# Brent's Third Local Implementation Plan 2019-2041

March 2019

# Foreword

The Mayor of London has set an ambitious vision for London. The transport network is seen as an essential part to his vision to improve people's lives by improving the streets we live in and making travel safer, healthier, greener and affordable.

Brent Council has worked hard to ensure our borough is a place that we can all be proud of, providing a place that supports everyone to succeed and be happy and healthy through its policies. Brent is in the midst of large scale change with significant regeneration completed and more to come. Brent is growing, our residents are living longer and new residents and businesses are attracted to our diverse and culturally vibrant borough. If Brent is to continue to grow and be economically vibrant our roads, bus and rail networks need to be up to the job.

Brent Council has adopted the Mayor's Healthy Streets approach to improve the streets we live in and make better use of what we already have in order to tackle the issues of pollution, congestion and noise associated with transport. We will seek to secure bus and rail improvements and work with our neighbouring authorities to provide a joined-up transport network which serves not only the borough but opens up access to new opportunities within London.

The development of this Local Implementation Plan outlines how Brent Council's existing transport policies will support the Mayor in achieving his vision within our borough. It has taken into consideration our wide variety of communities and businesses, with each of them experiencing unique issues and more importantly opportunities to encourage and enable better ways of moving around without the need to always jump in a car as well as improving the environment we live and work in.

The Local Implementation Plan clearly states our commitment to making travel safer, improving air quality and working towards creating a sustainable and inclusive transport network for all. The delivery plan provides further detail on how we will work to achieve better things for transport over the next three years and outlines our aspirations for the future.

By delivering this plan we will assist the Mayor in achieving his aims as well as delivering our transport vision.

*Signature*

Councillor Sharma Tatler

**Lead Member for Regeneration, Highways and Planning**

# Executive summary

The third Transport Local Implementation Plan (LIP3) for the London Borough of Brent sets out the long terms goals and transport objectives for the borough for the next 20 years, proposes a three-year programme of investment starting in 2019/20 and, includes a delivery plan for the period 2019/20 - 2021/22. It also includes the targets and outcomes the borough is seeking to achieve.

The LIP3 identifies how the Borough of Brent will work towards achieving the Mayor's Transport Strategy priorities which are:

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

The overarching aim of the Mayor of London's transport strategy is for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041. Brent is committed to supporting these aims and priorities. It is particularly important in the borough where obesity and diabetes levels are high and activity levels are low and air quality is a major concern. Encouraging more residents to travel more actively and sustainably more often key in addressing these issues.

To deliver the Mayor's priorities, policies in Brent that cover walking, cycling, schools, public transport, road safety, parking and enforcement, social inclusion, public realm, regeneration, freight, highway management, changing behaviour, environmental issues and low emission vehicles and working in partnership have all been considered. Changes were needed to reflect the new Mayor of London's transport strategy and to prepare for the significant projected population growth in London, potentially reaching 10.5 million residents by 2041.

As a result of LIP3, the borough will be able to access significant funding from Transport for London. This funding will enable the borough to deliver healthy streets, improve road safety, better environmental infrastructure and more facilities for cycling.

Extending 20mph zones, delivering road safety education and local road safety schemes, improving conditions for walking, cycling, accessibility, congestion relief, bus priority and freight management and in the longer term delivering more liveable neighbourhoods in the borough are included in this plan. The plan also looks at improving orbital links by active and sustainable travel. As a result, significant environmental improvements will be achieved across the borough which will help to prepare the borough to mitigate climate change.

# 1. Introduction and preparing a LIP

## 1.1. Introduction

1.1.1. 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.

1.1.2. This document is the third LIP for the London Borough of Brent. 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 Brent 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.

1.1.3. This LIP identifies how the London Borough of Brent will work towards achieving the MTS goals of:

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

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

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

## 1.2. Local approval process

1.2.1. Elected Members provided guidance to the borough officers during the development of the Draft LIP.

1.2.2. The LIP was considered by Cabinet on 15th October 2018 for submission to Transport for London and to undertake statutory consultation in accordance with the GLA Act.

1.2.3. Comments from both statutory and non-statutory stakeholders have been incorporated within this final version which has been considered by the Portfolio Holder and subsequently been approved for submission to TfL in accordance with approved recommendation from the Cabinet report.

1.2.4. Submission to TfL and the Mayor for approval was made on DD March 2019.

## 1.3. Statutory consultation

1.3.1. In accordance with the GLA Act 1999, Brent Council consulted the following organisations on this LIP document:

- TfL
- The Metropolitan Police
- London Borough of Barnet
- London Borough of Camden
- London Borough of Hammersmith and Fulham
- London Borough of Hounslow
- Royal Borough of Kensington and Chelsea
- London Borough of Westminster
- London Travel Watch
- WestTrans
- Network Rail
- Natural England
- Historic England
- Environment Agency
- Oak Old Park Royal Development Corporation
- Local organisations which represent disabled people, such as Brent Mencap and the Brent Disability Forum

- Local representative organisations, such as Brent Cyclists and Clean Air for Brent

1.3.2. The Council undertook a public consultation exercise between 24 October and 30 November 2018. A copy of the draft LIP3 along with the accompanying Equalities Impact Assessment and Strategic Environmental Assessment report, and an online questionnaire was available at Brent Council's website for any member of the public to respond at:

https://brent.objective.co.uk/portal/planning/draft_third_local_implementation_plan_lip3?tab=info

1.3.3. This was supported by news on the Council's website and a number of tweets.

1.3.4. An overview of the borough's statutory and non-statutory consultation is on the Council's website (include link to page).

## 1.4. Statutory duties

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

1.4.2. The borough has met its statutory duty and conducted a Strategic Environmental Assessment (SEA) and, as recommended, an Equality Impact Assessment (EQIA) on the proposals contained in its LIP. The LIP Outcomes and programmes have been assessed for both purposes, and this process has not identified any necessary changes to the objectives within Brent's Long Term Transport Strategy (LTTS) and therefore these have been used in developing the LIP.

1.4.3. 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. The Environmental Report and Environmental Statement, and the final EQIA remain on the website at this link: (*include link to Brent webpage)*.

## 1.5. LIP approval

1.5.1. The LIP was submitted and approved by the Mayor on tbc March 2019.

# 2. Borough Transport Objectives

## 2.1. Introduction

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

2.1.2. The LIP firmly demonstrates that it is informed by evidence and analysis of local needs and issues and that it is shaped by the wider context of the MTS vision, the MTS Healthy Streets Approach and the MTS policies, proposals and outcomes.

## 2.2. Local context

2.2.1. Brent faces many challenges in the coming years which will have direct implications for transport and the movement of people and goods. Crucially, where there are challenges there are also opportunities, and it is important these are recognised for Brent to maximise the advantages that can be taken from them.

2.2.2. The following sections explain these key strategic issues and associated opportunities in more detail.

2.2.3. <u>About Brent</u>

2.2.3.1. Brent covers an area of 4,325 hectares - almost 17 square miles, between inner and outer North West London. It extends from Burnt Oak, Kenton and Kingsbury in the north, to Harlesden, Queen's Park and Kilburn in the south.

2.2.3.2. Brent is bordered by the London Borough of Barnet to the east, Harrow to the north and Ealing to the west. It has short boundaries with the inner and central London boroughs of Hammersmith and Fulham, Kensington and Chelsea, Westminster and Camden in the south.

2.2.3.3. Latest (2016 based) population projections estimate the number of people living in Brent will increase from 328,800 people in 2016, to 347,200 in 2021 and 393,700 by 2041. This represents an increase of 64,900 people (20%) in the next 23 years. The growth is spread across the borough with increases in population to 2041 forecast to range from

a minus 5% to plus 280% in the borough wards. Current population projections, subsequently, represent a different scale of population growth than preceding periods.

2.2.3.4. Brent has a relatively young population compared to the national average with a median age of 32. The median age varied widely across Brent, ranging from 29 years in Stonebridge to 38 years in Kenton. This compares to the median age of 39 of the population in England. The data shows that in 2016, those aged 60 and over comprised 16% (52,124) of the total population. Those aged 19 and under comprised 25% (84,786) of the total population. By 2041, those aged 60+ are expected to comprise 21% (82619) of the total population. Their number will have almost doubled. Again, this growth will vary widely across the borough. When compared with 2016 figures, this indicates that Brent will experience an ageing demographic profile[1].

2.2.3.5. The diversity of Brent is marked and it is estimated that there are 182 nationalities represented in the borough. Over 140 languages are spoken in Brent and the borough has been officially recognised as the most ethnically diverse local authority area in the country.[2] In the 2011 Census, 63.7% of the population was black or from minority ethnic communities with large concentrations in some wards. This compares to a share of 40% of the population in London being black or minority ethnic.

2.2.3.6. Whilst many of Brent's residents are affluent, parts of the borough continue to suffer high levels of social and economic disadvantage. The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation for small areas in England. In 2015, Brent was ranked within the 15% most deprived local authorities in the country. Increasing levels of deprivation have been noted for all wards. While Harlesden and Queen's Park have become less deprived compared to previous IMD levels. These wards, however, were already experiencing high levels of deprivation. Deprivation in the south of the borough has increased over time, in particular the areas of Barnhill, Dollis Hill, Dudden Hill and Willesden Green. New pockets of deprivation have appeared in the north

[1] 2014-2029, 2014-based Sub-National Population Projections, Office for National Statistics

[2] Census 2011, Office for National Statistics

of the borough in the historically affluent areas of Kenton, Preston and Queensbury and, all of them have become more deprived[3].

2.2.3.7. Brent is the most deprived borough compared with neighbouring boroughs.

2.2.4. How Brent Moves

2.2.4.1. Figure 1 illustrates the modal split, indicating the share of the different modes in the total traffic volume of the borough[4].

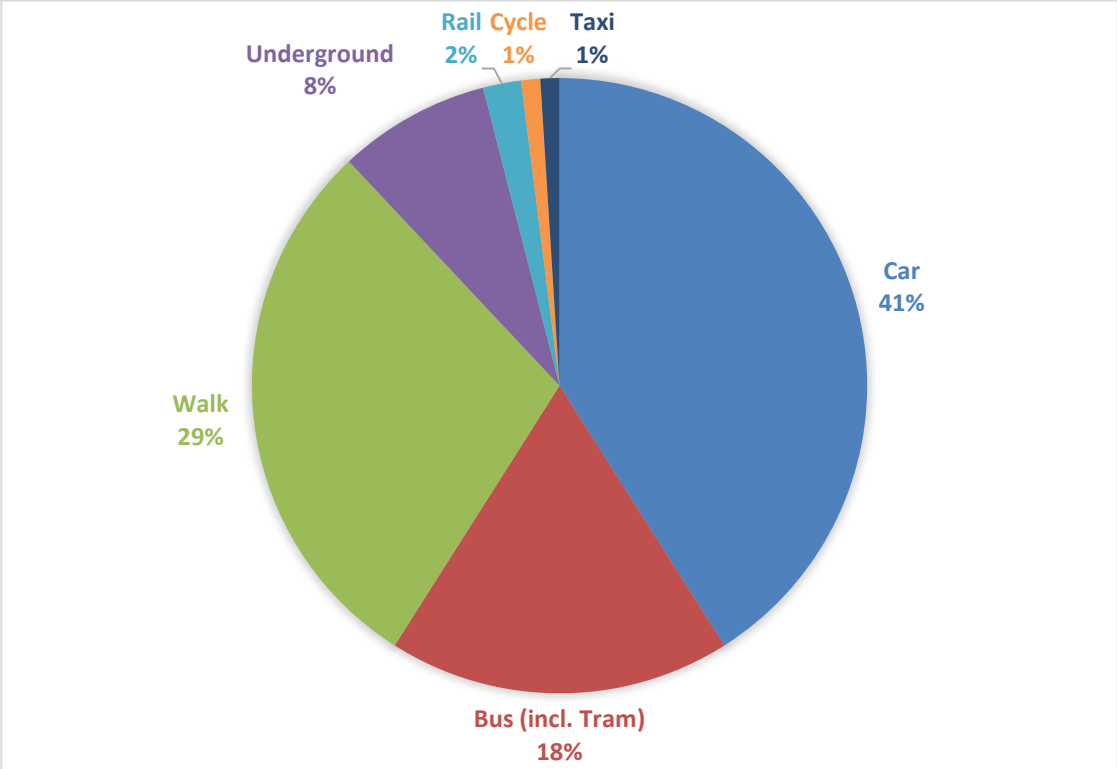



Figure 1: Mode Share of Trips Originating in Brent (2017)

2.2.4.2. Vehicles

2.2.4.2.1. The North Circular (A406) divides the less densely populated northern part of the borough from the south and is the only section of road that forms part of the Transport for London Road Network (TLRN).

[3] Deprivation – Brent Joint Needs Assessment, London Borough of Brent

[4] London Borough of Brent, Factsheet 2017, Transport for London https://tfl.gov.uk/cdn/static/cms/documents/brent-june-2017.pdf (as of 23/01/2019)

2.2.4.2.2. As an Outer London borough, car dependency is pronounced in Brent – the car is used for more journeys than any other mode even though half of all car journeys in Brent are less than five kilometres[5].

2.2.4.2.3. However, there is a distinct north-south divide as in many ways transport challenges in the south of the borough are more typical of people living in Inner London while those in the north are more typical of an Outer London Borough. The differences are marked. On average less than 50% of households in the south of the borough own a car and, residents there use a car for only a quarter of journeys. But in the north of the borough 68% of households own at least one car and, the car is used for half of the journeys[6].

2.2.4.3. Public Transport (Bus and Rail)

2.2.4.3.1. Brent is well served by a good public transport network, with 52 daytime bus routes, 14 night bus routes and 26 Network Rail, London Overground and London Underground stations. Whilst the overall network is a good one, the borough has poor interchange in key regeneration areas such as Park Royal, Wembley and Harlesden.

2.2.4.3.2. More than 80,000 Brent residents rely on public transport as their main mode of travel to work, and in addition to those on private school coach services, pupils use the local bus network to get to their place of education.

2.2.4.3.3. Figure 2 shows the current bus network in Brent. The bus network is mainly focussed around radial routes into Central London, providing for the commuter market and north-south movements. However, there is limited provision of east-west routes to provide connectivity between the radial lines within the borough. Figure 3 illustrates this, showing the PTAL (Public Transport Accessibility Level) levels across Brent. PTAL is the most widely recognised way to measure connectivity to the public transport network in London. The PTAL value combines information about how close public transport services are to a site and how frequent these services are. The highest level of connectivity has a PTAL of 6b

[5] Census 2011, Office for National Statistics

[6] Census 2011, Office for National Statistics

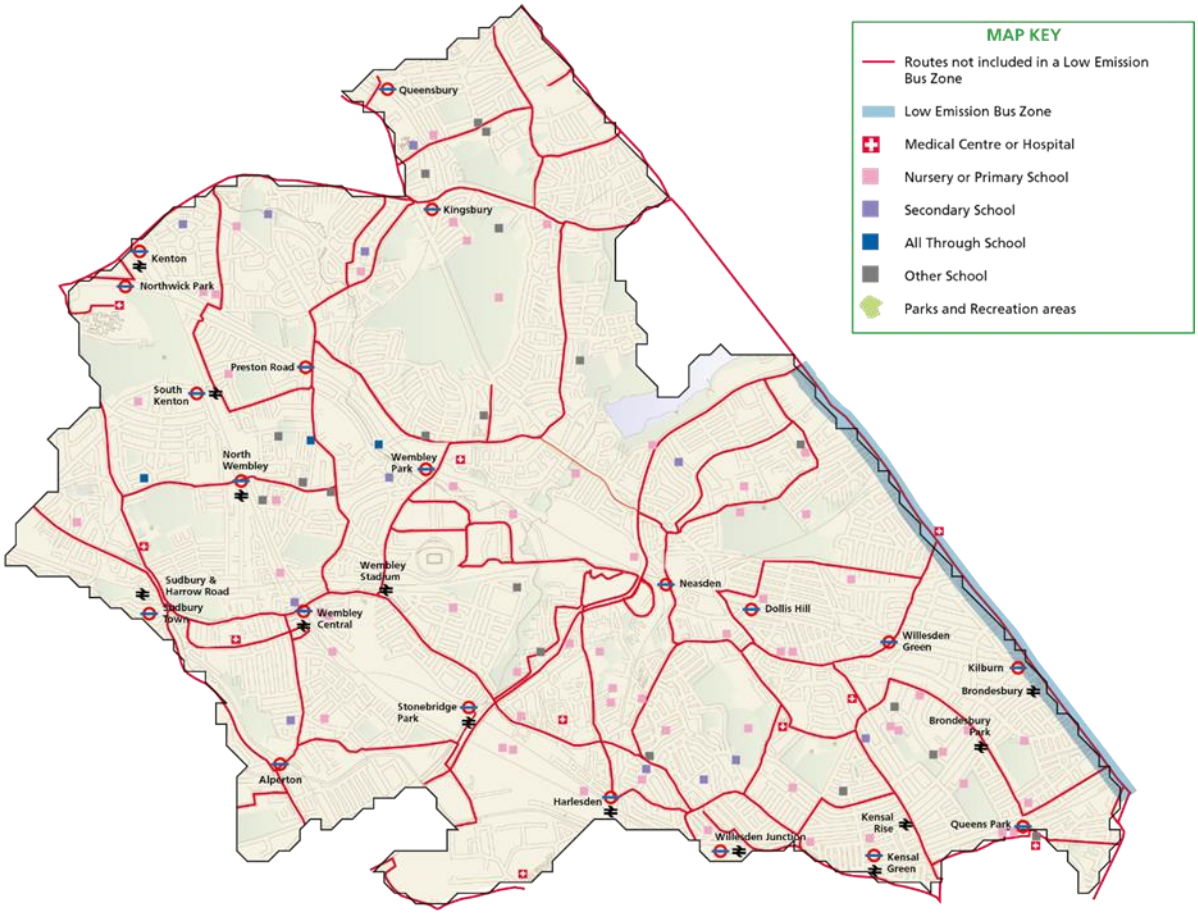



Figure 2: Bus Network in Brent

and the lowest has a PTAL of 0. For the policies in the London Plan, it is important to use connectivity indicators like PTAL because sites with better connectivity provide opportunities for development at higher densities and for sustainable development that reduces the need to travel by car.

