the posted speed limit from 50mph to 40mph speed limit in Year One.

Source of data: Site speed surveys/Traffic Regulation Order Reports/ Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Area Wide Speed Reduction

There are a number of other roads in the north of the Borough that display similar characteristics to Harvil Road. They are located in non-built up areas, speeding traffic, have no street lights and no facilities for pedestrians or cyclists. The Council is currently reviewing the speed limit on all its roads in the north of the borough with the objective of introducing a speed limit on all roads which is no higher than 40mph.

Local Target: Where suitable introduce a 40mph limit on all sections of road currently operating speed limit higher than 40mph by March 2022

Source of data: Site surveys and Traffic Regulation Order Reports / Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Accessibility and Mobility for All

As part of LIP3 accessibility and mobility schemes will be delivered that helps the safety and convenience with which disabled and elderly people can move around the Borough.

Every opportunity will be taken to ensure that bus stops, railway stations and taxi ranks will be well lit, clean and maintained and accessible to all. Step free routes between public transport nodes and the final destination will be a rolling programme in LIP3 - it is included in each year of the Three Year - Delivery Plan programme.

Annual Accessibility Workshop

Using TfL LIP3 funding the Council will continue to host the annual Accessibility Workshops that takes place every year in the Civic Centre, Uxbridge. The purpose of this Workshop is to give elderly and disabled people and their representative organisations the opportunity to bring to the Council's attention ways in which it could be made easier and more convenient to move around the Borough. Based on the feedback receive a programme of schemes will be implemented to improve mobility to all providing access to jobs, education and training, healthcare, leisure as well as being able to visit family and friends.

Local Target: 1 event per annum that generates a list of schemes for feasibility investigation

Source of data: Feedback from the event and the outcome of an engineers' site assessment for each suggested measure

Reporting Frequency: Annually

Presentation: Notes of the event, Leader of the Council and Cabinet Member for Finance, Property and Business Services Capital Release Reports, TfL LBH LIP Quarterly progress meetings/Proforma C

Boroughwide Accessibility

The Council will continue to use TfL LIP funding to deliver small changes that make a big difference to improving the mobility of elderly and disabled people. The Boroughwide Accessibility programme is typically used to provide safe and convenient places for people to cross roads through for example the provision of pedestrian refuges, dropped kerbs and tactile paving.

Local Target: Deliver all credible schemes suggested at the Accessibility Workshop

Source of data: LB Hillingdon

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Bus Stop Accessibility

Over the period of LIP2 LB Hillingdon has successfully made 95% of all bus stops in the Borough accessible for all. These bus stops have raised kerbs so that the ramp on the bus provided for wheelchair users can dock on the footway; barriers such as street furniture that got in the way of disabled people or presented a hazard to partially sighted people have been removed and the waiting area has been made level and even. Funding from TfL LIP3 will be made available to make any outstanding bus stops accessible for all and to address any new issues as they arise.

Local Target: To ensure that 95% of bus stops or more are accessible for all

Source of data: TfL/LB Hillingdon

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Parking Management Schemes

Using LIP funding Parking Management Schemes or Controlled Parking Zones are introduced along residential streets where the demand for kerb space exceeds supply. They are only introduced in response to requests from the residents themselves, LIP3 funding will be used to fund both informal and formal consultation, Traffic Order making and road markings and signage. Parking Management Schemes help improve road safety by reducing vehicle conflicts and which in turn contributes to the attainment of Vision Zero.

Local Target: Deliver between 8 and 12 Parking Management Schemes per annum

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings, Leader of the Council and Cabinet Member for Finance, Property and Business Services Capital Release Reports/Proforma C

Public Footpaths and Cycleways

Public Footpaths

Public footpaths provide people with somewhere to walk that can be direct and away from the pollution of road traffic. Some footpaths link key origins and destinations and provide a genuine alternative to relying on the private car for trip making. Footpaths enable people to travel actively and gain from all the benefit that exercise can offer. Public footpaths are also a leisure facility in their own right; they provide a place for someone to walk, jog, fish, bird watch or simply enjoy some fresh air. Supported by TfL LIP3 funding LB Hillingdon will develop and improve the Borough's network of public footpaths. Measures will typically include resurfacing, managing overgrown vegetation, entry treatments such as gateways or barriers to prevent motorcycle access whilst allowing cycle and wheelchair access - chicanes have proved to be very successful in this respect, Legible London finger posts and making secure footpath boundaries.

Local Target: Deliver three public footpath improvement schemes per annum

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Cycle Infrastructure

LB Hillingdon recognises that many people do not have the confidence or experience to cycle on the highway. So as not to exclude these groups from making a trip by bicycle, using LIP3 funding off road cycle routes will be provided. As part of improving North South connectivity, the Council has already outlined that off road cycle provision will be provided along the busy 'A' roads of Stockley Park and the Uxbridge Road. This funding will be used to develop further local cycle links as identified in Appendix E. These routes will be built in full accordance with London Cycle Design Standards.

Furthermore the Council recognised that cyclist will ride their bicycles almost anywhere. The Council seeks to accommodate this by making a budget available for 'Cycle Provision'. This budget is used to implement the small but very effective

measures and encourage and enable safe cycling such as providing "informal" cycle routes where desire lines have been created by cyclist themselves.

Local Target: To prioritise and deliver cycle scheme identified in Appendix E

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Transport Impacts

Air Quality Screening Projects

The health of young children is particularly vulnerable to poor air quality caused by road traffic. The help reduce children's exposure to harmful vehicular emissions, air quality screen will be provided at receptors where children are particularly vulnerable to inhaling harmful emissions. Building on the success of projects already delivered elsewhere, LIP3 funding will be used to provide air quality screening, this is simply a willow fence around the base of which plants are sown of a species that will both grow to form a physical barrier as well as absorb harmful emissions.

Local Target: 5 schools per annum

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C, Leader of the Council and Cabinet Member for Finance, Property and Business Services Capital Release Reports

Air Quality Focus Areas

The results of air quality modelling carried out by the Greater London Assembly, has identified a number of locations in Hillingdon eligible for designation as Air Quality Focus Areas. Air Quality Focus Areas are places where air quality is poor effecting a large number of people.

The approach for improving poor air quality in Focus Areas is to follow TfL's 'Healthy Streets' methodology - making streets contusive for walking, cycling and public transport use. This typically involves:-

- Gaining an understanding of existing conditions in the area;
- Identifying what those measures that are already in place and consider how these could be utilised to improve air quality;

- Considering opportunities and constraints in the area; and
- Producing concept designs and budget estimates for the measures that could be put in place.

Examples of the types of measures that can be delivered include, School Streets - this involves temporarily closing roads around the school gates, parking management, tree planting, pocket parks, facilities for cyclists such as cycle lanes and cycle parking as well as measures to promote and provide for low emission vehicles.

Local Target: Each year deliver the recommendations of an Air Quality Focus Area Study and undertake one new Study each year for implementation the following year

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

School Air Quality Projects

Using LIP3 funding the Council will work with schools in Hillingdon to raise awareness of the damaging impact poor air quality is having on public health and the environment. For example, school will be encouraged to include air quality as a topic in science lessons as well as tacking actions to improve air quality around the school campus through initiatives such as no idling campaigns, provision of electric vehicle charging points and the promotion of active travel.

Local Target: Work with 5 schools per annum

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Noise

Many LB Hillingdon residents are affected by noise from transport. These problems are particularly acute around Heathrow Airport, motorways, 'A' roads and classified road in close proximity to receptors such as school and residential areas. This budget is used to allow the Council monitor and measure transport noise and respond to the problems identified with bespoke local interventions.

Local Target: Continue to monitor aircraft noise at Heathrow Airport

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Residential Amenity

In busy built up areas such as Hillingdon it is not uncommon for the quality of life in residential areas to be spoilt by the intrusion of road traffic whether noise, air quality, vibration of feeling vulnerable to being involved in a road traffic accident. A reoccurring concern in Hillingdon relates to sleep disturbance caused by large lorries moving along residential streets during the hours of darkness. This budget is used to investigate the concerns of residents as they arise and the development and implementation of schemes that mitigate against the problems identified in response. Measures may include parking restriction, access restrictions, weight limits, width restriction or simply 'Unsuitable for HGV' signs.