2.2.4.3.4. London Underground serves 21 stations and 96 million passengers per year on the four lines running through Brent, comprising the Bakerloo, Jubilee, Metropolitan and Piccadilly lines[7]. Night Tube services are running Fridays and Saturdays on the Jubilee line with trains running on average every ten minutes across the entire line.

[7] Travel in London Report Volume 10, Transport for London

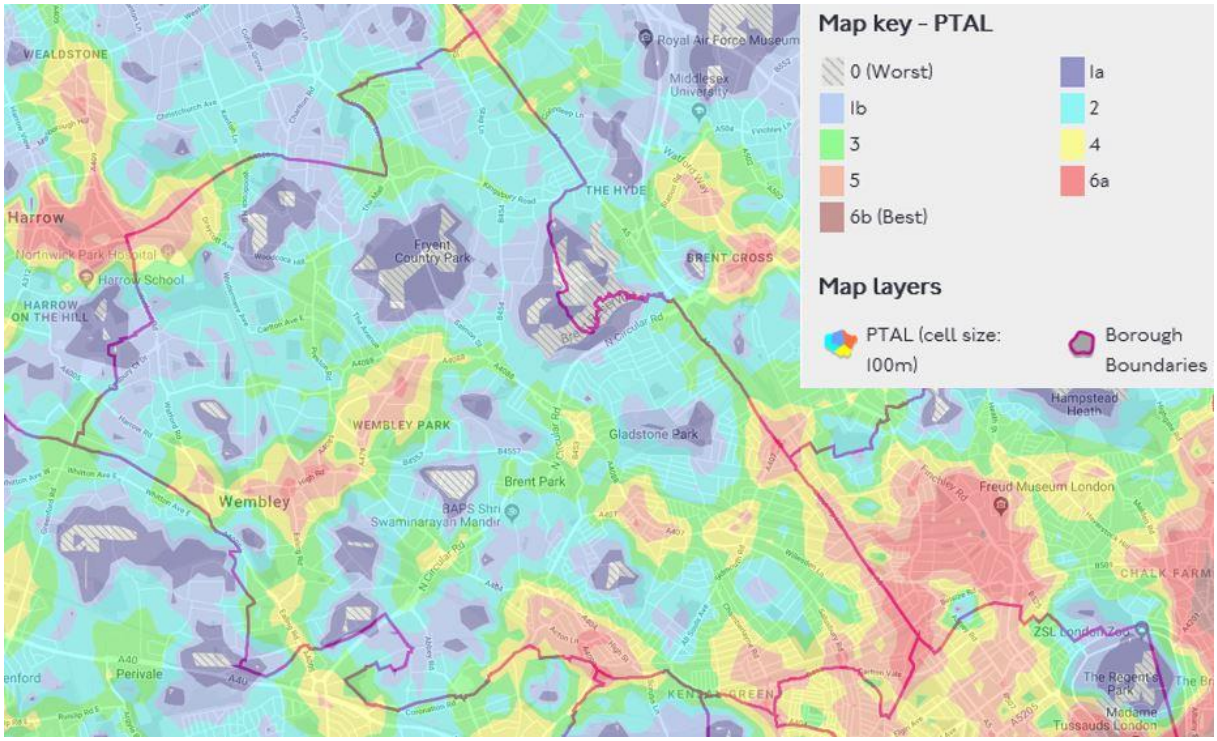



Figure 3: Public Transport Accessibility Levels (PTALs) in Brent

2.2.4.3.5. Figure 4 shows the current rail network in Brent. London Overground (as well as London Underground Bakerloo Line) trains provide key services across Brent and onwards into Central London, across to East London as well as south of the river. This includes some of the most deprived areas within the borough such as Stonebridge Park, Harlesden and Kensal Green. The service to Euston shares platforms and track with London Underground Bakerloo Line trains between Queens Park and Harrow and Wealdstone.

2.2.4.3.6. Chiltern Railways and Southern, two Train Operating Companies provide services on the National Rail network serving Brent.

2.2.4.3.7. Chiltern Railways provide train services from High Wycombe to London Marylebone. There are two Chiltern Railways stations in Brent, Wembley Stadium and Sudbury and Harrow Road. A third station, Sudbury Hill Harrow, lies just over the borough boundary, but serves many Brent residents.

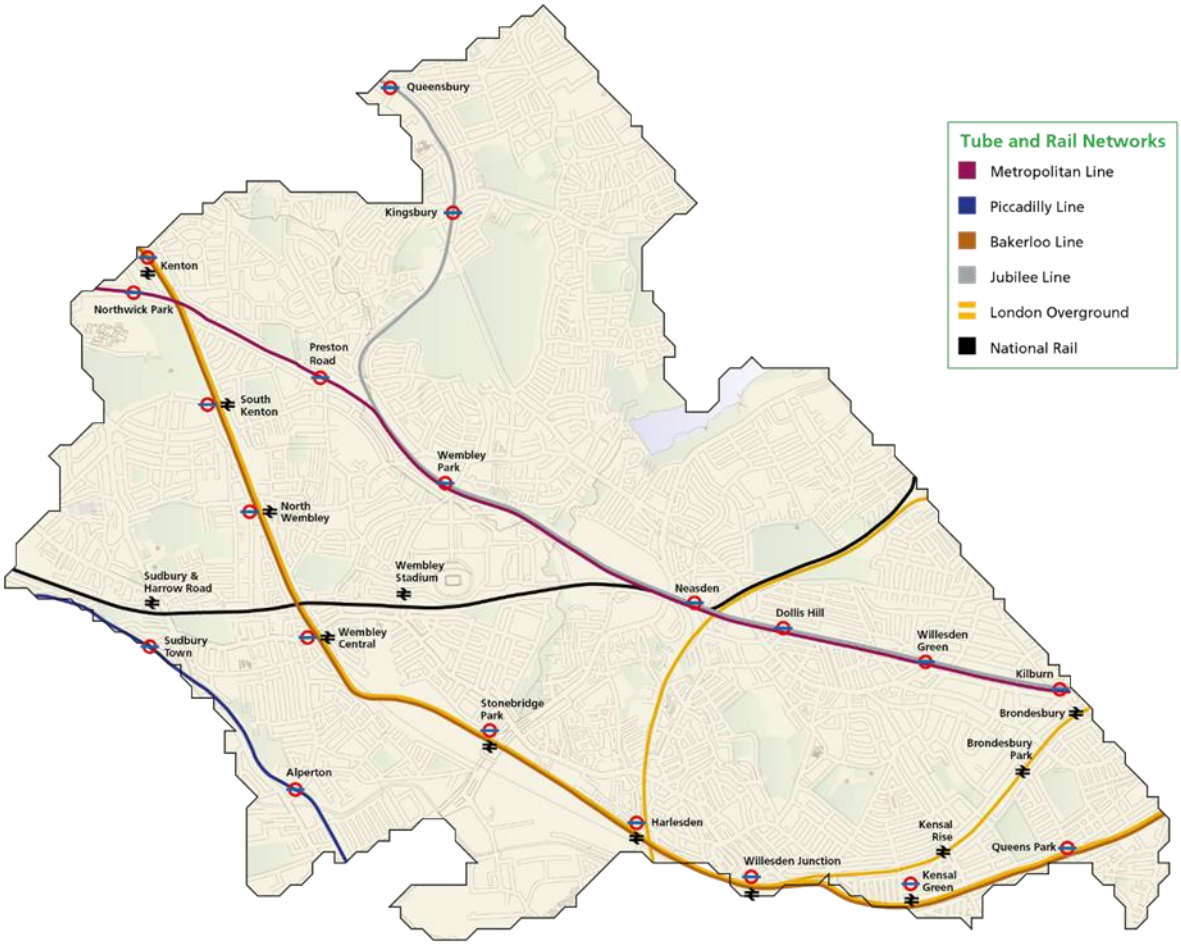



Figure 4: Rail Network in Brent (2018)

2.2.4.3.8. Southern provides an average of twenty trains in each direction on weekdays serving Wembley Central, with a number of through trains to and from Birmingham and Brighton via Gatwick Airport, enabling residents to travel to destinations such as Croydon and Gatwick, without the need to change trains in Central London.

2.2.4.3.9. There are only seven stations in the borough with step-free access from the streets to platforms: Kensal Rise (London Overground), Kilburn (Jubilee Line), Kingsbury (Jubilee Line), Wembley Park (Jubilee/Metropolitan Line), Willesden Junction Low Level (Bakerloo and London Overground), Wembley Central (Chiltern Railways) and Sudbury Town (Piccadilly Line).

2.2.4.3.10. The proposals for Old Oak Common to provide a direct interchange between HS2 and Elizabeth Line, together with Brent Council's aspiration

for an extension of Crossrail along the West Coast Mainline (through Wembley Central) will also reduce significantly the journey times from Brent to Heathrow in coming years. Should this be unachievable a second option of reinstating West Coast Main Line platforms at Willesden Junction Station will be pursued to provide appropriate interchange with HS2 and the Elizabeth Line.

2.2.4.4. Cycling

2.2.4.4.1. Brent is conducive to encouraging cycle use due to the relatively flat topography, in containing a number of town centres all of which provide services and employment accessible within a short distance by bike and, increasing numbers of residents having access to a bike.

2.2.4.4.2. Despite this, in 2011, only around 1.7% of journeys to work were made by bike, although almost five per cent of residents cycle at least once a week[8]. Recent evidence further suggests that the uptake of cycling in the north of the borough lags behind that of the south. In the south of the borough cycling claims between two and five per cent modal share of journeys, where as in the north this falls to one per cent or below.

2.2.4.4.3. Figure 5 shows the cycling potential for Brent.

2.2.4.4.4. Brent Council developed a Cycling Strategy in 2016. (Insert image of Cycling Strategy 2016). The Cycling Strategy for Brent sits within a framework of documents which complement the Council's Long Term Transport Strategy. The strategy informs the development of a programme of schemes to be identified and delivered to encourage more residents to cycle, to cycle safely, and to cycle more often.

2.2.4.4.5. To achieve this, Brent Council will implement a programme of infrastructure which will build upon best practice established with both Quietway 3 (Q3) and Carlton Vale, exemplar schemes which has been subject to significant levels of Transport for London funding to deliver high quality cycling infrastructure improvements.

2.2.4.4.6. With evidence suggesting that with infrastructure improvements the greatest benefits are realised when complementary smarter choices measures are also introduced, Brent Council will progress a

[8] Census 2011, National Office for Statistics

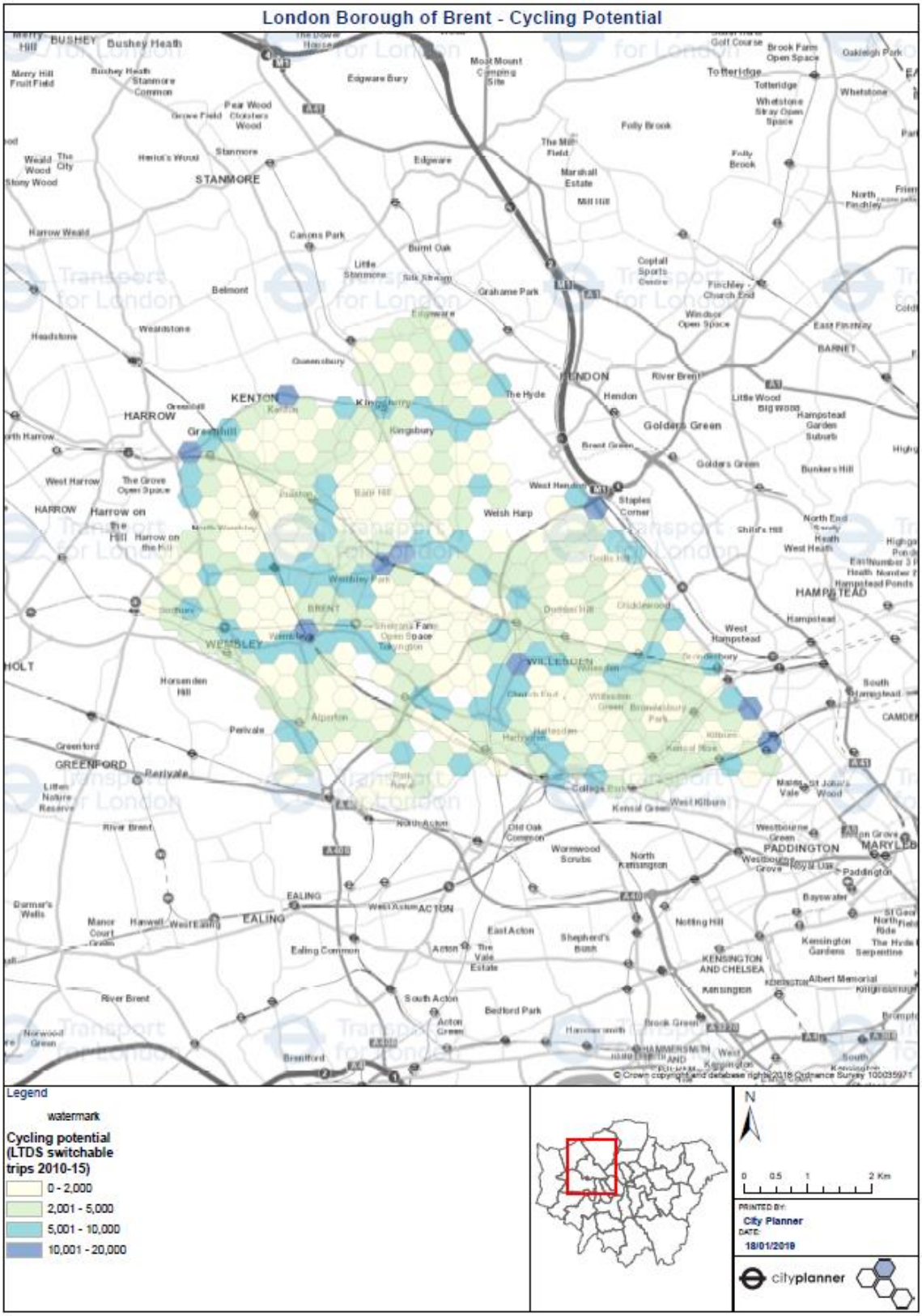



Figure 5: Cycling Potential in Brent (Source: TfL City Planner Tool)

complementary programme of smarter choices measures. They include for example:

- Borough-wide travel awareness campaign(s);
- Individualised Travel Marketing;
- School Travel Plans;
- Workplace Travel Plans.

2.2.4.5. Walking

2.2.4.5.1. As with cycling, Brent is also conducive to encouraging walking due to the relatively flat topography and it containing a number of town centres all of which provide services accessible within a short walking distance. Despite this, walking only represents around 4.6% of journeys to work, although over half of all children walk to school on a regular basis. Figure 6 shows the walking potential for Brent.

2.2.4.5.2. Brent Council developed a Walking Strategy in 2016. (*Insert image of Walking Strategy 2016*). The Walking Strategy for Brent sits within a framework of documents which complement the Council's Long Term Transport Strategy. The strategy informs the development of a programme of schemes to be identified and delivered to encourage more residents to walk, to walk safely, and to walk more often.

2.2.4.5.3. To achieve this, the Council implements a programme of infrastructure, safety and promotional measures, such as the Council's programme of both led and self-led health walks across the borough.

2.2.5. Brent's Future

2.2.5.1.1. The number of households in Brent will continue to increase. Household growth is spread across the borough with increases in households to 2041 forecast to range between five and ten per cent in the borough wards[9]. Estimates show the number of one person households to grow by around 12,500 (35%).

2.2.5.1.2. The borough's current regeneration strategy promotes new growth in five key areas – Wembley, Alperton, Kilburn, Church End and Burnt Oak. The emerging new Local Plan is also proposing further growth areas at

[9] Draft London Plan , December 2017

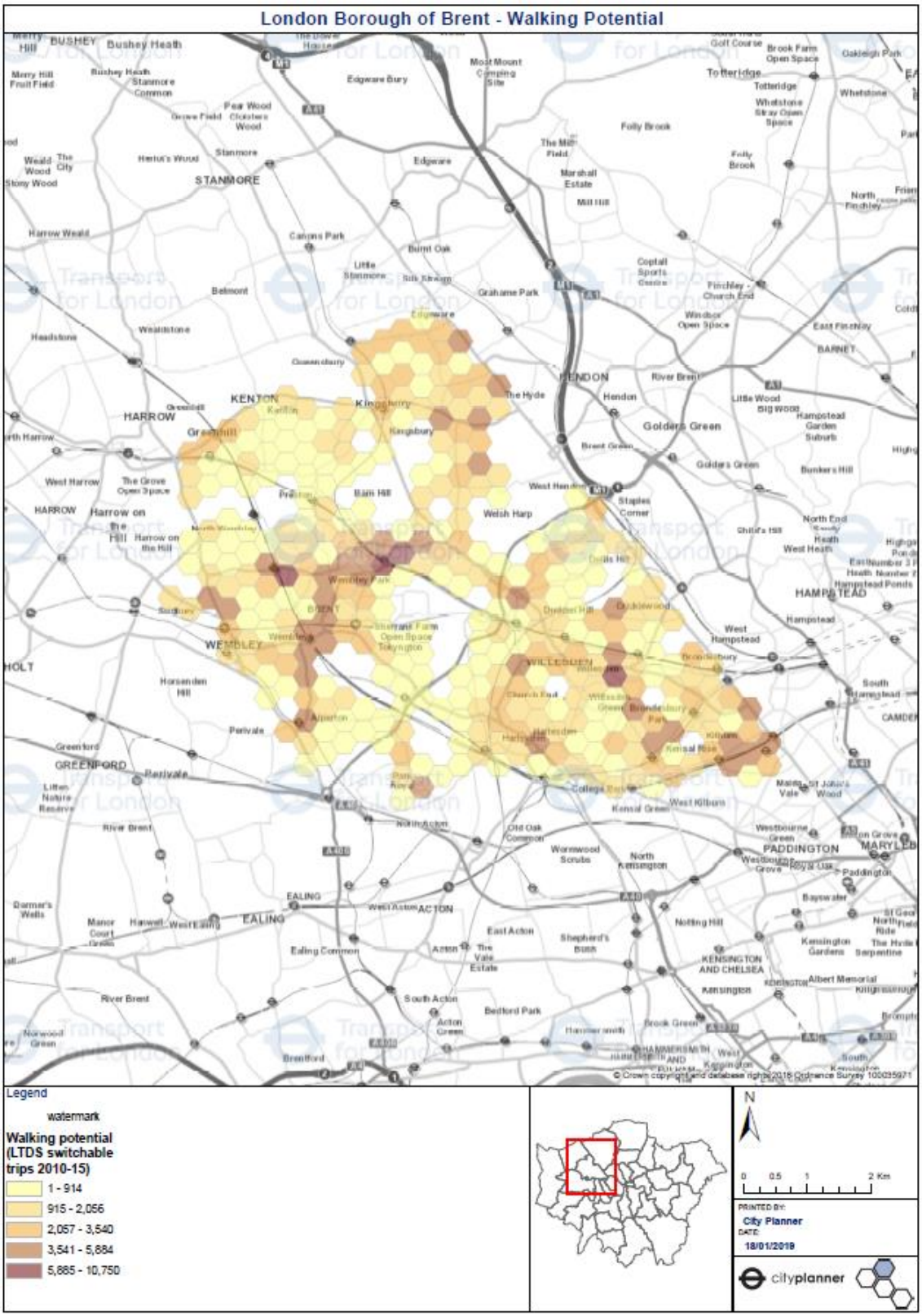



Figure 6: Walking Potential in Brent (Source: TfL City Planner Tool)

Neasden, Staples Corner and Northwick Park (Figure 7). Much of that growth will be residential, but in Wembley and Alperton there remains

scope for considerable new employment growth. In Wembley alone as many as 10,000 new jobs are expected to be created.