Local Target: Implement one residential amenity scheme per annum

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Ultra Low Emission Vehicles

The Council is aspiring to install more electric vehicle charging points (EVCPs) throughout the borough in a demand responsive manner. The Council will use the Go Ultra Low City Scheme Procurement Framework to appoint a company to manage, maintain and develop the network of electric vehicle charging points in Hillingdon. Electric vehicle charging points will be required at new development in accordance with the standards set out in the Mayor's Transport Strategy 2018.

Hillingdon is currently in the process of commissioning contractors to identify and review the operation of the EVCPs as installed to date and ensure that these are in good state of repair. As soon as the review has been completed the contractor will be asked to install additional public on-street charge points in a demand responsive manner.

Local Target: In 2019/20 appoint a company to manage, maintain and develop the Council own network of electric vehicle charging points. Install electric vehicle charging points in the Civic Centre 'Lobster Pot' car park

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Rapid Electric Vehicle Charging Points

Hillingdon Council have identified six potential sites for the installation of rapid electric vehicle charging points with Council managed town centre car parks. It has already been agreed that the Rapid EVCP for Grainges Yard in Uxbridge town centre would be taken forward as a pilot scheme. The rapid EVCP is planned to tie in with remarking the car park, improving disabled access to/from the car park and re-configuring car access to the adjacent multi-storey car park. The Grainges Yard scheme can be particularly beneficial for use by mini cab drivers serving the nearby Windsor Street taxi ranks. Using TfL LIP3 funding the Council will roll out the installation of rapid EVCP across the borough.

Local Target: Install Rapid EVCPs in Grainges Yard in Year 1 and up to 20 rapid EVCPs in the Council's other public car parks in years Two and Three

Source of data: LB Hillingdon

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Car Clubs

Particularly in the south of the borough Hillingdon faces the challenge of accommodating new housing in residential areas where the supply of car parking space is already at capacity. In these locations Car Clubs offer a partial solution. Car clubs can provide a cost-effective and flexible alternative to owning a car, especially in areas where parking provision is at a premium. Such locations can be found in the vicinity of public transport interchanges, especially in the south of the borough. Joining a car club provides the convenience of owning a car without the hassle or costs of repairs, servicing or parking. Members can book cars locally for just an hour, up to a whole weekend, or longer.

Hillingdon is developing car clubs in the spirit of London Councils' Smart Mobility and the Role of the Car Clubs report dated 7 December 2017 and subsequent guidance being from its car club working group. It is intended that Car Clubs will be established through the development management process without the need to call upon LIP3 funding. This has already been achieved as part of the redevelopment of the Nestle Factory, Hayes for residential.

Local Target: Establish three new Car Clubs in Year One of LIP3 through the development management process,

Source of data: Review planning decisions and progress implementing S106 Car Club agreements

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Street Trees

The Mayor's eighth Healthy Streets Indicator is concerned with providing shade and shelter. Provision of street trees forms an integral part of the Council's approach to nurturing its town centres and local shopping parades. Street trees will also be planted for example in highway land grass verges that boarder Hillingdon's highways.

Local Target: Net increase of street trees in each new scheme in the public realm wherever possible

Source of data: Tree asset records

Reporting Frequency: Annually

Presentation: Proforma C

Fleet Operator Recognition Scheme (FORS)

The Fleet Operator Recognition Scheme (FORS) is an accreditation scheme that aims to improve several aspects of van, lorry, mini-bus, coach and bus fleet activity. It is one over-arching scheme that encompasses safety, fuel efficiency, economical operations and vehicle emissions. FORS is a voluntary scheme that helps improve operators' performance in each of these areas helping fleet operators to become safer, greener and more efficient. A key priority of FORS training is to equip drivers with the skill they need to drive safely along roads shared with cyclists. The Council continues to require that all Construction and Logistic Plans submitted as part of a planning application have a requirement that all construction drivers hold FORS Silver accreditation as a minimum. It is not envisaged any LIP3 funding will be used.

Local Target: Continue to ensure that all CLP submitted as part of a planning applicationhave a requirement that drivers are FORS Silver accredited as a minimum.

Source of data: Planning/Highways Development Management

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings / Proforma C

Road Safety Education Training and Publicity and Active Travel

The Council is working actively with its school communities towards achieving the Mayor's Vision Zero for safety in London. The following projects are carrying significant local support and appear successful in establishing safe behaviour on Hillingdon's roads.

Mini Road Safety Officers, Junior Road Safety Officers and Youth Travel Ambassadors

Mini Road Safety Officers - Infant Schools (MRSO), Junior Road Safety Officers - Junior Schools (JRSO) and Youth Travel Ambassadors - Secondary Schools (YTA) are peer-led schemes where pupils themselves take up the lead for promoting road safety in their school. Supported by officers and TfL, the role of MRSO, JRSO and YTA is to get their fellow pupils and school community thinking about road safety issues around their school. The JRSO and YTA's are tasked with designing a local road safety scheme/campaign for their school in response to the issues identified. The project concludes with a 'Dragon's Den' style event where they will pitch their project to a host of panel members who will decide which projects will get funding. The panel is made up of the Cabinet Member for Planning, Transport and Recycling and representatives from the Police and TfL.

Local Target: 40 per cent of schools to participate in the Mini Road Safety Officers, Junior Road Safety Officers and Youth Travel Ambassadors

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Child Car Seat Campaign

In 2017, national car seat checks showed that, over the last eight years, there has been a 47% increase in the number of child car seats found to be incorrectly fitted. The Child Car Seat Campaign is aimed at helping parents choose the appropriate seat for their child and giving them practical guidance on how to make sure it is fitted correctly. A series of 'Fitting Clinics' will be organised around the Borough at a variety of locations. LIP funding will be used to provide a free child car seat clinic presented by qualified car seat professionals and the promotion of these events through various outlets.

Local Target: Check 100 child car seats per annum and give advise

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma

'Moving On'

'Moving On' is a project delivered to Year 6 children before they progress their educational journey to secondary school. At this stage in their life, children are moving into a road safety high risk road safety age bracket (11 to 16 years old) where the most likely event to result in their death is being involved in a road traffic accident. Graduating to secondary school for most children is a big step with many new distractions and temptations. The 'Moving On' project is designed to remind them of the dangers of road traffic whilst exploring the new challenges they will face when travelling a new route, often independently for the first time. LIP funding request is used to purchase all the resources needed to provide presentations and training to all Year 6 pupils in Hillingdon, encourage route planning, and providing vital information to parents.

Local Target: 50% of Junior Schools to participate in 'Moving On'

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Theatre in Education

Theatre is recognised as being a very powerful medium for delivering a road safety message. Research from TfL has shown that the 'Theatre in Education' experience is received positively from start to finish. The theatre companies are very effective at engaging with young people. The actors keep abreast of current trends, clothing, and the vocabulary of children/teenagers so they can fully relate whilst watching. Rather than simply telling children what not to do, the plays are felt to empower pupils to make their own choices which are considered to be very motivational. LIP funding will be used to stage 'Theatre in Education' performances in a number of schools across the Borough ranging from primary to secondary schools.

Local Target: 2,000 pupils to participate in Theatre in Education

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Be Safe Be Seen

The 'Be Safe Be Seen' campaign is run in schools to pass on the message of dressing in bright clothing when the clocks go back and the nights get longer. LIP funding will be used to support advertising in Hillingdon, as well as procurement of high visibility armbands etc to give to children in schools.

Local Target: 5,000 pupils to participate in Be Safe Be Seen

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Virtual Reality Road Safety

Virtual Reality (VR) is becoming very popular and gives the recipient the feeling of 'being there'. Road safety teams nationwide have begun to develop applications focusing on safety messages dependant on their target audience. LIP funding will be used to purchase VR sets and applications and to develop a workshop to deliver sessions to schools.