2.2.5.1.3. In addition to growth being delivered within Brent, neighbouring boroughs are also planning significant levels of housing development, most significantly at Brent Cross Cricklewood and Old Oak Common and, both aim to deliver thousands of new homes and jobs. In Old Oak Common as many as 25,000 new homes and 65,000 new jobs are expected to be created. In Brent Cross Cricklewood 7,500 new homes and 27,000 new jobs are expected to be created.

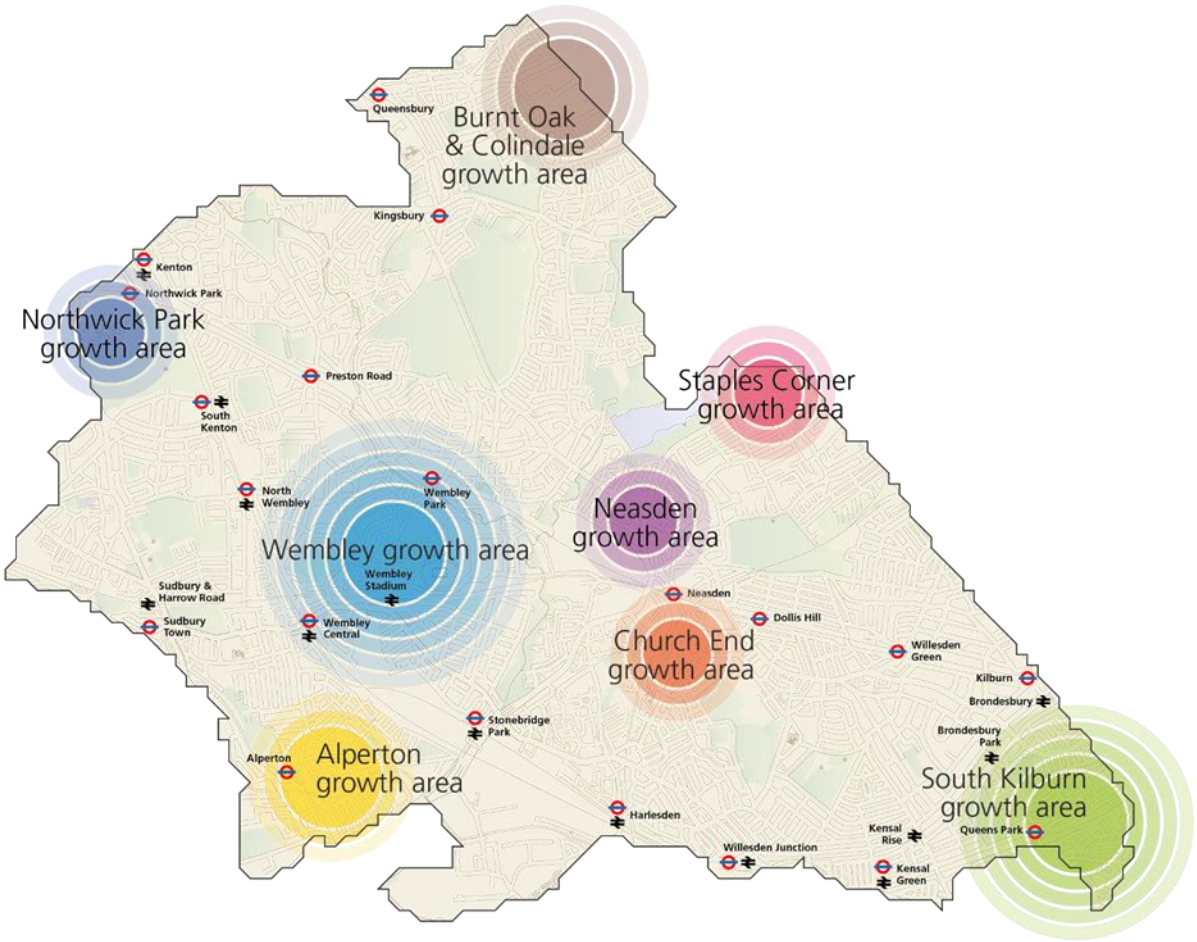



Figure 7: Growth Areas in Brent

2.2.5.1.4. Within the boroughs of Brent and Ealing lies one of London's primary industrial areas and the largest area of Strategic Industrial Land (SIL) in London – Park Royal. Masterplanning is underway led by Old Oak and Park Royal Mayoral Development Corporation (OPDC) to improve, intensify this key employment area as well as creating up to 1,500 new homes.

## 2.3. Changing the transport mix

### 2.3.1. Challenges and opportunities

2.3.1.1. Congestion

2.3.1.1.1. The current low level of sustainable mode use and the forecast growth will result in increasing pressure on the transport network and, impacting on the movement of people and goods.

2.3.1.1.2. There is limited evidence of modal shift from cars to more sustainable modes in the borough in recent years. As an Outer London borough, car dependency is pronounced in Brent – the car is used for more journeys than any other mode even though half of all car journeys in Brent are less than five kilometres[10].

2.3.1.1.3. There is a distinct north-south divide as in many ways transport challenges in the south of the borough are more typical of people living in Inner London while those in the north are more typical of an Outer London Borough. The differences are marked. On average less than 50% of households in the south of the borough own a car and, residents there use a car for only a quarter of journeys[11]. But in the north of the borough 68% of households own at least one car and, the car is used for half of the journeys[12].

2.3.1.1.4. Recent evidence suggest that the uptake of cycling in the north of the borough lags behind that of the south. In the south of the borough cycling claims 2-5% modal share of journeys, where as in the north this falls to 0-1%.

---

[10] Census 2011, National Office for Statistics

[11] Census 2011, National Office for Statistics

[12] Census 2011, National Office for Statistics

2.3.1.1.5. **Opportunities:** However, the travel patterns between adjacent boroughs and the containment of trips within some larger town centre areas indicate there is considerable potential for sustainable travel modes to assume a greater role than at present. There are **240,000 trips made by a vehicle that have their origin in Brent that could be cycled and just over 40,000 vehicle trips that start in Brent that could be easily walked**[13] [14] – hinting at the potential for increasing the mode share of active and sustainable travel if some of the barriers can be overcome. These barriers include low levels of cycle ownership, the physical severance caused by the major north-south arteries of the A406 and the North London and West London train lines, and the cultural challenges posed by a large ethnic community comprising ethnic groups for whom cycling and public transport traditionally holds very little appeal, particularly as a means of transport, and specifically among women.

2.3.1.2. Air Quality and Health

2.3.1.2.1. As with many parts of London there is significant scope for improvement in the health of Brent's population. One of the most direct impacts on health by transport is through lives lost and life limiting conditions caused by inactive lifestyles such as obesity and Diabetes Type 2.

2.3.1.2.2. In recent years it has become apparent that particulate matter and $NO_2$ pose a significant risks to the health of those exposed to them on a regular basis, with motorised vehicles being responsible for between 40% and 60% of air pollutants in the UK. In addition, $NO_2$ acts as an irritant, exacerbating respiratory conditions and contributing to premature deaths, particularly in vulnerable members of the population such as those with asthma or chronic obstructive pulmonary disease (COPD). $NO_2$ is generated as part of the combustion process that takes place in motorised vehicles.

2.3.1.2.3. **Opportunities:** Crucially, we need better cycling provision along key radial and orbital corridors linking origins and destinations such as employment and education sites. With air quality being identified as a priority for the Borough going forward, this should be highlighted as a

[13] Analysis of Walking Potential, Transport for London 2016

[14] Analysis of Cycling Potential, Transport for London 2016

benefit of **doing more for walking and cycling**. Active travel is increasingly recognised as an important component of incorporating moderate physical activity in people's everyday lives to either prevent Type 2 diabetes or, to help people with Type 2 diabetes avoid long-term complications, especially heart problems.

2.3.1.2.4. The Council has developed the Brent Health and Care Plan (2017) which highlights the priorities for improving the health of our residents.

2.3.1.2.5. Efforts to encourage modal shift towards walking and cycling provides a useful framework for reducing air pollution and for improving air quality. The need to significantly improve air quality in the borough was also identified by a recent survey (2016), showing it is an important issue for local residents. In response to this, the Council has reviewed its Air Quality Action Plan (2017) and, has identified a number of Air Quality Focus Areas across the borough. Air Quality Focus Areas are locations that have been identified as having high levels of pollution and human exposure and, include specific measures.

2.3.1.2.6. The Council will identify a suite of suitable measures in line with its Air Quality Action Plan (2017) to address issues around air quality within Brent's identified Air Quality Focus Areas and, accordingly the Borough will take forward bids to the Mayor's Air Quality Fund.

2.3.1.3. <u>Accessibility</u>

2.3.1.3.1. Underlying socio-economic conditions have a strong influence on travel choice, and with Brent having a high concentration of some of the most deprived areas in the UK (14), equity is, therefore, an important theme for LIP3. The relationship between travel choice and income is spelt out more fully in the most results of the London Travel Demand Survey[15]. These show a strong trend in reliance on the bus in lower income groups.

2.3.1.3.2. The more restricted transport choices of those on lower incomes are therefore an important issue for LIP3.

2.3.1.3.3. Additionally, in the Census 2011, 6.67% of people stated their day-to-day activities were limited a lot and a further 7.43% stated they were limited

[15] London Travel Demand Survey 2017, Transport for London

a little. For those of working age (16 to 64), these figures were 5.14% and 6.41% respectively[16].

2.3.1.3.4. Harlesden had the greatest number of residents who considered their health to be not limited by any health problems. Kenton had the least number of residents saying that their activities were not limited by health concerns Stonebridge had the greatest number of residents saying their day-to-day activities were limited a lot and a little. Northwick Park had the least number of residents in these two health categories[17].

2.3.1.3.5. Many residents in Outer London experience difficulty accessing every day services and amenities. This reflects the lower density of development in Outer London. But it also reflects a continuing loss of local amenities, such as shops, post offices and banks, libraries, hospitals and employment opportunities which can be reached on foot, by bicycle or by local public transport. This undermines local centres, local neighbourhoods and communities. Good growth has, subsequently, risen up the political agenda and is being prioritised in the Draft London Plan as well as the Council's emerging Local Plan.

2.3.1.3.6. With the identified and proposed Growth Areas, the Council aims to selectively increase density around local centres and public transport hubs. This helps to support public transport. Progressing the proposals around Northwick Park, the emerging Local Plan identifies a clear desire to make Northwick Park station step-free. This would also improve accessibility to Northwick Park Hospital for which access has been significantly improved already with the Council successfully lobbying for improvements to the 483 bus service. Enhancements to the public realm and better pedestrian and cycling routes to Northwick Park Station will complement the improvements to date.

2.3.1.4. <u>Road Safety</u>

2.3.1.4.1. Safety and casualty reduction on our roads is both an emotive and important area, and one which has been a key focus for the Council and its partners over a number of years. Whilst roads in Brent are safer now

[16] Census 2011, Office for National Statistics

[17] Census 2011, Office for National Statistics

than they once were, every serious collision is considered preventable and any death or serious injury is one too many.

2.3.1.4.2. The total number of road deaths and injuries in the borough has declined greatly over the span of LIP and LIP2 respectively but in the last few years this progress has slowed with annual totals (2016 base) now remaining similar to 2010 levels.

2.3.1.4.3. **Opportunities:** Over the last ten years roads in Brent have become safer, and a **focus of investment to reducing accidents** has realised a reduction in the number of accidents on our road network. Between 2004 and 2012, Brent saw a 45% reduction in KSIs from road traffic collisions, which placed the borough 7th of the 33 London boroughs. By comparison, London wide KSIs reduced by 28% over the same period[18].

2.3.1.4.4. Brent has implemented a series of complementary initiatives to reinforce safety messages and maintain desirable attitudes and behaviours cannot be ignored.

2.3.1.4.5. Although many of the risks are to older children who are becoming more independent, interventions with younger children can be more effective in the long term. Attitudes towards risk can be developed much more easily at a younger age and it is harder to influence teenagers after these attitudes have already been set. Brent Council uses theatre in education to deliver road safety messages for Brent schools, with the plays being highly effective at communicating the key road safety message to children, and leading to sustained behaviour change when it comes to being safe on the roads.

2.3.1.4.6. Furthermore, the Council acknowledges that road safety messages should also be supported by education and training in wider travel issues, including the provision of cycle training to all school children in the Borough.

2.3.1.4.7. **Improving the appeal of sustainable modes** relative to (indiscriminate) car use will also require demand management to reduce the ease and convenience of the car to persuade more people who could readily **change their travel behaviour** to actually do so.

---

[18] Long Term Transport Strategy, London Borough of Brent

2.3.1.4.8. Other areas have successfully encouraged higher levels of walking, cycling and passenger transport use by implementing restrictive car parking policies. Local evidence exists from a comprehensive analysis conducted by TfL (IBID 2012) on how parking provision leads to car ownership and use and, on the difficulties of achieving travel behaviour change in the absence of car parking constraints[19]. The emerging Brent Local Plan sets maximum **parking standards** and encourages car-free development where suitable mitigation can be achieved.

2.3.1.5. Orbital Public Transport Connections

2.3.1.5.1. The borough's polycentric population distribution and socio-economic characteristics result in a network almost exclusively focussed around radial routes to and from Central London. There is, however, limited provision of east-west routes to provide direct connectivity between the radial lines across the borough.

2.3.1.5.2. With the development of the proposals for the West London Orbital drastically improving the orbital public transport in West London and, indeed, Brent, the Council will progress plans to identify the potential of using demand responsive transport services to complement the existing bus network. The Borough is currently looking into the feasibility of a small demand responsive transport trial in the Park Royal area.

## 2.3.2. Borough objectives

2.3.2.1. The Council's priorities for the borough is a future built for everyone with an economy fit for all, a cleaner more considerate borough where we can all feel safe, secure, happy and be healthy.

2.3.2.2. Increased pressure on the transport network in the coming years up to 2041 is likely to be unavoidable. While Brent acknowledges that traffic management and transport network enhancements will have a role to play to accommodate the committed pattern of growth as identified in the Draft London Plan and the emerging Brent Local Plan, the borough is committed to enabling more active and sustainable travel choices by informing people how they can to travel more actively and more sustainably more often and provide the necessary infrastructure and

[19] Residential Parking Provision in New Developments, Transport for London 2012

public realm to accommodate the anticipated growth without affecting the quality of life of Brent residents. This includes walking, cycling and public transport as well as the promotion and support of alternative car ownership models of car clubs and, in particular, car clubs that make use of low emission or ultra-low emission vehicles.

2.3.2.3. Our Long Term Transport Strategy (LTTS) objectives are:

- Increase the uptake of sustainable modes, in particular active modes of travel;
- Reduce conventional vehicular trips on the network, particularly at peak times;
- Support growth areas and town centres to enable sustainable development, ensuring people have options on how to travel rather than drive;
- Reduce killed and serious injured (KSI) and slight accidents on Brent's roads;
- Reduce the exposure of Brent residents to Particulate Matter (PM) and Nitrogen Dioxide ($NO_2$) generated by the transport network.

2.3.2.4. The Council will, continue to develop and deliver initiatives that have the potential to change travel behaviour and enable more active and sustainable travel choices with demand management to reduce the ease and convenience of the private car within the borough.

## 2.4. Mayor's Transport Strategy outcomes

2.4.1. Brent's LTTS objectives match the Mayor's strategy outcomes in the context of current transport challenges affecting transport and the movement of people and goods. The LTTS has been taken as a starting point for the development of the LIP3 and its objectives are integrated into the local borough objectives it contains.

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

#### Challenges and opportunities

2.4.2. There are many challenges in Brent to the delivery of Outcome 1, these are outlined below.

2.4.3. As an Outer London borough, car dependency is pronounced in Brent – the car is used for more journeys than any other mode even though half of all car journeys in Brent are less than five kilometres. The North Circular (A406) divides the less densely populated northern part of the borough from the south and is the only section of road that forms part of the Transport for London Road Network (TLRN).

2.4.4. However, there is a distinct north-south divide as in many ways transport challenges in the south of the borough are more typical of people living in Inner London while those in the north are more typical of an Outer London Borough. The differences are marked. On average less than 50% of households in the south of the borough own a car and, residents there use a car for only a quarter of journeys. But in the north of the borough 68% of households own at least one car and, the car is used for half of the journeys.

2.4.5. Most of the borough's road network was developed in the nineteenth and early twentieth centuries and were not designed to deal with the volumes of cars and lorries which use them today. There are many demands placed on Brent's streets – pedestrians, cyclists, buses, private cars, delivery vehicles, both passing through and for access to shops and homes on the street, which can often come into conflict with each other.

2.4.6. Improved provision and support for active and sustainable modes – walking, cycling and public transport – is clearly required and key to achieving Brent's commitment to improving transport options for every member of our community and to reducing the negative impacts of travel on our borough as outlined in Brent's Long Term Transport Strategy.

2.4.7. Active travel comprises the most affordable and healthiest modes of travel and makes the most efficient use of limited road space. They also help to reduce overcrowding on public transport on shorter journeys, particularly as Outer London grows, and makes the public transport network more accessible for those who rely on it.

2.4.8. The Mayor's Transport Strategy and, subsequently, Brent's Local Implementation Plan are based on the Healthy Streets approach, which requires the Borough to rethink its approach to designing the public realm and transport provision alongside ensuring that regeneration and future development of Brent bring about 'good growth' which supports walking, cycling and public transport use. Collectively, this will bring about healthy

streets and people, a good public transport experience, and new homes and jobs where people have a good quality of life.

2.4.9. The Healthy Streets Approach is the system of policies and strategies to help Londoners use cars less and walk, cycle and use public transport more. The purpose of the Healthy Streets Approach is to provide long term plan for improving people's experiences of our streets, helping everyone to be more active and enjoy the health benefits of being on our streets.

2.4.10. The Borough is committed to the Healthy Streets Approach which uses ten evidence-based indicators. Improvements against all the indicators across the borough's streets will significantly transform the day-to-day experience of living in Brent.

2.4.11. Transport has a significant role to play in positively influencing these factors and, subsequently, has one of the greatest impact on improving the lives of the Brent's residents.

2.4.12. Obesity is a considerable concern for public health in Brent; almost 55% of Brent's adult population are overweight, 34% of whom are classified as obese with a chronic lack of physical activity. By 2050 levels of obesity are projected to reach 50% of the adult population in Brent[20]. Similarly, the most recent figures show that over 28% of Brent children in reception are overweight, 14% of whom are classified as obese[21]. Childhood obesity is the single biggest predictor of adulthood obesity and can increase the risk factors for many clinical conditions such as Type 2 diabetes in later life.

2.4.13. Type 2 diabetes rates in Brent are particularly high compared to other parts of the UK. In 2013/14, the average recorded prevalence of diagnosed diabetes on GP registers in England was 6.2%. Over the same period, 8.2% of people on GP lists in NHS Brent Clinical Commissioning Group were recorded as having diabetes. This equates to 23,079 recorded cases in adults.

[20] Health and Wellbeing in Brent – Joint Needs Assessment, London Borough of Brent

[21] National Child Measurement Programme 2017, NHS Digital

2.4.14. Active travel is increasingly recognised as an important component of incorporating moderate physical activity in people's everyday lives to either prevent Type 2 diabetes or, to help people with Type 2 diabetes avoid long-term complications, especially heart problems. In line with the recommendations of both the National Institute for Clinical Excellence and the National Institute for Clinical Excellence for encouraging active travel, the council will prioritise and promote walking and cycling for short trips[22]. In order to encourage modal shift from the car and improve local accessibility, this will be supported by:

- Maximising the role of walking and cycling as key transport modes by raising their status and promoting them as a healthy, economic, and energy efficient means of transport;
- Improving the pedestrian and cyclist environment by giving them greater priority and reducing danger from the speed and volume of traffic;
- Developing and maintaining safe, convenient, efficient and attractive transport infrastructure conducive to cycling and walking.

2.4.15. Brent's Health and Wellbeing Strategy "Empowering Communities to Take Better Care of Themselves" (2014) also supports an approach whereby active travel and physical activity become the norm in Brent's communities and, active travel is a great way for people to incorporate physical activity into their daily lives. While there is limited evidence of modal shift from cars to more active modes in the borough in recent years, there remains significant potential for this as a significant proportion of journeys currently made by motorised modes could be easily made instead by physically active modes as outlined above.

2.4.16. Responses to the consultation in relation to the development of Brent's Long Term Transport Strategy identified health as an important issue going forward in terms of quality of life for residents. The Brent Physical Activity Strategy (2016) echoes this and sets out the Council's approach to improving the health and wellbeing of Brent residents though increasing participation in everyday physical activity.

[22] Public Health Guideline PH41 "Physical Activity: Walking and Cycling", National Institute for Clinical Excellence

2.4.17. With the prevalent comparatively low levels of car ownership across the borough, residents are reliant on other modes of transport. Public transport plays an important role in providing an alternative mode to the car for residents and, though bus and train use are not considered active modes it is also worth noting that most journeys taken by public transport will include an element of walking or cycling, as part of the overall journey and, they contribute to reduced congestion and lower emissions by reducing the number of car trips taking place.

2.4.18. Responses to the consultation in relation to the development of Brent's Long Term Transport Strategy also identified that walking and cycling need a greater emphasis than it currently has and, the Council is, subsequently, committed to make cycling and walking a much more attractive option for short local trips.

### Borough Objectives

#### Increase the uptake of sustainable modes, in particular active modes of travel.

2.4.19. The Healthy Streets Approach is central to the Mayor's Transport Strategy and, therefore, to Brent's Local Implementation Plan. However, the challenges outlined above require a robust set of objectives and measures to encourage more residents to walk and cycle, to walk and cycle safely, and to walk and cycle more often.

2.4.20. For the Council to address the barriers preventing a wider uptake of walking and cycling in Brent, the Borough acknowledges that transformational changes to Brent's streets and places that give priority to, and, therefore, enable more residents to walk and cycle, to walk and cycle safely, and to walk and cycle more often are needed.

2.4.21. The borough will:

- Use a road user hierarchy to inform all relevant decisions: walking, cycling and public transport will be prioritised above private vehicle use.

- Aim to deliver the Healthy Streets outcomes so that streets become inclusive environments that enable walking and cycling for all who live in and visit the Borough, such as in relation to the current proposals for the Strategic A5 Road Corridor that look to specifically deliver against the Mayor of London's Healthy Street Indicators and, subsequently, provide the opportunity for a step chance in active travel along the corridor, including the wider area. The transport

elements will consist of improved connectivity and junction improvements as well as developing a framework for this area which can be used to assess transport aspects of planning applications as they are received. Remove barriers to walking and cycling, ensuring that any change made improves conditions for pedestrians and cyclists, encouraging residents to be healthier.

- Implement the infrastructure proposals set out in our Cycling and Walking Action Plan, including developing and implementing a network of cycle routes across the Borough such as Quietway 3 (Regents Park to Gladstone Park), Quietway 9 (Wembley Park to Harrow Weald) and CFR23 (Wembley to Willesden Junction), that will enable more enable more residents to walk and cycle, to walk and cycle safely, and to walk and cycle more often. The borough is committed to exploring opportunities to bring further routes forward. This will include planning for a range of different users and bikes.

- Change how road space is allocated, including reducing kerbside space for parking, and reallocating road space to active, sustainable travel modes, if necessary, to enable and encourage people to walk and cycle, to improve road safety and deliver enhancements to the public realm. This will include cycle permeability, cycle parking and wayfinding improvements.

- Introduce traffic restrictions, including trials, for timed road closures as part of the Borough's Healthy School Streets programme to reduce traffic dominance and provide safer and more welcoming environments for walking and cycling and, to enable residents, schools, parents and children to reimagine their streets as a precursor to potential longer term interventions that enable active travel modes.

- Bid for, and implement if successful, Liveable Neighbourhoods schemes at strategic locations across the Borough to provide transformational area-wide improvements that prioritise walking, cycling and access to public transport – including completion of the Liveable Neighbourhood scheme for the Kilburn High Road and hinterland area that upgrades the public realm, and enables walking and cycling.

- Continue to deliver a programme of education programmes for children and schools. This includes cycling training, pedestrian skills

training, school crossing patrols in defined locations, and awareness raising activities such as theatre in education and workshops, such as Brent's 'No Idling' campaign.

- Continue to attend Faith Forums and local community events to promote the borough's cycle training and infrastructure. This includes providing bikes for people to try out cycling.

- Work with our cycle training provider to adapt training specifically to enable participation by faith schools as well as all female training sessions. This is to address identified barriers within faith communities.

- Deliver borough-wide smarter choices measures to provide people with options on how to make their journeys which also help to reduce congestion and emissions. Research undertaken by the Department for Transport (DfT) in 2005 found that an intensive smarter choices programme over 10 years, could cut urban peak-hour traffic by 21% and off-peak traffic by 13%. Nationally, traffic volumes could fall by 11%. This demonstrates the scope for smarter choices measures to help reduce traffic levels[23].

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

### Challenges and opportunities

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

2.4.23. Killed and seriously injured casualties emerged as a theme of significance from the body of research. Brent has had a good deal of success in reducing all road casualties over the period of LIP and LIP2 with reductions in casualties and fatalities. However, in 2017 there were still 973 reported collisions resulting in 1,158 casualties. Of these, 132 were classed as a Killed or Seriously Injured (KSI), with this comprising 6 fatalities[24]. Figure 8 provides an overview by mode.

[23] Smarter Choices - Changing the Way We Travel, Department for Transport

[24] Department for Transport, Reported Road Casualties Great Britain: 2017 (RAS10014) and Transport for London, Road Casualties in Your Borough (Brent), 2018

2.4.24. The above suggests, however, that success has been heavily focussed on KSI accidents and that more work is required to reduce crashes of all severities. Addressing slight accidents, however, can be particularly important for pedestrians and cyclists, who may be seriously impacted by incidents that do not result in injury or damage but could potentially have done so. These incidents reduce confidence in the safety of the network and can lead to adverse behaviour change, reverting to car use having been a pedestrian or cyclist.

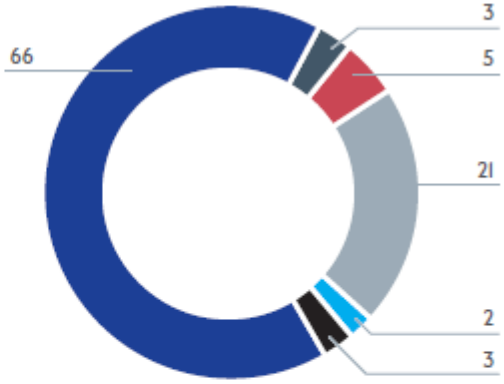
2.4.25. Brent is committed in aiming to achieve the Mayor's Vision Zero targets. The borough's Long Term Transport Strategy had already committed Brent to aim for no fatalities by 2035. Following the Mayor's published 2041 targets, Brent will adopt this going forward for Killed and Seriously Injured. In addition, will continue to aim to reduce slight injuries.

2.4.26. Brent's aim is to reduce all casualties, including slight casualties, to below 200 by 2035. This is a 44% reduction from the 957 casualties in 2013 and a 55% reduction from 2004.

**People killed or seriously injured – casualty type**


We must reduce road danger for the people who are most at risk.

**Non-injury vehicles involved where people were killed or seriously injured (%)**




We must reduce the danger posed by vehicles that present the greatest risk. The percentage of vehicles without injured occupants who were involved in a collision where someone else was killed or seriously injured* is shown above.

* Note that involvement does not infer fault

Figure 8: People Killed or Seriously Injured by Mode

2.4.27. When the next review of Brent's LTTS is due the safety target is likely to be split to clearly show the Mayor's Vision Zero target as well as a separate target to tackle slight casualties. It is slight casualties that Brent uses as an indication of where a more serious accident might occur and, to identify locations to target road safety schemes before more serious or, indeed, fatal casualties occurs.

2.4.28. '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.

2.4.29. 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.

2.4.30. 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.

2.4.31. Pedestrians and cyclists are disproportionately affected by serious injury caused by road traffic collisions, relative to the proportion of daily journeys they make up. It is important, however, that road safety performance measures consider not only total numbers but also the risk of being involved in a collision on the network by particular modes such

as pedestrians and cyclists. Fear of road traffic injury is a major barrier preventing people from walking or cycling, particularly amongst parents who consequently drive their children to school. Brent is addressing this by focussing its efforts not only on addressing killed and serious injured accident but also slight accidents.

2.4.32. Most serious road traffic collisions occur on roads with faster moving traffic because speed is normally the main determinant of the outcome of a collision. Children are more vulnerable to road traffic injury, as they are not able to assess traffic scenarios accurately until they are in their teens. Older people are often less mobile, frail, and may have sight or hearing impairments which making them less able to cope with busy roads, often resulting in social isolation. In addition, road traffic collisions are an equality issue for the borough as different groups within the community can be affected disproportionately. It is known that amongst children, the Black, Asian and Mixed Ethnicity (BAME) population, are more likely than white children to be injured or killed in a road traffic collision. It is also known that areas of deprivation tend to suffer from worse road safety records than other areas. Therefore, reducing the speed of traffic is a priority.

2.4.33. The design of roads is another determining factor and needs to be addressed. Many junctions have been improved by the Council over the last few years using LIP funding, although there are some clusters of collisions at some junctions which require further investigation.

2.4.34. Over the last ten years, roads in Brent have become safer, and a focus of investment to reducing accidents has realised a reduction in the number of accidents on our road network. Between 2004 and 2012, Brent saw a 45% reduction in KSIs from road traffic collisions, which placed the borough 7$^{th}$ of the 33 London boroughs. By comparison, London wide KSIs reduced by 28% over the same period.

2.4.35. Brent expects progress on KSI reductions to continue across the borough into the future, as it remains a key focus. However, there is still considerable work to do to further reduce accidents and create safe and accessible streets for all.

2.4.36. In addition to reducing the speed of vehicles, reducing their volume on the road would also benefit road safety. Fewer vehicles means less opportunity for collisions to take place.

2.4.37. Road safety will continue to be a focus of transport improvement schemes, although it is recognised that there is not always an engineering solution to every collision. A mixture of measures will help us achieve this objective.

2.4.38. Residents consulted on Brent Council's Cycling and Walking Strategies stated a clear preference that creating safe cycle routes is likely to increase safe walking and cycling. As stated above, the Council seeks to implement the infrastructure proposals set out in the afore mentioned strategies and complementary Action Plans, including developing and implementing a network of primary and secondary cycle routes across the Borough, cycle permeability, cycle parking and wayfinding improvements that will enable more people to walk and cycle, more safely and more often. This will include planning for a range of different users and bikes.

2.4.39. The Council will continue to provide opportunities for active travel by engaging with hard-to reach communities, including our cycle training scheme for children and adults, cycle loan offer, and community cycling programme schemes. Brent will also continue to deliver some of that cycle training, as currently, using all ability bikes and with children from Special Educational Needs schools in the Borough.

2.4.40. Given the high proportion cars, delivery vehicles and taxis operating in Brent, it is important to work with these professionals to raise awareness and advise them how to drive in a manner that reduces the threat to KSI's. The council will deliver driver awareness courses to drivers, providing an in-depth review of road positioning and road sharing. The courses will be delivered in partnership with local driving schools and promoted in the local media, and through the police. Promotion should be targeted in priority geographical areas relative to casualty data.

2.4.41. Vehicle technology is moving ahead quickly. Whilst fully autonomous vehicles may still be a few years off, but semi-autonomous enhancements (e.g. automatic emergency breaking and speed control) are already being implemented and are welcomed by the Council, the Council considers the need for more to be done to protect other (especially vulnerable) road users.

2.4.42. HGVs are involved in a disproportionately large number of cyclist fatalities in London and are a major concern. While modern HGV designs benefit from minimal blind spots, the majority of HGVs on the borough's

road are of age and characterised by a number of blind spots and a subsequent lack of visibility from the cab[25]. Unfortunately there were four fatalities in accidents involving vans and HGVs in the sub-region in 2014. Three of the four fatalities involved a Vulnerable Road User (VRU), all pedestrians. To help put this into context, the sub-region accounted for 19% of the total number of casualties for incidents involving vans and HGVs across London. Brent supports the development and introduction of TfL's Direct Vision Standard for HGV. It is expected that these standards will address road safety concerns not only on a London-wide basis but also those specific to freight in Brent.

2.4.43. Brent Council is leading by example in that the Council fleet has achieved FORS Gold standard.

2.4.44. Brent has been working with WestTrans to develop a Delivery and Servicing Strategy[26] that is being implemented in the six northwest London boroughs.

2.4.45. Unfortunately, motorcycle road casualties have remained stubbornly high. Despite motorcyclists accounting for just one per cent of journeys made in London, 27 per cent of people killed or seriously injured (KSI) on London's roads are motorcyclists. Locally, they comprise approximately a quarter of Brent's fatal or serious injuries. For a range of reasons they are particularly vulnerable and are roughly 40 times more likely to be killed per mile travelled than a car occupant. Because of this disproportional risk, relatively small increases in the number of riders on Brent's network can lead to significantly higher levels of more serious injury collisions.

2.4.46. Whilst most motorcyclists are considerate and careful riders they are frequently "not seen" by drivers leading to collisions – so called SMIDSY collisions (Sorry Mate I Didn't See You). Against this background, Brent Council set up the On2Wheels initiative. This provides clear messages for riders promoting them to stay safe by asking them to ensure they always look and look again, be bright and cover up and, see and be seen.

---

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

[26] WestTrans Freight Strategy (2016) http://www.westtrans.org/WLA/wt2.nsf/Files/WTA-180 (as of 22/01/2019).

These messages highlight how a few simple steps can help motorcyclists and scooter riders reduce their risks of near misses or serious collisions on the road.

2.4.47. Personal safety is another issue which effects travel choices. Providing a safe environment to travel and wait with consistent lighting levels, as well as adopting a “safe last mile home” agenda, particularly for those travelling in the hours of darkness is important.

2.4.48. Metropolitan Police Service statistics show the percentage of total crimes committed in Brent as have fallen around 1.75% in 2018. The most recent Brent Borough Profile 2014 has identified that level of perception of feeling unsafe is particularly high within Brent and much greater than the average for the London Greater Authority area. More than a quarter of the borough’s residents (27%) state that they felt unsafe walking in their area after dark, compared to only 11% regionally.

2.4.49. There was, however, encouragement in how perceptions of safety have changed overtime. Residents have largely started to feel safer in the day and at night over the past ten years. The biggest change has been regarding residents feel safer after dark which is a positive shift for Brent.

### Borough Objectives

**Reduce Killed and Seriously Injured (KSI) incidents and slight accidents on Brent’s roads.**

2.4.50. Reduction of road casualties is central to the Mayor’s Transport Strategy and therefore to Brent’s Local Implementation Plan. However, the challenges outlined above require a robust set of objectives and measures to help reduce all types of road traffic casualties in the borough, as set out below.