Local Target: Launch: Virtual Reality Road Safety in 2019/20

Source of data: LB Hillingdon

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Safe Drive Stay Alive

'Safe Drive Stay Alive' is a theatre production for young drivers with a powerful road safety message. It comprises of talks from different people all affected by road accidents/collisions involving young drivers. The event is designed to reach new, learner and pre-drivers in an emotive and hard-hitting way, thereby influencing behaviour and attitudes towards driving. The event is organised in partnership with the Fire Brigade, Police and Ambulance services. LIP3 funding will be used to cover venue hire including technical support and staff, transport for around 2,500 pupils to and from the venue, catering, promotional resources and teachers' resource packs.

Local Target: 1 event / annum (over 5 days); 2,000 participants from at least 12 different schools

Source of data: Attendance records/ Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Annually

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Pedestrian Training

The LIP3 budget will also be used to fund a team of six trainers to deliver practical pedestrian training to school children aged 5 to 11 years old (Year 1 to Year 6). The budget is used to fund trainers who take children out and teach them how to cross the road safely in real life situations.

Local Target: Train10,000 pupils/adults per annum

Source of data: Sessions booked / attendees registered

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings /Proforma C

Child Cycle Training (Bikeability)

LIP3 funding will be used to deliver the nationally recognised standard for child cycle training is known as 'Bikeability'. In previous years, this budget has been used to provide cycle training to around 1,750 pupils per year. The cycle trainers are casual employees and paid per session worked. The trainers take children out on the highway and teach them to cycle safely in real life situations. The offer is open to all schools in the Borough. The LIP3 budget will also be used to provide adult cycle training; this is offered to all Hillingdon residents and is provided on a one-to-one basis.

Local Target: Train 1,800 pupils in Bikeability per annum

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Dr Bike

Dr Bike session is an initiative that gives people the opportunity to have their bicycle checked over free of charge by an experienced mechanic and if necessary, minor adjustments are made or advice given. All these sessions are currently run by LB

Hillingdon casually employed Cycle Instructors. LIP3 funding will be used to deliver approximately 30 Dr Bike sessions.

Local Target: Organise 30 Dr Bike sessions per annum / check 1,500 bicycle per annum

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Guided Rides

To encourage and enable Hillingdon residents to take up cycling or ride a bicycle more regularly a series of "Guided Rides" are organised, these are led by the Council's trained Cycle Instructors. Since its inception the Guided Ride programme has flourished with all rides having an average of ten participants. The Council now offers family rides which are linked to/follow on from the 'Bikeability' training courses run at junior schools in the Borough; a child receives training at school which is followed by a "Guided Ride" that the whole family to take part in. The LIP3 budget will be used to covers the cycle instructor's time - two of whom are required per ride and the production of promotional material that is distributed around all libraries and cycle shops in the Borough.

Local Target: 24 rides per annum/ 200 participants per annum

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings/Proforma C

Active Travel Promotion at Local Events/Workplaces

A number of events are attended by the cycle instructors to promote cycle road safety, active travel and the cycle schemes run by the Council. These events include Hayes Carnival, May Fair on the Green in West Drayton, work with Hayes Muslim Centre, workplace engagement and other resident focused promotions.

Local Target: Organise 4 Bikespiration events in June and July each year.

Source of data: Feedback provided at the internal monthly TfL LIP LB Hillingdon officers meeting

Reporting Frequency: Quarterly

Presentation: TfL LBH LIP Quarterly progress meetings /Proforma C

Travel Plan Monitoring - WestTrans

LB Hillingdon has adopted the TfL criteria for the requirement of Travel Plans to be submitted as part of planning applications. Where planning permission is granted with a condition requiring the delivery of a Travel Plan it is essential that the Planning Authority monitors that the condition is discharged. TfL LIP3 funding will be used to continue to engage the services of the WestTrans Travel Plan Monitoring Officer to ensure that Travel Plans required as a condition of a planning permission are delivered.

Local Target: To ensure that all Travel Plans that are a condition of a planning permission are being delivered

Source of data: WestTrans Travel Plan Monitoring Report

Reporting Frequency: Every six months

Presentation: TfL LBH LIP Quarterly progress meetings /Proforma C

Further Schemes

In addition to the schemes described above, the Council will also look to implement the following schemes under Road Safety Education, Training and Publicity and Travel Awareness:

- Implement Cycle parking provision and introduce measures to tackle theft of bicycles across the borough;
- Provide a contribution to Westrans to allow for continued coordination of working across West London;
- Introduce active travel to school measures such as signing and lining improvements outside school;
- Continue to provide Instructor support to the Council Cycle and Pedestrians Trainers to allow more children and adults to receive training.

Year One 2019/20 Delivery Plan Schemes

The annual programme of schemes for 2019/20 will be completed and submitted to TfL via the Borough Portal. The programme of schemes will be updated annually and is subject to annual political approval. The indicative annual programme for 2019/20 is set out below and is subject to change based on the final budget available from TfL.

1. Transport Interchange and Healthy Streets

Project	Description	Funding (£k)
Public Transport Nodes - Hillingdon Hospital	Initiatives to improve access to the Hospital by public transport, walking and cycling. Review and implement measures to improve the management of buses and traffic generally	180
North Hyde Road Shopping Parade	Upgrade public realm, revise parking facilities, adjust pedestrian crossings, benches and cycle parking.	120
Oak Farm Area	Implementation of measures which may include cycle parking, resurfacing, facilities for elderly and disabled people, street lighting, street trees, benches, Legible London, car parking management.	120
Legible London	Develop and review schemes in Uxbridge, Hayes and along Grand Union Canal	75
Hillingdon Station forecourt area	Remodelling of Hillingdon Station Forecourt in response to the new 278 bus service. Works will include provision of a new island waiting refuge for passengers, bus flag and shelter.	145

2. North South Links and Supporting Growth

Project	Description	Funding (£k)
GUC-Cranford Park via North Hyde Gds & Watersplash Lane	Develop and implement shared use route including new path, signals upgrade and towpath interchange improvements	72
Springfield Rd Phase II	Completion of works along Springfield Rd including on/off street cycle facilities, pedestrian crossings and roundabout	37

3. Vision Zero School Travel Plan and Local Road Safety Schemes

Project	Description	Funding (£k)
Vision Zero Local Road safety schemes	Deliver local road safety schemes in response to collision data, petitions, receipt of road safety suggestion forms, information provided by the Police	175
School Travel Plan Road Safety Schemes	Implement school travel plan road safety schemes at Bishop Winnington Primary School, Frithwood Primary School, Whitehall Infants and Junior School	225
Harvil Road Speed Reduction	Implement measures to complement a reduction in the speed limit along Harvil from 50 to 40 mph so that it become self enforcing	60

4. Boroughwide Accessibility and Mobility for All

Project	Description	Funding (£k)
Accessibility schemes	Measures such as dropped kerbs, tactile paving and footway treatment in response to demand from visually and mobility impaired people. Continuation of Annual Accessibility Workshop, to give residents an opportunity to provide feedback to Council.	127
Bus Stop Accessibility	Accessibility measures to improve access to bus stops and on to bus services such as raised kerb heights.	30

5. Parking Management Schemes

Project	Description	Funding (£k)
Stop & Shop & Residents Parking Schemes	Develop ongoing programme including parking management schemes. Controlled zones where demand for kerb space exceeds supply. Road markings and signage changes.	99
Car Park Signage	Implement Study Recommendations in Uxbridge to reduce congestion and improve circulating traffic.	17

6. Public Footpath and Cycleways

Project	Description	Funding (£k)
PRoW Network upgrades and connections	Measures in line with mandatory public right of way programme	80
Cycle Infrastructure	Provisions of on and off road cycleways	150

7. Transport Impacts

Project	Description	Funding (£k)
Air Quality Screening Projects	Measures to protect vulnerable users in areas of poor air quality.	30
Air Quality Focus Areas	Undertaking studies in air quality focus areas and implementation of the measures to improve or protect against poor air quality.	140
School Air Quality Projects	Programme of schemes and air quality education at schools.	10
Tacking Transport Noise	Implementation of measures to mitigate against the impact of noise generated by transport.	10
Residential Amenity	Measures to improve the environment for residents which have been impacted by the transport network.	10

Ultra Low Emission Vehicles	Management, improvement and expansion of the electric vehicle charging network.	5
Rapid Electric Vehicle Charging Points	Installation of rapid electric vehicle charging points across the borough.	10
Street Trees	Installation of street tress to assist in improving air quality.	3

8. Road Safety Education Training and Travel Awareness

Project	Description	Funding (£k)
Child Cycle Training	An open offer of cycle training to all children in Hillingdon	124
Pedestrian Training	An open offer of pedestrian training to all children in Hillingdon	34
Instructor Support	Instructor training so that the Council is able to deliver cycle and pedestrian training 'In House'	33
Mini Road Safety Officers, Junior Road Safety Offices and Youth Travel Ambassadors	Road safety promotion and awareness led by school children themselves	35
Safe Drive Stay Alive	Theatre Production for those about to start learning to drive	33
Travel Awareness, Active Travel and Public Health Campaigns and	Awareness raising of the harm road traffic has upon public health and the	21

Events	environment and an introduction of the alternative travel choices available such as active travel	
Active Travel to Schools	Minor works such as signing and lining	40
Dr Bike	Simple essential bike maintenance	1
Guided Rides	Helping people to get back into cycling or start cycling more often	10
Cycle Parking and Tackling Theft	Provision of cycle parking and measures to tackle bicycle theft	36
Contribution to WestTrans	Membership of the WestTrans	20
WestTrans Travel Plan Monitoring	Monitoring of travel plans submitted as part of a planning application	8
Child Car Seat Campaign	Professional checks to make sure child car seats are fitted correctly	8
Moving On	Road safety advice for those moving up to secondary schools	8
Theatre in Education	Using theatre as the medium to communicate road safety	8
Be Safe Be Seen	Promotion of the benefits of wearing hi-visibility clothing	8
Virtual Reality Road Safety	Road safety training using the latest technology as a means to engage young people	8

Bikeability	Bicycle Training	8

Three Year Delivery Plan Risk Assessment

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

Table 134: Three Year Delivery Plan LIP Risk Assessment

Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
Financial					
Reduction in scheme three year period funding due to budget restrictions.		x		Work with TfL to ensure full LIP funding is achieved. Consider implementing lower cost options if permissible.	Project scope reduced and limited benefits realised. LIP objectives not met or non-progression of project.
Increase in unforeseen project costs due to environmental factors.		x		Maintain flexible budgets across 19/20 programme and ensure value engineering. Undertake judicious project management to ensure funding is used efficiently and justifiably.	Budget redistribution across programme could limit effectiveness of those programmes with reductions. LIP objectives not met or non-progression of project.
Statutory/Legal					

Hillingdon is required to implement the LIP under s151 of the GLA Act without sufficient external funding support.			x	Explore possibility for legal challenge, if possible jointly with other affected bodies.	Other Hillingdon services may be impacted.	
Draft LIP3 not supported by TfL.			x	Continued engagement with TfL LIP and borough sponsorship team.	Delay in LIP3 approval could delay 19/20 programme and reduce benefits.	
Legal challenge made on LIP3.			x	Continued engaging consultation with public and transparency on decision making.	Delay in LIP3 approval could delay 19/20 programme and reduce benefits.	
Third Party						
Stakeholders and/or third party support decreased or withdrawn.		x		Keep public and Members, and other partners informed through clear communication of planned projects and	LIP objectives not met or non-progression of project.	
Supply chain inability to deliver.			x	Ensure good supply chain management	Inability to spend budget and	
Development market slows.			x	Maintain good linkages to Local Plan and good relationship with developers.	Reduction in planning gain funding could place a higher reliance on	
Public/Political						

Change in policy or political direction.		x		Ensure that Members are frequently engaged in a variety of schemes through	Non-progression of project.	
Individual projects are not supported by Members.			x	Ensure that Members are involved at the early stage of project development, so that fundamental issues can be	Non-progression of project.	
Individual projects are not supported by the public at the		x		Undertake appropriate consultation at an early stage to ensure public support.	Non-progression of project.	
19/20 projects not supported by local community and ward			x	Early engagement with local community groups and members.	Project delay and late delivery of benefits.	
Programme & Delivery						
Insufficient staff resources to	x			Recruit temporary/fixed term staff or use	Non-progression or late delivery of	
Projects undertaken are not successful.		x		Schemes are to be carefully monitored and reviewed to identify non-delivered	LIP objectives not met.	
Delays to progress of work.	x			Consult with statutory undertakers as early as possible. Reprogram or transfer budget to support the next highest priority	LIP delivery programme extended or non-progression of projects.	
19/20 Programme slippage.			x	Ensure good project management procedures in place and efficient access	Delay to achieving LIP objectives and outcomes.	

Access to road network for construction.			x	Early engagement with LBH permitting team.	Delay to achieving LIP objectives and outcomes.	

Monitoring the delivery of the outcomes of the Mayor's Transport Strategy

Table 14 outlines the targets for Hillingdon against the MTS overarching mode-share aim and outcome indicators.

The Borough's progress against the outcome targets and mode-share aim will be measured through strategic data collected by TfL on behalf of the Boroughs.

The delivery indicators are set by TfL and relate to each of the nine MTS Outcomes. These provide a reference for the delivery of the Mayor's Transport Strategy at a local level. The borough will monitor and record the delivery indicators and report to TfL once a year in June using Proforma C.

Table 14: Borough outcome indicator targets

Objective	Metric	Borough target	Target year	Additional commentary
Overarching mode share aim – changing the transport mix				
Londoners' trips to be on foot, by cycle or by public transport	Active, efficient and sustainable (walking, cycling and public transport) mode share (by borough resident) based on average daily trips. Base period 2013/14 - 2015/16.	44% 56%	2021 2041	Through the LIP3, the London Borough of Hillingdon will address barriers to active travel, and apply relevant land use and planning policies to reduce the need to travel, with the aim of transforming Hillingdon's streets into places for people, to maximise active travel. Hillingdon will manage public transport and investment based on user needs, taking account the requirements of both of passengers and operators. New facilities will be implemented to improve the passenger experience throughout the journey, from start to end.

Objective	Metric	Borough target	Target year	Additional commentary
Healthy Streets and healthy people				
Outcome 1: London's streets will be healthy and more Londoners will travel actively				
Londoners to do at least the 20 minutes of active travel they need to stay healthy each day	Proportion of London residents doing at least 2x10 minutes of active travel a day (or a single block of 20 minutes or more).	31% 70%	2021 2041	Town Centre and residential streets will be assessed against the Healthy Streets guidance and barriers to active travel will be addressed through projects and programmes contained in the LIP3.
Londoners have access to a safe and pleasant cycle network	Proportion of Londoners living within 400m of the London-wide strategic cycle network.	4% 46%	2021 2041	

Objective	Metric	Borough target	Target year	Additional commentary
Outcome 2: London's streets will be safe and secure				
Deaths and serious injuries from all road collisions to be eliminated from our streets	Deaths and serious injuries (KSIs) from road collisions, base year 2005/09 (for 2022 target)	70	2022	London Borough of Hillingdon will work with stakeholders to collect, collate, analyse and interpret road traffic collision causality data and crime statistics to help understand real and perceived threats to residents' personal safety. A package of measures is contained in this LIP3 to address the issues identified.
	Deaths and serious injuries (KSIs) from road collisions base year 2010/14 (for 2030 target).	42 0	2030 2041	