2.4.51. It has been noted that in recent years progress has plateaued in comparison with previous years. Though it is not clear at the present time precisely what has caused progress to slow, if the Mayor’s targets are to be achieved this will need to be addressed through considerable additional investment to be provided in the short to medium term, to help us achieve this objective - on top of that already allocated. Whilst the Council makes every possible effort to address the issue it is concerned that the level of investment exceeds the Council’s resources and looks to

the Mayor to provide further financial support to achieve the targets of the published Vision Zero Plan[27].

2.4.52. The borough will:

- Reduce road danger and risk, and the perception of road danger, by improving the streets to create more forgiving environments (Safer by Design Principles), including transformational road safety improvement measures on our road network through the Liveable Neighbourhood Programmes, and continuing to deliver road safety behaviour change interventions in partnership with the police, community safety teams and local residents.

- Continue to use road safety as a principal criterion to identify road safety schemes funded through the LIP.

- Continue to implement 20mph zones and assess the potential for introduction of a borough-wide 20mph limit.

- Implement a set of measures focussed specifically on reducing speeds, including enhanced signage, working with the Police on Community Speedwatch (CSW) programmes and infrastructure measures, as well as significant road safety improvement schemes, prioritising hotspots of pedestrian and cycling casualties.

- Continue to work with the freight sector via the WestTrans Freight Strategy Steering Group to champion utilising vehicle technology such as the widespread adoption of FORS and CLOCS vehicle standards in response to the disproportionate involvement of vans and HGVs in pedestrian and cycle fatalities.

- When procuring highways services, the Borough will seek to ensure its suppliers have a minimum FORS Silver standard.

- Continue to deliver a programme of road safety education programmes for children and schools. This includes pedestrian skills

[27] Vision Zero for London, Transport for London

training, school crossing patrols in defined locations, and awareness raising activities such as theatre in education and workshops.

- Working with partners to deliver borough-wide campaigns and awareness raising activities to improve road safety, particularly benefitting vulnerable road users groups - pedestrians, cyclists and motorcyclists, such as the On2Wheels Initiative. In addition the council will work with the provider(s) of dockless cycle hire schemes in the borough to engage communities on road safety matters.

- Working with partners, such as TfL and the Met Police to provide measures to reduce the opportunity for crime and disorder at high risk locations, such as Wembley National Stadium and the SSE Arena, to protect visitors attending these attractions from potential major incidents. The council is committed to include appropriate designs in all schemes progressed by the council. This includes appropriate Hostile Vehicle Mitigation Measures (HVM).

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

### Challenges and opportunities

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

2.4.54. At busy times and in busy locations, single-occupancy car use is a very inefficient use of road space. The Department for Transport calculated that private car occupancy is at 1.5 to 1.6 persons per vehicle while up to ten bikes (and ten people) occupy the same space on the road. With up to 87 passengers on a double decker bus, buses are the most efficient mode of transport. The situation is the same for parking, with up to ten parked bikes occupying the same space as one parked car, and we would expect the situation in Brent to be similar.

2.4.55. The car is used for more journeys than any other mode even though half of all car journeys in Brent are less than five kilometres, with bus travel being the second most used mode.

2.4.56. On current trends, rising car ownership at a rate higher than the Outer London average from a low base[28] coupled with increasing journey distances[29] are set to significantly increase traffic volume. As a consequence, peak hour congestion is recognised as a problem at particular locations on the network; specifically along the A406 corridor and approaches to it, together with localised issues in Harlesden, Kilburn and Wembley. The major routes such as the North London Circular experience congestion over longer periods - reflecting the longer distance trips they carry. With the increased travel demand generated by growth already underway, it is anticipated that these issues are being exacerbated in the short to medium term.

2.4.57. While there is limited evidence of modal shift from cars to walking and cycling in the borough in recent years, there remains significant potential for this. Approximately 20% of all travel to work trips with a destination in Brent is less than two kilometres, and approximately 25% of commuters travel less than 5 kilometres[30]. Over two-third of the 148,292 people who work in the borough commute from other boroughs and local authorities (120,954), with half of them doing so by private car, primarily from Barnet (3,754), Ealing (3,327), Harrow (6,223) and, Hillingdon (2,022) [31]. Of the people whose journey to work originates in Brent, half of them commute by private car (10,599) [32].

2.4.58. Achieving this will require the Council to develop and implement demand management measures to ensure our road network as efficient and effective as possible in enabling trips to be made by modes other than the car.

2.4.59. The Council is committed to reallocate the limited road and kerbside space to other modes where feasible so that it can be used more efficiently.

---

[28] https://data.london.gov.uk/dataset/licensed-vehicles-numbers-borough (as of 17/10/2018)

[29] Census 2011, Office for National Statistics

[30] Census 2011, Office for National Statistics

[31] Census 2011, Office for National Statistics

[32] Census 2011, Office for National Statistics

2.4.60. Brent has a number of industrial estates of both local, regional and, indeed, national importance. They rely on and generate freight movements. Vehicles delivering to private residences and construction traffic also contribute significantly to the number of vehicle movements on the network. This has a significant impact on the local network in terms of congestion, road safety and air quality.

2.4.61. Due to the high percentage of vehicle kilometres attributable to freight, it is important that the LIP3 also aspires to identify opportunities to increase freight consolidation for local deliveries and to encourage where possible the use of alternative vehicles for the last mile, including by (electric) cargo bike and implementing dedicated cargo-bike loading and unloading space where feasible. Complementing WestTrans' Freight Strategy, the Council will develop Brent's Servicing and Delivery Strategy which will be the main vessel through which research into the best way of encouraging freight movements to occur either after business hours (whilst showing due consideration to the need to keep disturbances to local residents to a minimum) or in a more sustainable form of vehicle will be carried out. It will also seek to address the serious road safety issues generated by freight movement, particularly construction traffic and, the disproportionate impact this has on cyclists and pedestrians.

2.4.62. Recent evidence suggests, though, that providing attractive alternatives to the car is not sufficient on its own to encourage mode shift. A complementary approach which limits opportunities for inessential motor vehicle trips, and makes it the least attractive option, is also needed. The Borough will, therefore, consider opportunities to reduce car use (and motor traffic generally) relative to other more sustainable, more space efficient and healthier alternatives.

2.4.63. Parking policy is key to achieve this, with measures being implemented both at the journey origin and destination. This includes the availability and type of parking spaces, the size of CPZs and hours of control, as well as charging levels can all help to address inessential vehicle use. To encourage behavioural change, the Council will review and revise the Borough's Parking Permit Sacrifice Scheme. The scheme can go some way to reducing demand for residential parking in areas covered by Controlled Parking Zones, as it provides incentives to reduce household car ownership on a voluntary basis.

2.4.64. Brent's Local Plan states that removal of surplus parking spaces will be encouraged and parking provision of new developments should not have

negative impacts on the existing surrounding area. The borough will be implementing maximum car parking standards and where existing parking management is in place or can be secured, car-free/car-lite developments will be encouraged where there are other alternatives to travel other than by car.

2.4.65. The provision and use of car clubs will be promoted to provide a realistic alternative for essential car journeys. Car Clubs reduce overall car dependence, encourage use of more sustainable modes of travel and provide for Brent's residents' mobility needs by offering a vehicle when there is an essential need. It is estimated that each car club vehicle replaces approximately 10 vehicles according to Annual Survey by Carplus (2016/17), helping to reduce congestion and pollution as well as easing parking pressure. This enables kerbside space to be reallocated and utilised for other purposes, such as bike hangers or pocket parks.

2.4.66. Brent has established a considerable car club network in the Borough, with numerous car club locations, spread across the Borough, managed by three operators – Zipcar, Enterprise and most recently DriveNow – and an increasing number of car club members. The Borough has increased car club provision in recent years and has added to the existing back to base offer by introducing a flexible car club model in 2018. The network is well used. Opportunities to electrify the car club fleet in the Borough are also being explored in liaison with all operators.

2.4.67. The Borough will look to implement a range of demand management measures on Brent's streets where feasible, including rolling out Brent's 'Healthy School Streets' programme of timed road closures at the start and end of (and potentially during) each school day, particularly around pollution hotspots and busy roads, to provide healthy routes to school, also filtered permeability where cars are restricted to benefit pedestrians, cyclists and buses The borough will also explore low-emission vehicle only zones.

### Borough Objectives

**Reduce conventional vehicular trips on the network, particularly at peak time.**

2.4.68. Developing and implementing traffic demand management measures to reduce car dependency is central to the Mayor's Transport Strategy and, therefore, to Brent's Local Implementation Plan.

2.4.69. Our policies and measures to address this considerable challenge are outlined below.

- Develop and implement a range of initiatives that promote and provide attractive, convenient and safe alternatives to private cars and other forms of motor traffic.

- Continue to implement CPZs on a demand-led basis by local community groups.

- Continue to support and promote the existing back to base and flexible car club models in the Borough as an alternative to private vehicle ownership and, expand where appropriate Brent's car club network as an alternative, including exploring the potential for introducing and managing a revised Parking Permit Sacrifice scheme managing to encourage residents to give up a parking permit in exchange for car club membership.

- Support, promote and expand (flexible) cycle hire systems – including working with TfL and operators to further develop the dockless bike hire programmes in Brent – as a tool for creating viable alternatives to car ownership and use.

- Continue to lobby TfL for improvements to public transport services and capacity of them, particularly in areas of low PTAL in the Borough.

- Implement a range of demand management measures on Brent's streets, including a rolling programme of 'Healthy School Streets' of timed road closures at the start and end of (and potentially during) each school day, particularly around pollution hotspots and busy roads, to provide healthy routes to school. The council is committed to investigate location where filtered permeability in the context of those schemes to enable convenient, comfortable, easy and fast trips by walking and cycling and provide priority for these modes can be implemented.

- Explore the introduction of low-emission vehicle only zones and assess feasibility. With walking and cycling being the lowest emission forms of transport, the council is committed to also prioritise these modes in the context of plans to introduce low–emission vehicle only zones and is committed to investigate location where filtered

permeability in the context of those schemes to enable convenient, comfortable, easy and fast trips by walking and cycling and provide priority for these modes can be implemented.

- Implement a range of behaviour change and complementary measures programmes that contribute to reducing inessential motor traffic and increasing the use of sustainable modes, including the continuation to deliver a School Travel Plan behaviour change programme, engaging with Brent's schools and their involvement in the STARS accreditation process, providing measures to reduce school-run traffic, and encourage healthy routes to school. The Borough will also continue to implement smarter choices initiatives outlined in the Borough's Walking and Cycling Action Plan, including the Borough's community cycle skills training programmes.

- Develop a Servicing and Delivery Strategy for a pilot area (to be identified), and to be consulted on during the period of this LIP3. Project to form part of work to be delivered through WestTrans to outline in detail the challenges and solutions presented by freight in the Borough and further measures to reduce freight/delivery trips by motorised vehicles.

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

### Challenges and opportunities

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

2.4.71. Air quality improvement measures have previously been focussed on the reduction of carbon and $CO_2$ production. However, in recent years it has become apparent that particulate matter and $NO_2$ pose the most significant risks to the health of those exposed to them on a regular basis. Transport is a significant contributor and, air pollution which impacts on the health of our residents and communities is becoming a growing concern, especially with regard to nitrogen dioxide ($NO_2$) and particulates ($PM_{2.5}$ and $PM_{10}$).

2.4.72. The Mayor has pledged to make Central London zero emission by 2025, and Brent is committed to reducing levels of pollution across the Borough to within World Health Organisation (WHO) standards.

2.4.73. The health impacts of poor air quality are striking. The MEDICAL EFFECTS OF AIR POLLUTANTS (COMEAP) estimated in 2009 that nearly 29,000 deaths are caused by air pollution with life expectancy of every person in the UK reduced by an average of seven to eight months.

2.4.74. Most recent modelled estimates using PUBLIC HEALTH ENGLAND'S Public Health Outcomes Framework suggest 6.4% of all Brent deaths in 2016 in people aged 30 and over were attributable to particulate air pollution ($PM_{2.5}$). This compares to the UK average of 5.3% and, would mean that an estimated 110 deaths in Brent in 2016 were attributable to particulate air pollution.

2.4.75. Since the last LIP, the number of Air Quality Focus Areas in Brent has increased, with Neasden Town Centre, Church End, Kilburn and Wembley and Tokyngton now being declared Air Quality Focus Areas. These areas (shown in Figure 9) were selected based on traffic volumes and levels of traffic emissions, and, as Growth Areas, have been identified as areas of planned development.

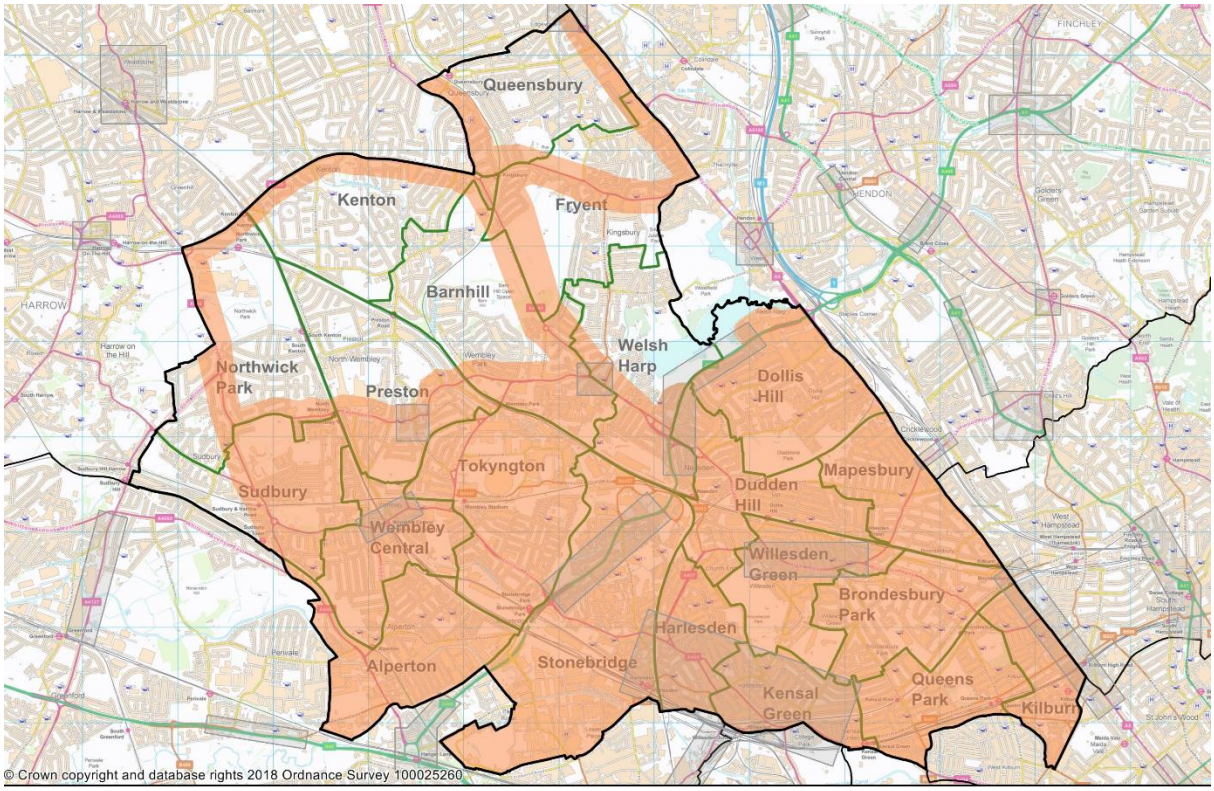



Figure 9: Air Quality Management Areas in Brent

2.4.76. Following the Mayor's School Air Quality Audit Programme, Brent has two participating schools, John Keble CE Primary and Ark Franklin Primary. The borough is working with both schools to take forward recommendations made to improve air quality around the schools.

2.4.77. The Mayor will introduce the Ultra-Low Emission Zone (ULEZ) in London in April 2019. ULEZ will operate 24 hours a day, 7 days a week, every day of the year within the same area as the current Congestion Charging Zone (CCZ). Most vehicles, will need to meet new, tighter exhaust emission standards (ULEZ standards) or pay a daily charge to travel within the area of the ULEZ in addition to the Congestion Charge and the Low Emission Zone (LEZ). From 25 October 2021 the area will be expanded to the inner London area bounded by the North and South Circular roads.

2.4.78. The extension of the ULEZ up to the North Circular Road will mean that the boundary will run directly through Brent in the Stonebridge, Welsh Harp, Dudden Hill and Dollis Hill wards. Modelling by TfL of the impact of this on emissions at a more localised level suggests a 23% reduction in NOx emissions on the North Circular in Brent in 2021. However, the annual $NO_2$ limit value and World Health Organisation guidelines for $PM_{2.5}$ on this road will continue to be exceeded. In addition, a one per cent increase in vehicle kilometres travelled on this road in Brent is expected.

2.4.79. Brent fully supports the introduction of ULEZ, including the extension to the north and south circulars, although our aspiration is for it to be London-wide to ensure the greatest benefit and to realise greater air quality improvements for all of Brent's residents.

2.4.80. London's bus fleet is also undergoing a significant upgrade to ensure ULEZ compliance by 2019, with single deck buses becoming fully electric while double deck buses will becoming hybrid.

2.4.81. Selected bus corridors outside the ULEZ area will also be prioritised for improvements as part of TfL's Low Emission Bus Zones (LEBZ). Brent welcomes the implementation of the LEBZs which will see the exclusive use of buses with top of the range engines and exhaust systems that meet or exceed the highest (Euro VI) emissions standards. Euro VI diesel engines provide a significant improvement to older engines in particular with regards to the amount of NOx that is emitted. These engines will

also emit less $CO_2$, CO (carbon monoxide), $PM_{10}$ and $PM_{2.5}$ and other local emissions. Figure 10 shows those cleaner bus routes in Brent.