Objective	Metric	Borough target	Target year	Additional commentary
Outcome 3: London's streets will be used more efficiently and have less traffic on them				
Reduce the volume of traffic in London.	Vehicle kilometres in given year. Base year 2015. Reduce overall traffic levels by 10-15%.	2122 1910-2016	2021 2041	Through proper design, management and maintenance streets in Hillingdon will operate to maximum efficiency. Land use/transportation planning policies will be applied to reduce the need to travel and measures will be put in place to encourage and enable travel by public transport, cycling and walking – helping Hillingdon's streets to become places for people. Travel Plans will continue to be required in support of new planning applications, delivery of these will continue to be monitored. The Council will implement, monitor and review actions in the Delivery Plan aimed at reducing the volume of road traffic using Hillingdon's roads
Reduce the number of freight trips in the central London morning peak.	10 % reduction in number of freight vehicles crossing into central London in the morning peak period (07:00am - 10:00am) by 2026.	N/A	N/A	
Reduce car ownership in London.	Total cars owned and car ownership per household, borough residents. Quarter of a million fewer cars owned in London. Base period 2013/14 - 2015/16.	145,100 147,800	2021 2041	

Objective	Metric	Borough target	Target year	Additional commentary
Outcome 4: London's streets will be clean and green				
Reduced CO_2 emissions.	CO_2 emissions (in tonnes) from road transport within the borough. Base year 2015/16.	382,100 153,700	2021 2041	Hillingdon's streets will be safe, clean and green and places for people. This will be achieved through the development management process, maintenance and investment in the measures identified in the Healthy Streets Guidance. Air quality will be monitored and using a priority based approach, the Council will devise a package of LIP3 measures to reduce public exposure to air pollution. The Council will be early adopter of new technology and innovation.
Reduced NO_x emissions.	NO_X emissions (in tonnes) from road transport within the borough. Base year 2013.	620 110	2021 2041	
Reduced particulate emissions.	PM_{10} emissions (in tonnes) from road transport within borough. Base year 2013.	116 91	2021 2041	
	$PM_{2.5}$ emissions (in tonnes) from road transport within borough. Base year 2013.	57 45	2021 2041	

Objective	Metric	Borough target	Target year	Additional commentary
A good public transport experience				
Outcome 5: The public transport network will meet the needs of a growing London				
More trips by public transport - 14-15 million trips made by public transport every day by 2041.	Trips per day by borough of residence. Reported as 3yr moving average. Base year 2013/14 - 2015/16.	154,000 212,000	2021 2041	New and existing bus service start points, final destinations and places en-route will include facilities for both the operation of public transport and improving passenger experience. The Council will gather quantitative and qualitative data through a range of means to help develop public transport projects. Every opportunity will be taken to secure developer contributions to provide public transport infrastructure for both the passenger and operator. The Council will be an early adopter of new models for delivering public transport.

Objective	Metric	Borough target	Target year	Additional commentary
Outcome 6: Public transport will be safe, affordable and accessible to all				
Everyone will be able to travel spontaneously and independently.	Reduce the difference between total public transport network journey time and total step-free public transport network	7-minute difference (-39%)	2041	How the public transport network is managed and investment prioritised will be in response to user demand and benefit. Measures will provide for the needs of public transport operators and facilities for passengers. Developer contributions will be a key source of funding for this investment.
Outcome 7: Journeys by public transport will be pleasant, fast and reliable				
Bus journeys will be quick and reliable, an attractive alternative to the car	Annualised average bus speeds, base year 2015/16	13.1-13.4 mph 13.6-14.9 mph	2021 2041	How the public transport network is managed and investment prioritised will be in response to user demand and benefit. Measures will provide for the needs of public transport operators and facilities for passengers. Developer contributions will be a key source of funding for this investment.

Objective	Metric	Borough target	Target year	Additional commentary
New homes and jobs				
Outcome 8: Active, efficient and sustainable travel will be the best options in new developments **Outcome 9: Transport investment will unlock the delivery of new homes and jobs**				
Through the development management process, new developments will be situated in locations accessible by walking, cycling and public transport and will include facilities to encourage and enable travel by these modes. Using the Local Plan, opportunities to deliver new homes and jobs will be identified and LIP3 funds will be used for investment in measures to unlock sites constrained by poor transport accessibility. There will be projects to improve the public realm in turn, giving business the confidence to invest.				

Appendix A – LIP Mandatory Requirements

LIP Mandatory Requirements

As part of the development of the LIP, the Council is required to address a number of mandatory requirements including identifying transport objectives, producing a costed Delivery Plan and to set out how these will achieve the MTS policies. The table below details where in the LIP the requirements have been addressed.

Requirement	Where addressed in the LIP
1. Where boroughs do not use the model template and provide their submission in a different format, they must provide an index to their responses cross-referenced to all the mandatory requirements as defined in this guidance.	N/A
2. Boroughs are required to include in their LIP an explanation of the statutory background of the LIP process.	Ch.1 Introduction
3. Boroughs are required to outline the democratic processes taken to approve the submission of the LIP at a borough level.	Ch. 1 Local approval process
4. Boroughs are required to provide evidence to show that all statutory consultees and any other organisations/groups have been engaged with during the formal statutory consultation period. They must also demonstrate how the views of their consultees have been taken into account.	Ch. 1 Statutory consultation
5. There is a requirement to undertake a Strategic Environmental Assessment and it is recommended that an Equalities Impact Assessment is also done (which addresses the borough's Public Sector Equality Duty). The boroughs are required to consider whether it is appropriate for the LIP to be assessed against other matters, for example crime and disorder, health, economic and business issues, air quality and climate change.	Ch. 1 Statutory duties
• Boroughs must meet all of the following requirements for the submission of their LIP set out below under the following headings: o Name of document; o Submitting the document to TfL; o Submission milestones.	Ch 1. LIP approval
• Boroughs are required to set out the local context including the geographical, demographic and other characteristics of their boroughs, cross-referencing existing policy and context documents as appropriate.	Ch. 2 Local context

8. Boroughs are required to identify key opportunities for shifting trips and journey stages to walking, cycling and public transport to contribute to achieving the overarching aim for 80 per cent of trips to be made by active, efficient and sustainable modes by 2041.	Ch. 2 Changing the transport mix – challenges and opportunities
9. Boroughs are required to set out local issues, challenges and opportunities within the context of contributing towards the achievement of the nine Mayor's Transport Strategy outcomes and the relevant policies and proposals.	Ch. 2 Mayor's Transport Strategy outcomes & Borough objectives
10. .Boroughs are required to set objectives that explicitly assist with meeting the Mayor's Transport Strategy aim of increasing the sustainable travel mode share.	Ch. 2 Mayor's Transport Strategy outcomes & Borough objectives
11. Boroughs are required to identify a set of locally specific LIP objectives that contribute to achieving the nine outcomes of the Mayor's Transport Strategy, and the relevant policies and proposals.	Ch. 2 Mayor's Transport Strategy outcomes & Borough objectives
12. Other Mayoral strategies are also relevant to LIPs, and boroughs should have regard to these as they are published.	Ch. 2 Other mayoral strategies
13. Boroughs are required to outline projects and programmes that contribute to the delivery of the Mayor's Transport Strategy – including the overarching mode share aim, each of the nine outcomes and the relevant policies and proposals – in preparing a Delivery Plan.	Ch. 3 Linkages to the Mayor's Transport Strategy priorities
14. When preparing their LIPs, boroughs are required to take into account the major projects and investment in all modes of transport, as well as the investment in the road network that may impact on their borough, as set out in the TfL Business Plan.	Ch. 3 TfL business plan
15. Boroughs are required to identify all interventions that are intended to be wholly or partly funded using LIP funding in the borough's Programme of Investment. Boroughs should identify the proposed funding source for each of these interventions, i.e. how much is from LIP funding allocations and how much comes from other sources (for example, the council's own capital and revenue sources, Section 106/CIL contributions, or other sources of TfL/GLA funding, such as Growth Areas).	Ch. 3 Sources of funding
16. Boroughs are required to provide a list of potential schemes up until 2041, together with a short explanation of the reasons for their inclusion in the Delivery Plan.	Ch. 3 Long-term interventions to 2041

17. Boroughs are required to produce a costed and funded high- level indicative Programme of Investment that covers, by year, the three-year period 2019/20 to 2021/22.	Ch. 3 Three-year indicative programme of investment
• Boroughs are required to provide supporting commentary on: o How the three-year Programme of Investment has been derived, including how potential interventions have been identified and prioritised, and practical considerations relating to timescales, capacity and consultation; o The role of revenue-based investment, policy decisions, and third-party actions (including commitments outlined in TfL's Business Plan and investment programme) in delivering the borough's LIP objectives; o How the delivery of the Mayor's priorities will be supported at a local level.	Ch. 3 Supporting commentary for the three-year programme
19. Boroughs are required to include a concise section on risk assessment and mitigation in preparing and considering options for their Delivery Plan.	Ch. 3 Risks to the delivery of the three-year programme
20. Boroughs are required to provide a detailed and costed programme of schemes and initiatives for the first year of the plan, with the programme to be updated in subsequent years. Boroughs should submit their Programme of Investment using Proforma A (as shown at Part three – Appendix F). Proformas will need to be uploaded to the Borough Portal.	Ch. 3 Annual programme of schemes and initiatives
• Boroughs are required to provide supporting commentary on: o How the annual Programme of Investment has been derived, including how potential interventions have been identified and prioritised, and practical considerations relating to timescales, capacity and consultation; o The role of revenue-based investment, policy decisions, and third-party actions (including commitments outlined in TfL's Business Plan and investment programme) in delivering the borough's LIP objectives; o How the delivery of the Mayor's priorities will be supported at a local level.	Ch. 3 Supporting commentary for the annual programme
22. Boroughs are required to identify any projects that have significant potential of risk within the planned programme of works and identify any mitigation measures for these high- risk projects.	Ch. 3 Risk assessment for the annual programme
23. Boroughs are required to set targets against the overarching mode share aim and the nine outcomes using their respective outcome indicators.	Ch. 3 Overarching mode-share aim and outcome indicators

24. Boroughs are required to collect this information and submit it to TfL using Proforma C on at least an annual basis.	Ch. 3 Delivery indicators

Appendix B – Consultation Feedback Summary

Consultation Feedback Summary

The following table summarises feedback to the draft LIP3 from the various consultees:

What you said	What we are doing
Ensure target is included for reducing GHG emissions	The 'Air Quality and Noise', and 'Healthy Neighbourhoods' Programmes will look at this. As the programmes in the LIP3 progress, specific areas will be targeted and prioritised based on need and local demand.
Ensure target is included to improve air quality	The 'Air Quality and Noise', and 'Healthy Neighbourhoods' Programmes will look at this.
South of the borough is more polluted and has poorer air quality so create plan to combat this	The Council recognises this and the 'Air Quality and Noise', and 'Healthy Neighbourhoods' Programmes will look at this. Sustainable travel options will be prioritised in the South of the borough.
Ensure target is included to reduce run-off pollution from vehicles, address issue of groundwater, soil pollution and flood risk implications of the LIP	This will be explored through the delivery of making car use efficient on Hillingdon streets and improvements to the urban realm.
Consider impact on wildlife and SSSIs	Comment is welcomed and will be considered when making improvements.
Consider fuel use/efficiency, reducing transport distances and waste disposal/recycling of transport-related goods	Development and management of Hillingdon streets will consider this, as programmes in the LIP3 progress. Council does plan to reduce the dominance and reliance on cars within the borough through improving sustainable transport options. Not all improvements are within Hillingdon's control and support and investment will be required from TfL and neighbouring boroughs.
Consider the social effects of transport	Comment is welcomed and will be considered when making improvements.
More explanation of how towpaths are to be improved; encourage freight travel on canals; promote the cultural aspects of canals	Council acknowledge this, and as programmes are developed, consultation and engagement will be carried out with the community, providing more information.
Promote towpaths as an uncongested route for people to walk and cycle on	Comment is welcomed and will be explored as part of the sustainable transport options within the borough.
Towpaths – address the issues of poor surfacing, access, isolation, narrowness, unlit and far from town centres	The Council acknowledge this and have a programme of renewal and improvements that needs continued support from stakeholders. Towpath programmes are included within the LIP.

Need to balance need for more towpaths with security/privacy of boaters	The Council acknowledges this concern, and will work with stakeholders to fully consider the impacts and explore mitigation as these proposals progress.
Check the timescales as they may be different to expected, i.e. for towpath upgrades; concerns over council being able to provide funding	This is noted by Council and new funding streams are always being explored.
More detail on how the high levels of cross-border travel with Buckinghamshire will be tackled to encourage people to use more public transport options – this would involve cross-border transport solutions; mention other towns outside borough boundaries to emphasis importance of connectivity	The Council acknowledged this concern, and will work with TfL and stakeholders to fully consider the impacts of cross boundary travel and explore possibilities for affordability.
Tackle the issue of freight using unsuitable roads; create emissions standards on freight vehicles, esp. HS2 trucks	This is noted and addressed in the 'Air Quality and Noise' Programme.
Little mention of Heathrow including the high emissions vehicles they use and the expansion plans which could impact on SRN	This will be examined as the scheme progresses, and any identified interventions will be implemented through local improvements where possible and developers.
Linking Central line to Uxbridge – question of the cost and whether it will adversely impact other lines – instead create interchange at Park Royal	The council acknowledge this. Heathrow Airport Limited (HAL) have been tasked with managing their own vehicle/freight use. Hillingdon will work with HAL to raise concerns.
Create a night tube service	The council is aware of the issues surrounding the extension of the central line, and is one of council's aspirations. The Council are willing to work with TfL to address these challenges.
Need more car parking as car hire will not meet demand	This is noted and an aspiration of Council's to increase train frequency to make public transport a more viable option for all. Hillingdon will work with TfL to gather support for these improvements.
More detail on cycling facilities and routes – create a cycle 'spine' from Eastcote to Heathrow, provide more cycle parking and include a high level strategic cycle network map that shows the creation of a coherent cycle network; encourage people to cycle more to stations (Crossrail); people do not cycle due to safety concerns; LED demarcation	The car parking strategy will explore this further.
Include more cycle facilities in new developments	This opportunity has been identified in the LIP3 document, and the council will work with HAL to explore cycling opportunities to Heathrow. Road safety training and schemes will also address this.
More detail on walking improvements	Comment is welcomed and aligns with Council's sustainable transport plans for

	new developments.
Need more detail on public transport measures including more bus priority	Noted, and more details will follow as programmes are progressed and consulted upon.
Include more detail on school travel plans to show how 70% of children will actively travel to school including programmes that have already proved successful elsewhere; encourage safety for active travel, i.e. high vis, LED lights	The Council does not have control over bus priority measures, and will work TfL to improve optimisation of the network.
Close rounds around schools to improve air quality	This will be addressed through the School Travel Plan Safety Schemes and Road Safety Training at schools.
Discounted parking for zero emissions vehicles with more EV charging points; encourage businesses to go green with rate reductions	The 'Air Quality and Noise', and 'Healthy Neighbourhoods' Programmes will look at this. The Healthy Neighbourhoods programme in particular will provide a focus on schools through Healthy Schools and School SuperZones initiatives. As the programmes in the LIP3 progress, specific areas will be targeted and prioritised based on need and local demand.
Prioritise spaces for car sharing in new developments	The council recognises the importance of this, and is in-cooperate in addressing air pollution and efficient use of vehicles on Hillingdon roads. There is a specific programme of Electric Vehicle Charging points to address this.
Council could create a car share scheme	Comment is welcomed, and Council will ensure it is explored as an option in new developments that are required to provide more sustainable transport options.
Create a Clean Air Zone	Comment is welcomed and noted.
Strategic Environmental Assessment (SEA) and Equality Impact Assessment (EQIA) on LIP proposals	No issues identified to change

Appendix C – TfL Feedback

TfL Feedback

The draft Hillingdon LIP3 was submitted to TfL and the following feedback was received:

1	LIP Guidance Requirements	Hillingdon Comments
1.1	Requirement 1: Request that a table is added to the final draft, as an appendix, which cross references to where all of the LIP Guidance Requirements have been met.	A table has been added to the LIP as Appendix A, outlining where all the requirements have been met.
1.2	Requirement 4: The final draft LIP should summarise any changes made in response to issues raised in the consultation.	A summary of public consultation comments has been outlined in the LIP executive summary. Appendix B has been added summarising all public feedback.
1.3	Requirement 5: The draft LIP refers to an SEA being completed. However, the SEA has not been supplied to TfL. The final draft LIP should summarise any changes arising as a result of the SEA.	SEA now supplied to TfL and details of process set out in chapter 1.
1.4	Requirement 14: With regard to TfL's major schemes the draft LIP does not include Crossrail or TfL's complementary measures in its list.	This has been added to Table 11: Long-term interventions up to 2041.
1.5	Requirement 15: Table 11, which sets out potential sources of funding for LIP delivery, appears to contain some figures in millions and others in thousands. This table needs to be completed to show the other sources of funding including, for example, Crossrail complementary measures and from the GLA.	Table 11 has been updated to reflect this.
2	**Objective Setting – Mode Share**	
2.1	The local context, challenges and opportunities are clearly set out in relation to achieving the MTS mode share aim.	Noted
2.2	No objective has been set which contributes to achieving the active, efficient and sustainable mode share aim. The draft LIP needs to contain objectives that explicitly assist with meeting the MTS aim of increasing the sustainable travel mode share (Please see LIP Guidance Requirement 10). These should demonstrate a stronger commitment overall to supporting a reduction in car dependency to ensure consistency with the MTS.	Comment is noted, and all nine objectives have been updated accordingly.

3	**Objective Setting – MTS Outcomes**	
3.1	The draft LIP contains a high level aim, labelled as an objective, for each of the MTS Outcomes. These are broadly consistent with the MTS but they need to be strengthened with more detail, or complemented by a set of more specific SMART objectives. By doing so, the LIP would more strongly demonstrate how the borough intends to tackle the challenges it has identified and how it will achieve its short and longer term Outcome indicator targets. These more defined and detailed objectives could draw upon the proposed approach or actions that are outlined in some of the 'Challenges and Opportunities' sections.	Comment is noted, and all nine objectives have been updated accordingly.
	Outcome 1	
3.2	The draft LIP contains a good outline of the challenges and opportunities to increase the level of active travel. Use has been made of cycling and walking potential data analysis from the City Planner tool.	Noted
3.3	The objectives need to be more detailed and specifically related to achieving this Outcome. The LIP contains a long narrative outlining the barriers and benefits of improving the uptake of walking and cycling. However, it lacks detail on how these challenges will be addressed. For example, the LIP should set out the borough's objectives and plans for developing and implementing its cycle network in order to demonstrate how it is addressing the identified challenges.	Comment is noted, and all nine objectives have been updated accordingly.
	Outcome 2	
3.4	The draft LIP contains a good analysis of the road danger reduction challenges in the borough including a spatial analysis and break down by type of road user.	Noted
3.5	The draft LIP narrative for Outcome 2, *London's streets will be safe and secure,* recognises that eliminating death and serious injury on London's roads requires a fundamental step change in approach, policy and action to address this challenge. The adoption of the Vision Zero target is welcomed too. However, the draft	Comment is noted, and all nine objectives have been updated accordingly. The Council's commitment to road safety is evident from its exemplary record and Traffic Commissioner's compliments toward the Leader of the Council. It will retain this record by

	LIP needs to include an explicit objective adopting Vision Zero with a commitment to applying a Safe Systems approach to road danger reduction and to eliminating fatalities and serious injuries in road traffic collisions, consistent with MTS Policy 3. This should also be reflected in the schemes and actions included in the Three-Year Programme.	prioritising its accident remedial programme based on carefully monitoring accident records and prioritising its programme accordingly.
3.6	The borough needs to outline plans for improving security, reducing crime and disorder and reducing fear of crime (Policy 4 of the MTS).	Additional commentary added to Hillingdon objective 2 in the Three Year - Delivery Plan.
	Outcome 3	
3.7	The challenges and opportunities for Outcome 3, that London's streets will be used more efficiently and have less traffic on them, are well set out.	Noted
3.8	As per paragraph 3.1 above, the stated objective is not sufficiently detailed or it needs to be complemented with additional SMART objectives. This will show how the borough intends to contribute to achieving the Outcome. There is no reference to how traffic restraint measures or demand management measures will reduce traffic and which measures the borough is currently deploying or will adopt. However, the pledge to work with TfL to develop a traffic reduction strategy is welcomed.	Explicit initiatives to increase active, efficient and sustainable transport, including reduction in car dependency will be developed with stakeholders and residents locally. Details of indicative initiatives has been added to the Three Year - Delivery Plan in chapter 3.
	Outcome 4	
3.9	The challenges and opportunities to improve air quality are well articulated.	Noted
3.10	As per paragraph 3.1 above, the stated objective is not sufficiently detailed or it needs to be complemented with additional SMART objectives. This will show how the borough intends to contribute to achieving the Outcome. There is no reference to other environmental objectives or initiatives, for example the use of SuDS (MTS Proposal 44) or protecting tree canopy cover (MTS Proposal 43).	Comment is noted, and all nine objectives have been updated accordingly.
	Outcome 5	

3.11	As per paragraph 3.1 above, the stated objective is not sufficiently detailed or it needs to be complemented with additional SMART objectives. This will show how the borough intends to contribute to achieving the Outcome.	Comment is noted, and all nine objectives have been updated accordingly.
	Outcome 6	
3.12	The challenges and opportunities to improve public transport accessibility are well articulated.	Noted
3.13	As per paragraph 3.1 above, the stated objective is not sufficiently detailed or it needs to be complemented with additional SMART objectives. This will show how the borough intends to contribute to achieving the Outcome.	Comment is noted, and all nine objectives have been updated accordingly.
3.14	These revised objectives could draw on the proposed approach or actions that are outlined in the Opportunities section e.g. related to identifying the next Tube and national rail step-free access priorities, ensuring all of the existing accessible bus stops remain accessible and ensuring the street environment is accessible, particularly on key pedestrian routes to accessible interchanges.	Comment is noted, and all nine objectives have been updated accordingly.
	Outcome 7	
3.15	As per paragraph 3.1 above, the stated objective is not sufficiently detailed or it needs to be complemented with additional SMART objectives. This will show how the borough intends to contribute to achieving the Outcome.	Comment is noted, and all nine objectives have been updated accordingly.
3.16	These revised objectives could draw on the proposed approach or actions that are outlined in the Opportunities section. These revised objectives relate to bus priority and supporting measures to enhance bus journey time reliability, and the whole journey approach to access the public transport network.	Comment is noted, and all nine objectives have been updated accordingly.
	Outcomes 8 and 9	
3.17	The wording of the objective for outcome 8	We are to a large extent dependent on Heathrow and Stockley Park when it

	is much weaker than the MTS referring only to travel choices that will be available. There is no indication of how sustainable transport will become the best option and there is no detail as to how any necessary restraint measures would be applied. Reference is made to emerging Local Plan policies on parking which TfL has judged to be inadequate and not consistent with the adopted or draft London Plan. A firm commitment is required in the LIP to apply measures to limit car use at new residential and commercial developments and to work towards adoption of draft London Plan parking standards for new development as soon as possible.	comes to travel choices. We will actively refer to what the largest employers are doing and refer to the emerging Local Plan policies. We are taking measures to limit car use at new residential and commercial developments and working towards adoption of draft London Plan parking standards for new development.
3.18	Similarly there is limited confidence that outcome 9 can be delivered at a local level due to a lack of detail in the text on page 88. Linkage should be made between proposed measures and how the policy objectives will be realised in the borough's main areas for future growth including the Heathrow Opportunity Area.	Text on page 88 has been updated to include Heathrow Opportunity Area and linkages between proposed measures and policy objectives for future growth.
4	**Borough targets**	
4.1	*Mode share* It is noted that targets have been set for 2021 and 2041 which are consistent with the MTS trajectory contained in the Borough Data Pack. This is welcomed.	Noted
4.2	*MTS Outcomes* It is noted that targets have been set which are consistent with the MTS trajectories, for MTS Outcomes 1 to 7, contained in the Borough Data Pack. A target consistent with achieving Vision Zero has also been set for 2041. This is welcomed.	Noted
4.3	Following the moves to new collision reporting systems – the Case Overview and Preparation Application (COPA) for the Metropolitan Police Service and Collision Reporting And Sharing (CRASH) for the City of London Police – we have	We will pay attention to new KSI estimates