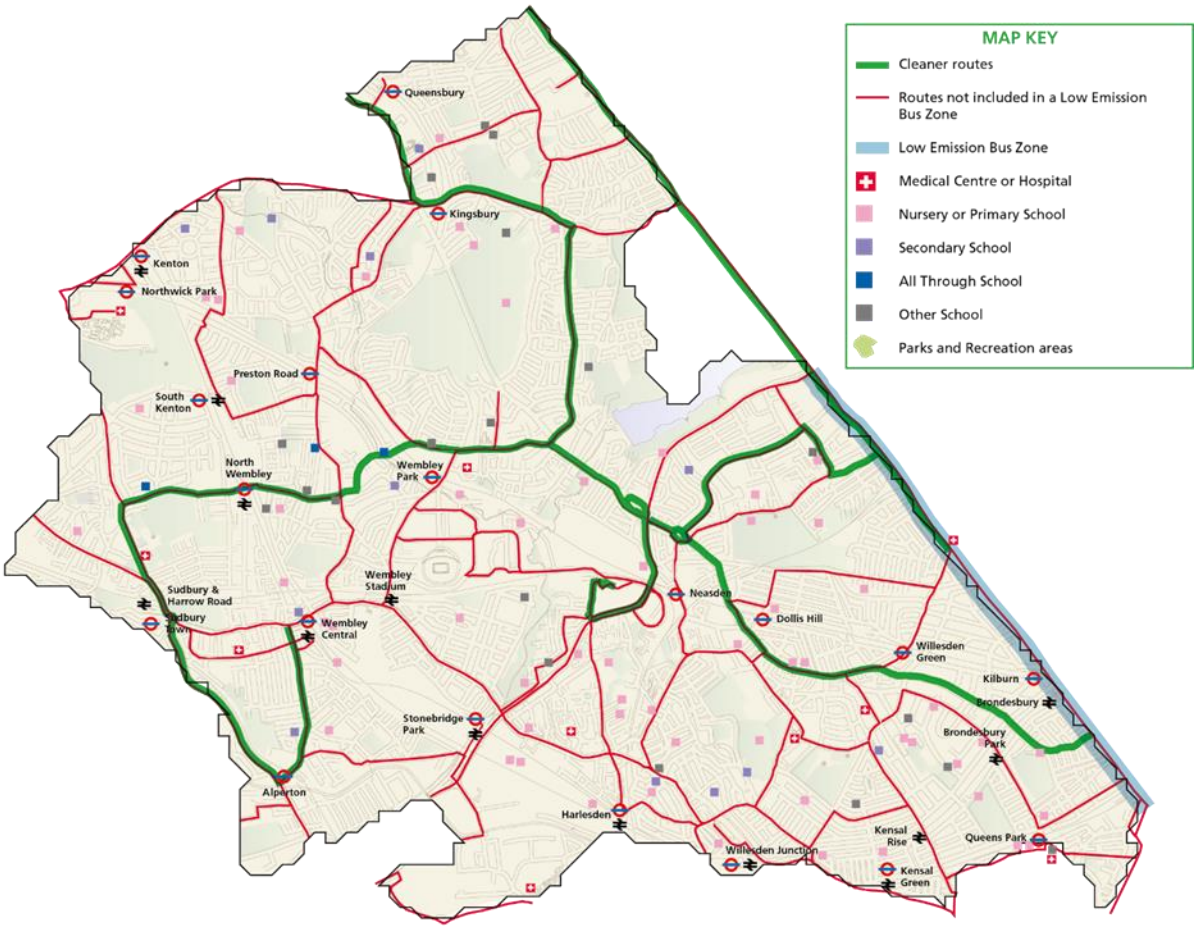



Figure 10: Cleaner Bus Routes (LEBZs) in Brent

2.4.82. Brent currently benefits from three of the proposed twelve LEBZs to be implemented by 2020, including the A5 corridor from Cricklewood/Edgware Road (by Staples Corner) to Maida Vale (Elgin Avenue/Abercorn Place). The other two corridors run from Uxbridge Road – Southall/Hayes to Shepherd's Bush and, Chiswick High Road to Kensington High Street respectively.

2.4.83. Due to the large number of bus routes running through Brent and in particular certain strategic corridors, Brent will continue to lobby TfL for further changes to the local bus fleet to reduce dependency on diesel.

2.4.84. Where journeys cannot be switched to more sustainable, cleaner options such as walking, cycling and public transport, the Borough will encourage

and enable those with essential need for a car to change to low and ultralow emissions vehicles (LEV and ULEV), such as electric vehicles.

2.4.85. Brent Council is actively working to develop and implement a comprehensive network of electric vehicle charge points to encourage the take-up and use of EVs in the borough across a wide range of different types of vehicles and users, including for residents, car clubs and taxis. This includes the expansion of the London-wide Source London network.

2.4.86. Source London charge points are predominantly located at, or close to, destinations where people are expected to make trips to. They are therefore primarily intended to be used as a top-up facility for electric vehicles rather than a primary source of charging. Since 2016, a total of 25 Source London EVCPs were installed throughout the borough.

2.4.87. For Brent residents who do not have access to off-street parking so that they can charge their vehicles overnight and close to home we are looking to install electric chargers on lamp columns which will enable overnight charging of electric vehicles. This is particularly important as the majority of electric vehicle owners charge their vehicles at home overnight and in Brent's south-eastern wards, from Harlesden to Kilburn, it is estimated that 81-90%[33] of households do not have access to off-street parking to charge from home. These residents require charge points at the kerbside in residential streets.

2.4.88. Charging facilities are required for residents who are employed in the taxi and private hire (PHV) trades and other small businesses. The Mayor's Taxi and Private Hire Action Plan 2016 requires that from January 2018 and 2020 onwards respectively, all taxis and PHVs licensed for the first time must be zero emission capable (ZEC). In order to recharge quickly during the working day, ZEC taxis and PHVs require rapid points capable of charging to 80% from flat in 30 minutes. Brent has engaged with TfL over the past year to identify an initial set of locations for people to 'top-up' their vehicles for those longer journeys that cannot be completed on one charge. Five rapid chargers have been installed and are operational in Brent and a further 15 locations have been identified for consideration on the strategic road network and near taxi ranks.

[33] West London Electric Vehicle Study, WSP Parsons Brinkerhoff (2016)

2.4.89. However, the lowest emission forms of transport are walking and cycling. As well as helping to mitigate toxic pollution, they also generate no carbon emissions. These modes also contribute to delivering other objectives in this Strategy more widely, and therefore remain the Council's priority.

### Borough Objectives

**Reduce the exposure of Brent residents to Particulate Matter (PM) and Nitrogen Dioxide ($NO_2$) generated by the transport network.**

2.4.90. Reducing emissions and exposure to air pollution is central to the Mayor's Transport Strategy and, therefore, to Brent's Local Implementation Plan.

2.4.91. The Borough will:

- Support the uptake of cleaner vehicles for essential car/taxi/van trips by providing the charging network infrastructure and policy, but retain active travel as our priority in the first instance as the cleanest, genuinely emission-free forms of travel.

- Continue to plan, develop and implement a comprehensive network of electric vehicle charge points to encourage the take-up and use of EVs in the borough across a wide range of different types of vehicles and users, including approximately 30 Source London chargers, an additional 15 GULCS rapid chargers and a minimum of 85 lamp column chargers in 2019/20. Proposed sites will be consulted on.

- Identify opportunities, and bid where appropriate, for additional funding to deliver common and innovative EV charging infrastructure, such as from the Office for Low Emission Vehicles (e.g. GULCS and On-Road Charging System (ORCS)) and Innovate UK (e.g. Electric Vehicle Charging for Public Spaces Challenge Fund).Continue to set the Borough's parking charges and progress the introduction of an annual levy on the price of a resident's parking permit for all diesel vehicles to incentivise the uptake of lower emission vehicles as well as other objectives set out in this Strategy. Along with the introduction of the levy for all diesel vehicles, the Council is also looking to increase the respective surcharges for second and third residents' parking permits.

- Work with car club operators to increase the proportion of EVs in their fleets, including through lower cost permits, with new car club bays being delivered on-street to be EV where feasible.

- Explore the introduction of area-based 'Low Emission Neighbourhoods' across Brent. Areas are to be identified in conjunction with Brent's Air Quality Action Plan (2018).This will focus on reducing levels of driving and, encourage mode shift to active travel, alongside EVCP provision in the surrounding area(s).

- Work with TfL on delivering the necessary infrastructure to support Low Emission Bus Zones operating in Brent.

- Continue anti-idling enforcement at hot spots at schools across the Borough following an initial pilot started in 2018.Identify opportunities for increased planting and urban greening in all transport schemes to help mitigate the impacts of carbon emissions and climate change, and provide shade and shelter and, seek opportunities, where suitable, to convert carriageway space to green space through parklets, pocket parks and other measures, which also contribute to the wider Healthy Streets agenda. In this regard, the council confirms its commitment to consider SuDS as part of the all schemes to convey and attenuate surface water, thus mitigating the risk of surface flooding.

- Continue to assist John Keble CE Primary and Ark Franklin Primary in delivering the recommendations made within their respective action plans to improve air quality around the schools and encourage behaviour change to more cleaner and active travel to school.

- Work towards the World Health Organisation (WHO) limits for Particulate Matter and Nitrogen Dioxide by 2030 and, implement a range of additional measures as set out in the Brent Air Quality Action Plan.

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

### Challenges and opportunities

2.4.92. There are many challenges in Brent to the delivery of Outcome 5, these are outlined below.

2.4.93. Public transport makes a substantial contribution to the Brent transport provision economy, accounting for 202,000 daily passenger journeys in the borough in 2015/16. This compares with approximately 10 million journeys London wide[34].

2.4.94. In Brent we have a highest public transport mode share of all Outer London. Public transport journeys account for 37% of all trips[35].

2.4.95. In a borough with levels of car ownership still well below the Outer London average, there are over 40% of households with no car/van available to them, and therefore to whom public transport is a vital lifeline[36]. A further 40% of households in Brent have access to a single car[37], often leaving others in the household reliant on other modes of transport.

2.4.96. Kilburn (4802 households) had the highest number without access to a car or van, Kenton (763 households) had the least. The highest numbers of households with access to one car or van were in Queen's Park (2656 households), again Kenton (1533 households) had the least.

2.4.97. The bus network operated in Brent is managed by TfL London Buses with services operated commercially by Arriva London North Ltd., Abellio London Ltd., East London Bus and Coach Company Ltd., London Chartered Busways Ltd., London Central Bus Company Ltd., Metroline Travel Ltd., Metroline West Ltd. And Tower Transit Operations.

2.4.98. The operation of commercial bus routes relies on passenger demand, and extensive urban bus networks require populations which are sufficiently high, densely distributed, and willing to use public bus services.

---

[34] Travel in London Volume 10, Transport for London

[35] Travel in London Report 11, Transport for London

[36] Census 2011, Office for National Statistics

[37] Census 2011, Office for National Statistics

2.4.99. Within the Borough, public transport connectivity is variable as shown in the Public Transport Accessibility Level (PTAL) map in Figure 11. The borough's polycentric population distribution and socio-economic characteristics result in a network almost exclusively focussed around radial routes to and from Central London. There is, however, limited provision of east-west routes to provide direct connectivity between the radial lines across the borough.

2.4.100. Underlying socio-economic conditions have a strong influence on travel choice, and with Brent having a high concentration of some of the most deprived areas in the UK (14), equity is, therefore, an important theme for LIP3. The relationship between travel choice and income is spelt out more fully in the most results of the London Travel Demand Survey[38]. These show a strong trend in reliance on the bus in lower income groups.

2.4.101. The more restricted transport choices of those on lower incomes are therefore an important issue for LIP3. A reliance on modes other than the car means the provision of a good public transport networks is key to try and provide equity of travel options for Brent residents. Those on lower incomes (and usually residents in more disadvantaged communities) were also, subsequently, identified as being most vulnerable to being hit by the lack of orbital bus services, due to their more limited access to other forms of transport.

2.4.102. Public transport plays therefore an important role in providing an alternative mode to the car for residents and, though bus and train use are not considered active modes it is also worth noting that most journeys taken by public transport will include an element of walking or cycling, as part of the overall journey and, they contribute to reduced congestion and lower emissions by reducing the number of car trips taking place.

2.4.103. A number of regeneration and growth initiatives are planned or already underway across the borough which will support future economic growth and employment. Brent's Local Plan states that the most significant growth (and associated developments) in Brent will be delivered in identified growth areas - all of which are at transport hubs.

[38] London Travel Demand Survey 2017, Transport for London

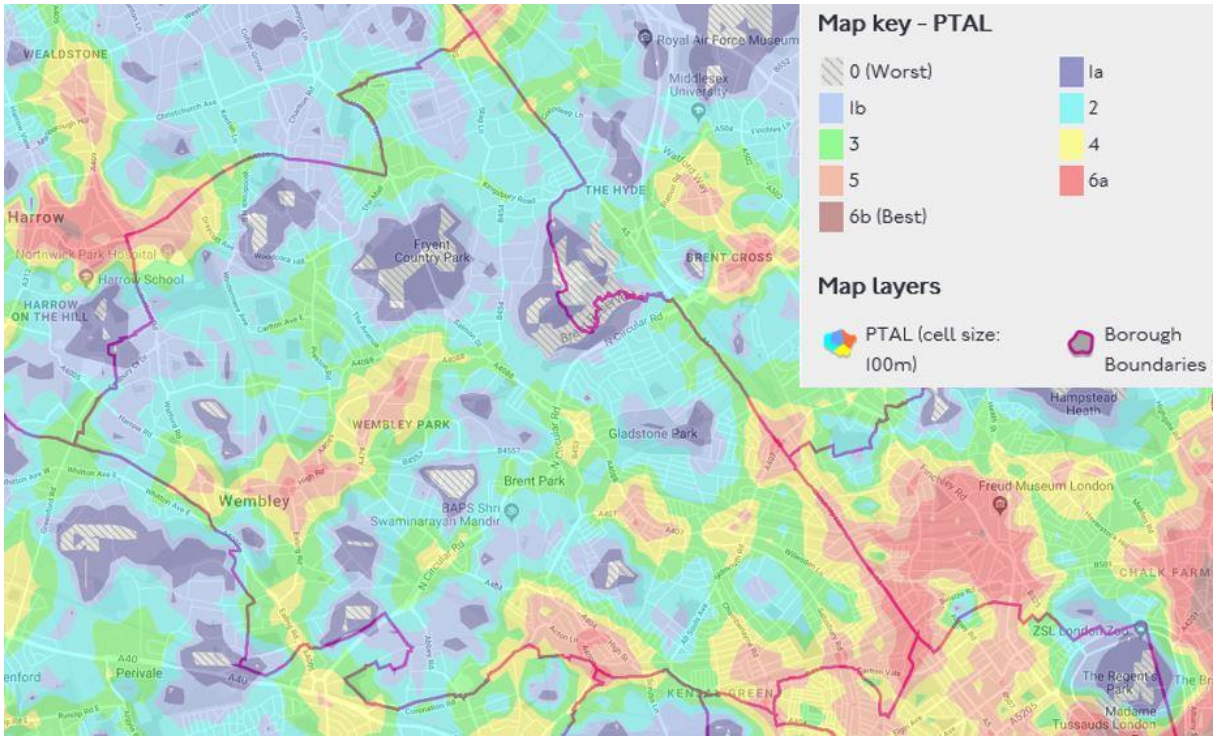



Figure 11: Public Transport Accessibility Levels (PTALs) in Brent

2.4.104. These include Alperton, Burn Oak/Colindale, Church End, South Kilburn and Wembley identified as key to regenerating the borough and affording substantial opportunities for redevelopment. The emerging new Local Plan is also proposing further growth areas at Neasden, Staples Corner and Northwick Park. In addition to the growth areas, two other key locations were identified in which significant change will be brought forward because of their strategic significance to Brent and London as a whole. These areas are the North Circular Road and Park Royal.

2.4.105. An increase in public transport capacity is essential to support growth and unlock new areas by making them more accessible. Investment will not only unlock housing growth but also provide interchange options crucial to improve both accessibility to the public transport network and connectivity.

### Borough Objectives

**Increase the uptake of sustainable modes, in particular active modes of travel.**

2.4.106. With more than 80,000 Brent residents relying on public transport as their main mode of travel, public transport plays a key role in the borough's transport mix. The Council, however, mainly has a lobbying and

influencing role, which it will continue to do and will focus of its lobbying to ensure that:

- The local and sub-regional bus network is continued to be developed by TfL with priority given to those locations where PTALs are low and, improved orbital connectivity across the wider network.

- To seek improvements to the London Overground network in terms of frequencies and destinations.

- To seek improvements to the Thameslink network in terms of frequencies.

- To seek improvements to the Chiltern Line in terms of frequency, Sunday service, reliability and through trains to other destinations, especially in relation to the Sudbury Hill, Sudbury and Harrow Road and Wembley Stadium stations.

- To monitor and assess the impacts of the two existing railway improvement projects (HS2 and the Elizabeth Line) to ensure they deliver the wider benefits to Brent residents which have been committed and that the construction does not adversely impact on residents without appropriate mitigation measures.

- Seek the comprehensive redevelopment of Willesden Junction so that plans for HS2, Network Rail, Crossrail 2 and Great Western Mainline Stations, as well as surface transport (buses and taxis), are integrated.

- Seek improvements in reinstating West Coast Main Line platforms at Willesden Junction Station to provide appropriate interchange with HS2 and the Elizabeth Line.

- Work to deliver the West London orbital link, along with partner Boroughs and Network Rail as part of supporting regeneration and growth in the Borough. The proposals for the West London Orbital for a London Overground from West Hampstead and Hendon at the northern end to Hounslow at the Western end via Brent Cross West, Neasden, Harlesden, Old Oak Common, Acton and Brentford will improve connectivity across North West London, and will establish a number of new connections to existing radial routes including

Thameslink, London Underground's Bakerloo, Jubilee and Piccadilly lines, HS2 and Crossrail.

- Continue to improve public transport provision by providing new and improved pedestrian and cycle routes, such as the recently improved active travel connections to existing rail stations at Wembley Park, Wembley Stadium and Wembley Central, and other transport infrastructure (including to reduce severance for active travel modes caused by road/rail/canal networks) to complement TfL bus network by improving access to it and new sites brought forward through good growth, ensuring connectivity across the wider network.

- Continue to develop and deliver the programme of smarter choices initiatives to encourage a shift to active travel modes to reduce public transport overcrowding.

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

### Challenges and opportunities

2.4.107. Buses offer the public transport mode with the greatest coverage and patronage in Brent and consequently extending the bus network represents the easiest and cheapest means of providing an alternative to the private car for many journeys. As such, the quality and reliability and coverage of the bus network will need to be promoted throughout LIP3.

2.4.108. The importance of buses is illustrated by the fact that over 60% of public transport journeys in Brent are made by bus.

2.4.109. More than 44,000 people in Brent have some form of long-term health problems or disability which impact on their day-to-day activities[39]. It is estimated that 15,057 people in Brent aged 18 to 64 years had a moderate physical disability in 2015. By 2030, this is estimated to increase to 16,725 people, an increase of 11%. In 2015, 4,164 people aged 18 to 64 were estimated to have a serious physical disability. By 2030, this is expected to rise to 4,763 people, an increase of 14%[40].

[39] Census 2011, Office for National Statistics

[40] Joint Strategic Needs Assessment (2016), London Borough of Brent

2.4.110. The most recent mid-year population estimates for 2016 show that a higher proportion of Brent's population, 14.0%, is aged 65 and over, compared with the Outer London average of 13.1%[41].

2.4.111. Ensuring that everyone can access the transport network underpins Brent's commitment to delivering the borough's over-riding objectives to reduce inequality and improve the health and well-being of its population, where everyone has a chance to succeed, and everyone can lead happy, healthy and fulfilling lives.

2.4.112. This indicates a changing and increased demand for accessible transport.

2.4.113. Through the Bus Accessibility Programme 97% of bus stops in Brent are now accessible for people with mobility impairments, facilitating independent travel. This Programme provides improvements that allow buses to pull up to the kerb allowing a disability ramp to be extended. The Council is mindful of an ageing population and this has improved access to transport for groups who may otherwise struggle to move around the borough, supporting them to remain independent.

2.4.114. The remaining 3% of bus stops have been accessed in order to provide accessibility improvements. However, it has been established that it is not possible to improve the remaining bus stop locations in accordance with design standards.

2.4.115. In Brent, however, several Underground stations at present do not have step-free access, as well as a number of Overground stations and Network Rail stations. Delivering enhanced provision of step-free access to stations in Brent, with a short term focus on Stonebridge Park, Wembley Stadium, South Kenton and Willesden Green and Willesden Junction stations remains key, with future locations for improvements to be identified.

2.4.116. Recent discussions at Brent's Public Transport Forum have identified a need for step-free access at a number of stations across the borough, such as Alperton (Piccadilly Line), Queens Park and Harlesden

[41] Mid-2016 Population Estimates, Office for National Statistics

(Bakerloo Line and London Overground). For the anticipated growth at Northwick Park to be realised, the emerging Local Plan identifies a clear desire to make Northwick Park station step-free. This would also improve accessibility to Northwick Park Hospital.

### Borough Objectives

**Increase the uptake of sustainable modes, in particular active modes of travel.**

2.4.117. With more than 80,000 Brent residents relying on public transport as their main mode of travel, public transport plays a key role in the borough's transport mix. The Borough will pending funding availability:

- Work with TfL to create public transport strategies for areas of the borough which are likely to see significant change as part of regeneration or growth, similar to that produced for the Wembley area.

- Support the provision of on-demand bus services (particularly in east-west direction), which are of benefit to those otherwise excluded from such networks.

- Carry out a study into which of the remaining stations in the Borough which do not have step-free access should be prioritised based on specific local details.

- Implement a range of permeability and accessibility improvements to stations and town centres through Liveable Neighbourhoods and other bespoke programmes. Park Royal Liveable Neighbourhood application proposed for submission in November 2019 for delivery over three to four years.

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

- Lobby TfL and Network Rail to improve step-free access (SFA) on underground, Overground and mainline stations within the borough to improve accessibility for more disadvantaged communities, including Northwick Park (Metropolitan Line) Alperton (Piccadilly Line) and Queens Park (Bakerloo Line and London Overground) and other locations.

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

### Challenges and opportunities

2.4.119. Many buses, underground and rail lines are seriously overcrowded, creating an unpleasant and at times unreliable passenger experience. Even with significant investment and planned improvements, overcrowding will continue, mainly due to population growth with demand exceeding supply. Journeys, therefore, need to be enabled to more efficient modes where there are opportunities to do so, freeing space as demand for services increases. It is estimated that just under 200,000 public transport trips made in Brent could be cycled, with the majority of which are made by Brent residents[42].

2.4.120. Bus services will form the key component of the sustainable travel modes promoted in the Borough and, Brent is, therefore, strongly supportive of TfL's ongoing commitment to implementing a range of bus priority investment measures to provide infrastructure needed for buses to be a high quality, reliable public transport network that help to sustain a growing Borough. A recent example include the a bus-only slip road for Bus Route 206 buses on Brentfield Road in Neasden, enabling buses to take a more direct route that aims to save roughly five minutes journey time. The changes also mean that buses can travel the same route in both directions, making the route not only faster but more convenient and direct.

2.4.121. The average excess waiting times for buses in Brent have increased from an average of one minute in 2016 to 1.1 minutes in 2017/18. Passenger research indicates that improved punctuality is a priority for bus users, and with increasing demand on the road network which is likely to result in further traffic congestion it is very likely that bus priority infrastructure will be necessary to maintain bus service viability, punctuality and encourage modal shift.

2.4.122. The council is, therefore, progressing a number of bus priority schemes, most notably along the Chamberlayne Road/Kilburn Road corridor. The schemes comprise the removal of double kerbs and improve the

[42] Transport for London, Analysis of Cycling Potential (2016)

carriageway alignment to aid bus stop accessibility and bus movement through this key corridor. The scheme will:

- Address the waiting and loading restrictions near the Kilburn Lane junction with Harrow Road to ensure buses can enter Kilburn Lane with minimal delay on exiting the Harrow Road junction;

- Mitigate the impact of parking and loading on movement, notably for buses and cyclists;
- Address the narrow footways to improve pedestrian access to bus stops; and

- Address the Buller Road junction alignment to improve bus movement and pedestrian road safety in this section.

- Other bus priority schemes progressed by the council include the implementation of a new bus gate at Capitol Way to give buses priority access, thereby reducing delays to bus journeys.

### Borough Objectives

**Increase the uptake of sustainable modes, in particular active modes of travel.**

2.4.123. With more than 80,000 Brent residents relying on public transport as their main mode of travel, public transport plays a key role in the borough's transport mix. The Borough will:

- Deliver bus priority improvements across the Borough, particularly completion of the schemes along the main bus corridors such as Chamberlayne Road, Kilburn Road and Kilburn High Street, and support the provision of on-demand bus services (particularly in east-west direction), which are of benefit to those otherwise excluded from such networks.

- Encourage a shift from public transport use to walking and cycling where appropriate to reduce public transport overcrowding.

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

- Lobby TfL to ensure that they maintain a bus service that provides a good level of frequency, ride comfort and accessibility to Brent's residents, recognising the role of buses as the most accessible part of our public transport system.

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

### Challenges and opportunities

2.4.125. London is expected to grow by a significant amount in terms of employment, jobs and population over the next 25 years. Brent will therefore also see considerable growth over this period, much greater in scale than in recent times. The borough's population is forecast to grow by approximately 20% by 2041, from 330,000 people in 2016 to 394,000.

2.4.126. The London Plan housing target for Brent will add a minimum of 29,150 dwellings in Brent.

2.4.127. A number of regeneration and growth initiatives are planned or already underway across the borough which will support future economic growth and employment. These include the five Growth Areas of Alperton, Burn Oak/Colindale, Church End, South Kilburn and Wembley identified as key to regenerating the borough and affording substantial opportunities for redevelopment. The emerging new Brent Local Plan is also proposing further Growth Areas at Neasden, Staples Corner and Northwick Park. In addition to the Growth Areas, two other key locations were identified in which significant change will be brought forward because of their strategic significance to Brent and London as a whole. These areas are the North Circular Road and Park Royal.

2.4.128. The current low level of active and sustainable modes and the forecast growth resulting in greater pressure on the transport network, underlines the need to rethink the long term approach to transport in accordance with the objectives set out in Brent's Long Term Transport Strategy which support the seven transport principles to enable good growth as set out in the Mayor's Transport Strategy.

2.4.129. An increase in public transport capacity is essential to support the growth and unlock new areas by making them more accessible. Brent, therefore, supports the proposals for the West London Orbital via Neasden and Harlesden which will further improve connectivity across North West London and has the potential to enable significant numbers of mixed development, with the potential to unlock 15,000 to 20,000 new homes across the West London sub-region and, to realise development within

Brent comprising approximately 10,000 new homes. Those are mainly to be realised around Neasden and Staples Corner.

2.4.130. The Council also welcomes proposals for increasing capacity on several Underground lines, in particularly those most affecting Brent such as the proposed capacity upgrades for the Northern Line, Piccadilly Line and Metropolitan Line.

2.4.131. Similarly, improved provision and support for sustainable modes is clearly required to help unlock areas for regeneration, making them more accessible, and ensure the most efficient use of the transport network for a growing population in the Borough. Evidence suggests, however, that on its own investment to improve provision for and encourage use of alternative modes of travel to the car will not be sufficient to change existing travel behaviour, and deliver the required modal shift. Good Growth as defined by the Mayor calls for an active approach to shaping the changing character of places, rather than simply a reactive response to proposals. Demand management to reduce indiscriminate car use will, subsequently, be key in supporting sustainable travel improvements and encouraging modal shift in the medium to long term in Brent as previously outlined (reference is made to Outcome 3).

2.4.132. Parking policy is key to achieve this, with measures being implemented both at the journey origin and destination. With cars being parked stationary for 95% of the time on average, parking has a considerable impact on the design of new developments. The Council has been proactive in its parking policies, reducing parking levels to a minimum where feasible, and seek to remove parking where it is a barrier to movement, particularly in relation to active travel routes.

### Borough Objectives

**Support growth areas and town centres to enable sustainable development, ensuring people have options how to travel rather than drive.**

2.4.133. Brent is expected to see high levels of growth over the next 20 to 30 years, focussing on the Growth Areas. The Good Growth principle is central to the Mayor's Transport Strategy and, therefore, to Brent's Local Implementation Plan. Adequate transport investment will be required to ensure those unprecedented levels of development take place on a sustainable basis, are accessible for all users and does not place undue pressure on the transport networks. Whilst the Council makes every possible effort to address the issue it is concerned that the level of

investment exceeds the Council's resources and looks to the Mayor to provide further investment from TfL in the short to medium term and, support to work with the Council to realise good growth within the Borough.

2.4.134. The Borough will:

- Continue to develop masterplans for each of the identified Growth Areas to provide a framework for delivering an exemplar accessible and sustainable urban environment and, identify a number of public realm improvements to be implemented and maintained throughout the town centres where walking and cycling are comfortable, convenient, safe and efficient choices for people to move around the local area. The council will ensure to provide for all ages and abilities and aim to further enhance the attractiveness of the public realm, such as seating and trees to enable more walking by all.

- Continue to implement the Borough's Transport Strategy for Wembley to meet the needs of regeneration and economic growth, with this largely focussing on active travel connections to existing rail stations at Wembley Park, Wembley Stadium and Wembley Central.

- Explore the feasibility of the development of a Travel Planning Strategy to secure and robustly monitor Travel Plans from (relevant) new development sites to ensure they set the highest standards that meet our transport objectives, minimising their impact on the transport network particularly with regard to congestion, air quality and safety.

- Seek and secure developer contributions to ensure the maximum funding potential from new developments to provide new and improved pedestrian and cycle routes, and other transport infrastructure improvements (including those aimed to reduce severance for active travel modes caused by road/rail/canal networks), improve access to new sites and connectivity across the wider network.

- Seek planning obligations from developers to provide parking management mechanisms, such as Controlled Parking Zones to enable car-free/car-lite development.

- Work with developers to encourage the provision of better information about active travel provision and public transport services, especially with hard to reach groups.

- Explore the introduction of area-based 'Low Emission Neighbourhoods' across Brent, to deliver a package of measures to improve air quality in and around town centres. This will focus on reducing levels of driving and, encourage mode shift to active travel, alongside EVCP provision in the surrounding areas.

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

### Challenges and opportunities

2.4.135. Not only is the anticipated scale of development in Brent such that major changes can be expected in the transport networks, there are also a number of transport investment proposals that can unlock new development in Brent.

2.4.136. Those include:

<u>High Speed 2 – Old Oak Common</u>

2.4.137. The largest change in urban development and travel patterns in West London will be delivered by the development of Old Oak Common around the proposed High Speed 2 (HS2), Crossrail and Great Western Mainline interchange. It is noted that this development provides huge opportunity for regeneration not just of the Old Oak area but also for the wider area, including Brent.

2.4.138. The regeneration of Old Oak and Park Royal Opportunity Area (with Park Royal being identified in the Draft London Plan as an Opportunity Area with the capacity has capacity for 1,500 new homes and 5,000 new jobs) focusses around the proposed HS2, Elizabeth Line and Great Western Main Line interchange station. Having been identified as part of the regeneration of the wider area, the redevelopment of Willesden Junction Station presents a strong opportunity to open up connections to the north and, ensure the existing communities as well as Harlesden Town Centre will benefit from the regeneration of Old Oak. Willesden Junction is a critical commuter station for Brent residents.

2.4.139. In addition, the proposed transport interchange at Old Oak Common, providing easy transitions with a number of other mainline and commuter rail services, including the Elizabeth Line and the West Coast Main Line will provide additional connections to Wembley. Such links will allow Brent to be better interconnected with the wider rail network, reduce travel time into Central London and, ease congestion at Euston.

West London Orbital

2.4.140. The proposals for the West London Orbital (WLO) for a London Overground from West Hampstead and Hendon at the northern end to Hounslow at the Western end via Brent Cross West, Neasden, Harlesden, Old Oak Common, Acton and Brentford will further improve connectivity across North West London, and will establish a number of new connections to existing radial routes including Thameslink, London Underground's Bakerloo, Jubilee and Piccadilly lines, HS2 and Crossrail.

2.4.141. The WLO line has the potential to enable significant numbers of mixed development, with the potential to unlock 15,000 to 20,000 new homes across the West London sub-region and, to realise development within Brent comprising approximately 10,000 new homes. Those are mainly to be realised around Neasden and Staples Corner.

Brent Cross West Thameslink

2.4.142. Brent Cross Cricklewood, though located in Barnet, will create a new sustainable mixed use town centre for Barnet and, the development is hugely significant for North West London. The development is underpinned by major transport improvements, including the new Brent Cross West Thameslink Station which will link Brent Cross Cricklewood to Central London. Complementary investment in the transport infrastructure will include comprehensive redesigns of major road junctions, as well as enhancement to the local pedestrian and cycle networks. The latter including a new living bridge across the A406. The programme is also expected to create up to 27,000 new jobs and will be a huge economic boost for the area, including Brent.

### Borough Objectives

**Support growth areas and town centres to enable sustainable development, ensuring people have options how to travel rather than drive.**

2.4.143. Brent will see considerable growth over the period of the LIP3, some of which is being unlocked by the two major transport infrastructure projects detailed above. Increased growth has the potential to place greater pressure on the transport network and could lead to reduced utility for residents if it is not adequately supported by further local transport investment.

2.4.144. The Park Royal Opportunity Area Planning Framework, for example, provides scope through the regeneration to further improve links to Harlesden in association with accessibility improvements at Old Oak Common. These opportunities to improve sustainable access will be taken forward as and when possible.

2.4.145. Another recent example is the development of the Harlesden Neighbourhood Plan (2018) which aims to address deprivation and increase the wellbeing of its residents by addressing the importance of affordable housing, a thriving local high street and local economy with increased access to opportunities and public services. With accessibility and connectivity being a major factor in this, the Neighbourhood Plan includes policies leading to development being more sustainable by, for example, promoting trip generating development in the town centre where public transport, walking and cycling access is good, proposing higher density housing development in line with the London Plan's principles, i.e. where public transport access is better. The Neighbourhood Plan is also promoting and prioritising sustainable modes of transport alongside a reduction in car parking in the area.

2.4.146. The Borough will:

- Seek the comprehensive redevelopment of Willesden Junction as so that plans for HS2, Crossrail and Great Western Mainline Stations, as well as surface transport (buses and taxis), are integrated to best meet the needs of Brent's residents, businesses and visitors to the Borough.

- Seek improvements in reinstating West Coast Main Line platforms at Willesden Junction Station to provide appropriate interchange with HS2 and the Elizabeth Line.

- Work to deliver the West London orbital link, along with partner Boroughs and Network Rail as part of supporting regeneration and growth in the Borough. The proposals for the West London Orbital

for a London Overground from West Hampstead and Hendon at the northern end to Hounslow at the Western end via Brent Cross West, Neasden, Harlesden, Old Oak Common, Acton and Brentford will improve connectivity across North West London, and will establish a number of new connections to existing radial routes including Thameslink, London Underground's Bakerloo, Jubilee and Piccadilly lines, HS2 and Crossrail.

## 2.5. Other Mayoral Strategies

2.5.1. The wider policy context for this Local Implementation Plan reflects a number of plans, programmes, strategies and guidance at a regional level as well as the borough plan and local plan at a local level. The Mayor's Transport Strategy is not the only Mayoral that has influenced the policy direction contained within this LIP. The Draft London Plan (2017), London Health Inequalities Strategy (2017), London Economic Development Strategy (2018), London Environment Strategy (2018), London Culture Strategy (2018), and London Housing Strategy (2018) have helped shaped this document.

2.5.2. These strategies are all supported by the borough's actions on how we will manage movement by encouraging more cycling and walking; recognising the importance of the bus and rail network to support growth without the need for a car and provide accessibility to employment opportunities, and providing public realm that improves air and noise quality that support health and well-being for our communities, including a safe place to live and work.