	now completed initial back estimates for the number of people killed or seriously injured (KSI) for each borough between 2005 and 2017 (contained in the 2017 'Casualties in Greater London' factsheet, available on the TfL website alongside supporting data tables at https://tfl.gov.uk/corporate/safety-and-security/road-safety).	
4.4	We will issue a revised set of borough trajectories for Outcome 2 and Vision Zero and need boroughs to update their targets to reflect these new trajectories in their final LIP for 2022 and 2030 (2041 is unchanged at 0). The level of ambition remains unchanged, despite these revised figures. The borough is also asked to include the following text in the final LIP under Outcome 2 explaining the reasoning for the change in trajectories and targets	Waiting for the new trajectories for Outcome 2 and Vision Zero.
5	***Delivery Plan – Longer term interventions to 2041***	
5.1	The schemes set in table 12 are noted. Some details are 'tbc'. Where this is the case for indicative costs could the borough give a range. In addition it would be beneficial to group these projects into indicative phases for potential implementation.	This has been updated.
6	**Delivery Plan – Three-Year Indicative Programme of Investment**	
6.1	The description of the schemes, contained in table 10, and the narrative for the Three-Year Programme needs more detail, and a clearer indication of how the schemes will contribute to achieving the targets for the relevant MTS Outcomes.	Noted. Under each objective, schemes have been detailed as to how that objective will be met.
6.2	This would not necessarily go into the same level of detail as the Annual Programme but would provide an	Three year programme updated accordingly in chapter 3.

	indication of the type of measures (including scheme-specific detail, locations and timeframes) that will be delivered across the three years and provide more detail on the borough's intentions than currently outlined in the supporting commentary.	
7	**Delivery Plan – Annual Programme**	
7.1	Comments on the Annual Programme (Proforma A) have been provided separately via the borough's Network Sponsorship contact.	Agreed

Appendix D – Road Safety Programme Suggestion Form

ROAD SAFETY PROGRAMME SUGGESTION FORM

Hillingdon Council has allocated a budget aimed at helping to address road safety issues of local concern. Every year, the Council – in common with other London Boroughs – receives a sum of money aimed at tackling road safety problems at sites with established accident records. Understandably, there is never enough money or resources available to treat every site in London, and sites where there have been no serious or fatal accidents recorded by the police are less likely to receive funding. The Council has recognised, however, that there is a valuable fund of local knowledge among the general public of sites or situations where road users feel vulnerable, and therefore the separate 'Road Safety Programme' budget has been established to tackle what might be thought of as 'accidents waiting to happen'. Each suggestion the Council receives will be investigated and reviewed to establish both its validity as a concern and how practical it may be to find a solution. Understandably, the Council hopes to achieve the maximum effect from the limited funds at its disposal, and so no guarantee can be given at this stage that your suggestion will lead to a specific scheme. However, your interest has been registered and our dedicated Road Safety Programme Engineer will be pleased to discuss your ideas with you.

Please provide your contact details:

Name:	Mr / Mrs / Miss / Ms		Street Champion No.
Address:			
Phone:		Phone *(alternative):*	
E-mail:			Date:

Please tell us how you found out about this initiative (please tick):

Hillingdon People	Newspaper article	Ward Councillor	Friend/ neighbour	Other

Please tell us the address of the site where the problem exists:

[please continue on separate sheet if necessary]

Please describe the most important issues that you perceive to be the problem:

[please continue on separate sheet if necessary]

Transport & Projects, Residents Services,
London Borough of Hillingdon
3N/04, Civic Centre, High Street, Uxbridge, UB8 1UW

ROAD SAFETY PROGRAMME SUGGESTION FORM

Often a sketch can help to illustrate the problem. If you are able to provide a rough indication of the problem in diagrammatic form, please do so in the space below or on a separate sheet (don't worry about drawing skills!)

[please continue on separate sheet if necessary]

Please feel free to offer your suggestions below. These will be considered in the context of what is practical, cost-effective and feasible.

[please continue on separate sheet if necessary]

Thank you again for your interest. Please do not hesitate to contact the Road Safety Programme Engineer on 01895 277879 if you would like to discuss these issues in more detail.

The London Borough of Hillingdon (LBH) is the data controller in regards to any personal data you submit using this form. LBH processes personal data in line with its obligations under data protection legislation. For more information on how LBH will process your personal data please visit www.hillingdon.gov.uk/privacy

Transport & Projects, Residents Services,
London Borough of Hillingdon
3N/04, Civic Centre, High Street, Uxbridge, UB8 1UW

Appendix E – Cycle Schemes

Number	Section Description	Length
	North of A40	**16.6km**
1	**A40/ A4180 West End Road interchange: complementary measures to TfL Project**	**0.5km**
2	**Station Approach, South Ruislip**	**0.5km**
3	**A4180 West End Road: Wingfield Way - Bedford Road (both sides)**	**2km**
4	**A4180 West End Road: Bedford Road - Sidmouth Drive (both sides)**	**0.5km**
5	**A4180: Sidmouth Drive - Wood Lane (both sides)**	**2km**
6	**A4180: Wood Lane - Midcroft (both sides)**	**1.3km**
7	**Midcroft**	**380m**
8	**A4180 High Street (Ruislip) Midcroft - B466 Eastcote Road**	**630m**
9	**A437 High Road Ickenham: Mill Lane - A4180 High Street (Ruislip) (both sides)**	**1.7km**
10	**A437 High Road Ickenham: B467 Swakeleys Road - Austin's Lane (both sides)**	**0.6km**
11	**A437 Long Lane: A40 - Milton Road (both sides)**	**2km**
12	**Hillingdon Station interchange**	**0.5km**
13	Field End Road	4km
	South of A40	**17.8km**
14	**A437 Long Lane: Sutton Court Road - Hillingdon Station (both sides)**	**2.6km**
15	B483 Park Road: A4020 Hillingdon Hill - Gatting Way (both sides)	2km
16	A4020 Hillingdon Hill -Road / B483 Park Road St Andrew's Roundabout	320m
17	**A4020 Hillingdon Hill -Road: The Green Way - B483 Park Rd (both sides)**	**1.6km**
18	Churchill Road, St Andrew's Park	1.1km
19	**A437 Long Lane: south of Sutton Court Road (both sides)**	**2km**
20	**A4020 Uxbridge Road: Morgan's Lane - A437 Long Lane (both sides)**	**3km**
21	A437 Dawley Road: B465 West Drayton Road - Botwell Common Road	1.3km
22	B465 West Drayton Road: A437 Harlington Road - A408 Stockley Road	740m
23	A408 Falling Lane: High Street Yiewsley - B465 West Drayton Road	1.7km
24	**A408 Stockley Rd: B465 West Drayton - Horton Rd (Stockley Roundabout)**	**700m**
25	A437 Dawley Road: Grand Union Canal - Botwell Common Road	720m
	Southern Part of Borough	**9.4km**
26	**Grand Union Canal towpath: Station Rd Hayes - A437 Dawley Rd, south side only**	**1km**
27	**A408 Stockley Rd: Shepiston Lane - Horton Road (Stockley Roundabout)**	**1.5km**
28	Nestles Avenue	690m
29	North Hyde Gardens: A437 North Hyde Road - Grand Union Canal	450m
30	A4044 Holloway Lane: A408 Sipson Road - Cherry Lane Roundabout	530m
31	A4044 Holloway Lane: Harmondsworth Road - Sipson Road	750m
32	Cranford Park: North Hyde Road - M4 St Dunstan's Subway via Watersplash Lane	670m
33	North of M4: St Dunstan's Subway - Fuller Way	520m
34	Cranford Park: Fuller Way - Cranford Lane	1,8km
35	A4044 Stanwell Moor Road: A4 - A3113 Airport Way and Bath Rd-PRoW Y23 (300m)	2.3km
	TOTAL **(including 25km Strategic Routes)**	**44.7km**