# 3. The Delivery Plan

## 3.1. Introduction

3.1.1. This chapter sets out our Delivery Plan for achieving the objectives of this LIP. It includes:

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

## 3.2. Linkages to the Mayor's Transport Strategy priorities

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

**TABLE ST01 - Linkages between LIP projects and programmes and the Mayor's Transport Strategy outcomes**

| | Programme/Project | MTS mode share | MTS outcomes | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Improving active, efficient and sustainable mode share | No 1:-Active | No 2:- Safe | No 3:-Efficient | No 4:- Clean & Green | No 5:- Connected | No 6:- Accessible | No 7:- Quality | Nos 8 & 9 Sustainable Growth/Unlocking |
| | **Corridors, Neighbourhoods and Supporting Measures** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1 | LIP Policy, Programme and Monitoring | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2 | Travel awareness programme | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| 3 | Installation of Electric Vehicle Charge Points (EVCPs) | | | | | ✓ | | | | ✓ |
| 4 | Car Clubs | ✓ | | ✓ | ✓ | ✓ | | | | ✓ |
| 5 | Local Safety Schemes (Investigation) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | Local Safety Schemes (Implementation) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| 7 | Review/amendment of existing and future 20mph zones | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| 8 | Walking and Cycling Supporting Engineering Measures (inc. STP schools) | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| 9 | Bike It Project Sustrans/Brent | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| 10 | Adult & Child Cycle Training Programme | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| 11 | West Sub-Region Travel Planners | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| 12 | Walking and Cycling – Supporting Non-Engineering Measures (inc. STP schools) | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| 13 | Education, Training and Publicity (ETP) Initiatives | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| 14 | Environmental Health Initiatives – Air Quality | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| 15 | Waiting and Loading Restriction Reviews | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 16 | Accessibility and Disabled Person's Parking Places | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| 17 | Signing and Lining Review | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | **Bus Priority** | | | | | | | | | |
| 18 | Minor works (such as lining and signing) | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| 19 | Major works (such as signal modifications) | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| | **Cycling** | | | | | | | | | |
| 20 | Quietway Wembley Park to Harrow Weald | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| 21 | Quietway Regents Park to Gladstone Park | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| 22 | CFR23 (Wembley to Willesden Junction) | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| | **Liveable Neighbourhoods** | | | | | | | | | |
| 22 | Park Royal | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |

## 3.3. TfL Business Plan

3.3.1. 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.

3.3.2. The following TfL projects have implications for the borough.

3.3.3. Deep Tube Upgrade Programme (DTUP)

3.3.3.1. The DTUP aims to replace the life-expired rolling stock and signalling and control systems across the four 'Deep Tube' lines – the Piccadilly, Bakerloo, Central and Waterloo & City lines (in that order).

3.3.3.2. The replacement of ageing assets on these lines will transform customer service quality through the introduction of a consistent brand of high capacity, walk-through and, air-cooled trains as introduced on the Sub-Surface lines. The new trains, combined with modern signalling control systems and supporting infrastructure, will allow the introduction of high frequency automatic train operation.

3.3.3.3. Implications for borough:

3.3.3.3.1. Brent is strongly supportive of TfL's ongoing line upgrade programmes to increase frequency and capacity of services, along with improving step-free access at platform level at its stations and modernising rolling stock, signalling and operational infrastructure. Notwithstanding this support, Brent will continue to work and secure upgrades to the frequency and capacity of the Bakerloo and Piccadilly lines to be prioritised and brought forward from current expected timeframes, where possible.

3.3.4. Four Line Modernisation

3.3.4.1. This programme involves work on the sub-surface lines of the Circle, District, Hammersmith & City and Metropolitan. Work has been completed on a new control centre and continues with signalling upgrades on all four lines. This project will provide increased reliability to these tube lines with 28 trains per hour by 2023 on the Metropolitan line.

3.3.4.2. Implications for borough:

3.3.4.2.1. Key strengths of the public transport network within Brent include the Metropolitan line, which provides a fast and efficient link into Central London and is currently under capacity. Brent is strongly supportive of TfL's ongoing line upgrade programmes to increase frequency and capacity of services. Notwithstanding this support, Brent will continue to work and secure improvements to step-free access at its stations.

3.3.4.3. Complementary works to be carried out by the borough:

3.3.4.3.1. With Brent progressing the regeneration works in line with the Wembley Masterplan and associated Wembley Area Action Plan, access to Wembley Park Station has been improved significantly, with, for example, a new taxi rank interchange implemented adjacent to the station. While the latter was mainly completed in anticipation of the start of the Night Tube services are running Fridays and Saturdays on the Jubilee line, the rank enables an easy and convenient interchange with the Metropolitan line as well as the local bus services.

3.3.4.3.2. As the schemes progress, existing access routes to the station such as via North End Road will be further improved.

3.3.5. <u>Modern Bus Fleet</u>

3.3.5.1. The Mayor has made a commitment to providing a cleaner and greener bus fleet in London to assist in tackling the capital's poor air quality. All new double-deck buses will be hybrid, electric or hydrogen to focus on only buying the greenest, cleanest buses. By 2037 all 9,200 of London's bus fleet will be zero emission.

3.3.5.2. The entire London bus fleet will meet Euro VI emission standards by 2020. The majority of buses will be retrofitted with new exhaust systems, and in some instances engines to ensure cleaner greener vehicles as soon as possible.

3.3.5.3. Implications for borough:

3.3.5.3.1. Brent welcomes the implementation of the modern bus fleet, especially in the context of the New Low Emission Bus Zones (LEBZs) which will see the exclusive use of buses with top of the range engines and exhaust systems that meet or exceed the highest (Euro VI) emissions standards. Euro VI diesel engines provide a significant improvement to older engines in particular with regards to the amount of $NO_x$ that is emitted. These engines will also emit less $CO_2$, CO (carbon monoxide), $PM_{10}$ and $PM_{2.5}$ and other local emissions.

3.3.5.3.2. Brent benefits from three of the proposed twelve LEBZs to be implemented by 2020, including the A5 corridor from Cricklewood/Edgware Road (by Staples Corner) to Maida Vale (Elgin Avenue/Abercorn Place). The other two corridors run from Uxbridge Road – Southall/Hayes to Shepherd's Bush and, Chiswick High Road to Kensington High Street respectively (Figure 12).

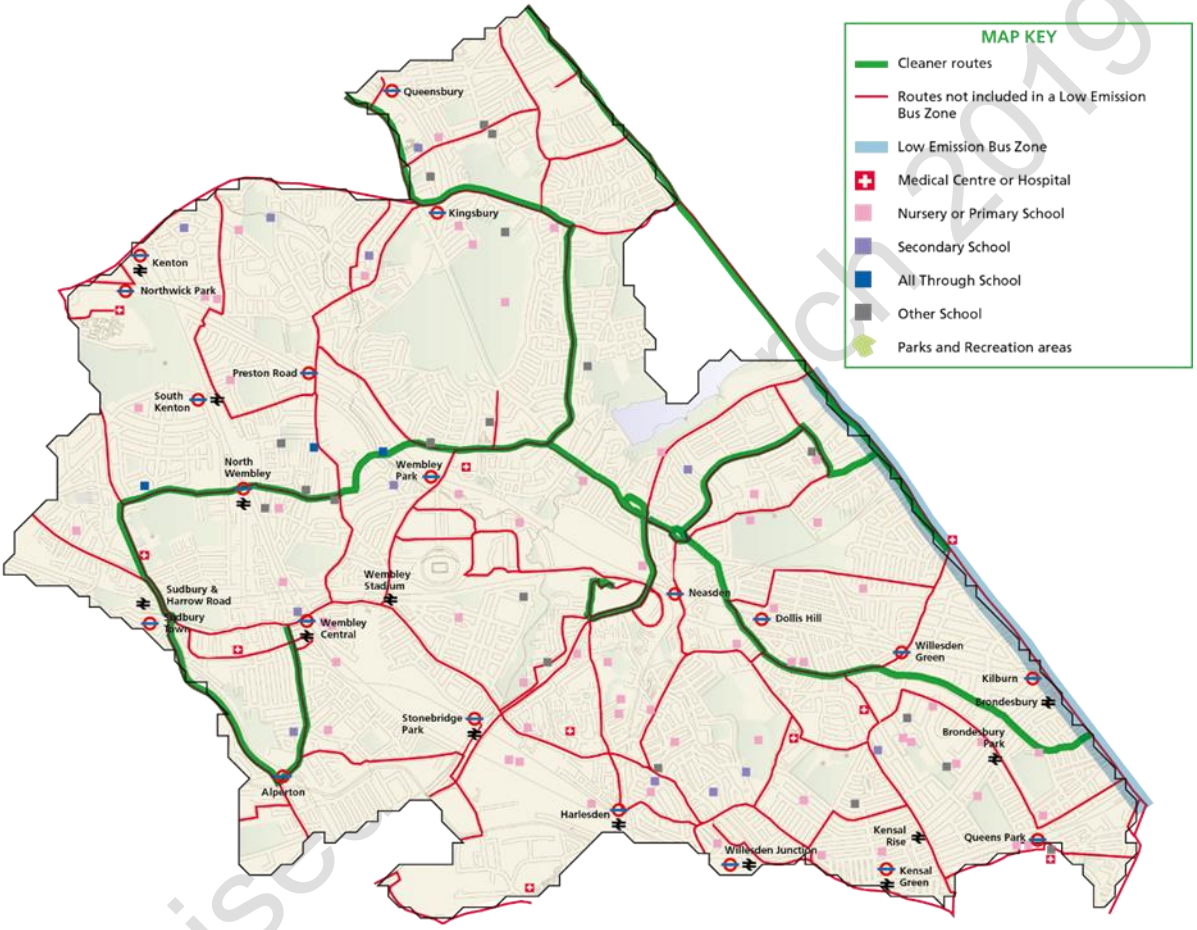



Figure 12: Cleaner Bus Routes (LEBZs) in Brent

3.3.5.3.3. Due to the large number of bus routes running through Brent and in particular certain strategic corridors Brent will continue to lobby TfL for further changes to the local bus fleet to reduce dependency on diesel.

3.3.5.4. Complementary works to be carried out by the borough:

3.3.5.4.1. The LEBZ along the A5 corridor will further inform work on Brent's Kilburn Area Liveable Neighbourhoods bid and, other key projects focused on improving Kilburn Town Centre and the local area.

3.3.5.4.2. The Council has commissioned to undertake a series of stakeholder and community engagement activities within the proposed Kilburn Area Liveable Neighbourhood area, with the activities demonstrating the local understanding of the opportunities presented by Healthy Streets and identifying local issues to be addressed by the scheme.

3.3.6. Ultra-Low Emission Zone (ULEZ)

3.3.6.1. From 25 October 2021 the area will be expanded to the inner London area bounded by the North and South Circular roads. If you are driving any petrol or diesel vehicle within this enlarged area you will also need to meet new tighter emissions standards or pay a daily charge. This daily charge is in addition to the weekday Congestion Charge if you drive in central London as well.

3.3.6.2. Vehicles using the North and South Circular Roads and not going into the ULEZ will not be charged.

3.3.6.3. Implications for borough:

3.3.6.3.1. Earlier in June 2018, the Mayor of London confirmed details relating to the expanding of London's Ultra-Low Emission Zone (ULEZ) from October 2021. Having been consulted on the revised ULEZ boundaries, Brent stated that it was fully supportive of expanding the area where ULEZ emission standards apply as this recognises that poor air quality is not solely a problem for central London. However, Brent's preference was for a London-wide ULEZ to support greater air quality improvements for all of Brent's residents.

3.3.6.3.2. The extension of the ULEZ up to the North Circular Road will mean that the boundary will run directly through Brent in the Stonebridge, Welsh Harp, Dudden Hill and Dollis Hill wards. Modelling by TfL of the impact of this on emissions at a more localised level suggests a 23% reduction in $NO_x$ emissions on the North Circular in Brent in 2021. However, the annual $NO_2$ limit value and World Health Organisation guidelines for $PM_{2.5}$ on this road will continue to be exceeded. In addition, a one per cent increase in vehicle kilometres travelled on this road in Brent is expected.

## 3.4. Sources of funding

3.4.1. Table ST02 below identifies potential funding sources for implementation of our LIP, including LIP funding allocation from TfL, contributions from the borough's own funds, and funding from other sources.

3.4.2. Brent's parking revenue is used to support the Freedom Passes scheme.

3.4.3. The key source of funding is the borough's LIP allocation. Figures provided by TfL indicate that the borough will receive £2.147m.

3.4.4. In addition to the above, the borough hopes to achieve TfL Strategic and Discretionary funding for liveable neighbourhoods, bus priority, road safety, and cycle quietways. This funding is dependent on negotiations with TfL and successful bids.

3.4.5. 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.

3.4.6. Where applicable, sums available from developers via section 106 agreements will be sought. S106 can only be spent on works in accordance with the agreement and as such will be secured on a scheme by scheme basis.



**SAMPLE TABLE ST02 - Potential funding for LIP delivery**

| Funding source | 2019/20 | 2020/21 | 2021/22 | Total |
|---|---|---|---|---|
| **TfL/GLA funding** | | | | |
| LIP Formula funding –Corridors & Supporting Measures | £2,147k | £2,147k | £2,147k | £6,441k |
| Local Transport Fund | £100k | £100k | £100k | £300k |
| Discretionary funding | | | | |

| | | | | |
|---|---|---|---|---|
| Liveable Neighbourhood Park Royal [43] | | £2,000k | £4,000k | £6,000k |
| Strategic funding | | | | |
| Bus Priority | £1,000k | £1,000k | £1,000k | £3,000k |
| Cycle Quietway | | £750k | £2,000k | £2,750k |
| Sub-total | £3,247k | £5,997k | £9,247k | £18,491k |
| **Borough funding** | | | | |
| Capital funding | £8,500k | £11,000k | £11,000k | £30,500k |
| Revenue funding | £921k | £921k | £921k | £2,763k |
| Parking revenue | £12,572k | £12,572k | £12,572k | £37,716k |
| Sub-total | £21,993k | £24,493k | £24,493k | £70,979k |
| **Other sources of funding** | | | | |
| S106 | Annual review | | | |
| CIL | £6,000k | tbc | tbc | £6,000k |
| European funding | 0 | 0 | 0 | 0 |
| Sub-total | £6,000k | tbc | tbc | £6,000k |

[43] Subject to TfL confirmation of award.

| | | | | |
|---|---|---|---|---|
| Total | £31,240k | £30,490k | £33,740k | £95,470k |

## 3.5. Long-Term interventions to 2041

3.5.1. In the medium to long-term the borough believes that a number of significant, but currently unfunded, investments will be required to ensure the economic and social vitality of the borough. These are shown in Table ST03 below with indicative funding and uncommitted timescales.

**TABLE ST03 - Long-term interventions up to 2041**

| Project | Approx. date | Indicative cost | Likely funding source | Comments |
|---|---|---|---|---|
| West London Orbital | 2019-2030 | £265m | LB Brent, TfL, Mayoral CIL, GLA, Central Government, Network Rail and, developer contributions | Utilisation of an existing underused freight line to provide an orbital passenger service, including new stations. |
| Travel Planning Strategy | 2023 | £30k | LB Brent | Develop a Travel Planning Strategy to improve accessibility, positively affect modal choice for journeys for work and education purposes and, and reduce congestion. |
| Controlled Parking Zone (CPZ) Policy | 2019-2025 | £6m | LB Brent | Investigate the feasibility of implementing a |

| | | | | |
|---|---|---|---|---|
| | | | | borough-wide policy on controlled parking zones. Pending recommendations made, implementation on agreed outcomes from the study (study to be completed in 2019). |
| Parking Permit Sacrifice Scheme | 2019-2025 | £50k | LB Brent | To review, implement a revised permit sacrifice scheme, including promotion to achieve a reduction in car numbers. |
| Bus rapid transit network for orbital links between Brent Cross and Ealing | tbc | tbc | LB Brent, WestTrans, TfL and developer contributions | Improve orbital accessibility complementing existing conventional London bus services. |
| Demand Responsive Transport Offer for Brent Pilot. | tbc | tbc | LB Brent, Old Oak and Park Royal Development Corporation (OPDC), TfL and operator | Review and develop options for a pilot demand responsive bus service scheme focussing on the Park Royal area to complement the commercially run bus network. |
| Borough wide 20mph strategy | 2023-2025 | £50k (study only, no works) | LB Brent, TfL and, developer contributions | Investigate the feasibility of implementing borough-wide 20mph speed limit. |

| | | | | |
|---|---|---|---|---|
| Delivery and Service Plan (DSP) Implementation | 2023-2025 | tbc | LB Brent, WestTrans, TfL and developer contributions | Subject to Strategy and identified outcomes being approved, implementation of DSP. |
| Neasden Liveable Neighbourhood | 2023 - 2028 | £18m | LB Brent , TfL and developer contributions | Review the highway layout to provide improved public realm, air quality and accessibility to services and public transport. |
| Housing Infrastructure Fund South Kilburn | 2019/20-2030 | £10m | LB Brent, TfL and developer contribution | Improve its townscape attributes and give greater priority to pedestrians and cyclists. Further tree planting will be undertaken to soften the street to give a boulevard type feel. Within the South Kilburn estate this will be through designing streets to limit vehicle speeds to 20mph. |
| Housing Infrastructure Fund Northwick Park | 2019-2026 | £9.9m | LB Brent, TfL and developer contribution | Improve local transport links and infrastructure to support an addition c.2000+ homes.<br><br>Proposals being considered include step-free access at Northwick Park station, improved accessibility for buses serving the |

| | | | | |
|---|---|---|---|---|
| | | | | hospital and Westminster campus and public realm improvements for encouraging walking and cycling. Requests being made to reduce parking from current levels whilst also intensifying development at this location. |
| Wembley Transport Improvements | 2020-2026 | £12m | LB Brent | This covers a new pedestrian/cycle bridge over the Metropolitan line, linking open space and removing a barrier to cycling; improvements to Great Central Way/Drury Way junction to better manage the network on Wembley Event Days. |
| Wembley High Road | 2021-2026 | £5m | LB Brent, TfL and developer contribution | Scheme to redesign Wembley Triangle to provide new public realm space and improved crossing facilities for pedestrians. |
| A406 North Circular Road Transport Improvements | 2020-2035 | £100m | LB Brent, TfL and developer contribution | Improved pedestrian and cyclists' safety as key locations, such as Neasden and Staples Corner. |

## 3.6. Three-year indicative Programme of Investment

**3.6.1.** The Three Year indicative Programme of Investment has been completed in the table ST04 below.

| **TABLE ST04 - Three-year indicative programme of investment for the period 2019/20 to 2021/22** | | | |
|---|---|---|---|
| The table summarises, at a programme level, the borough's proposals for the use of TfL borough funding in the period 2019/20 – 2021/22. | | | |
| London Borough of Brent<br>TfL BOROUGH FUNDING 2019/20 TO 2021/22 | Programme budget | | |
| | Allocated 2019/20 | Indicative 2020/21 | Indicative 2021/22 |
| Local Transport Initiatives | £100k | £100k | £100k |
| CORRIDOR, NEIGHBOURHOODS & SUPPORTING MEASURES | £2,147k | £2,147k | £2,147k |
| LIP Policy, Programme and Monitoring | £50k | £50k | £50k |
| Travel Awareness Programme | £25k | £25k | £25k |
| Installation of Electric Vehicle Charge Points (EVCPs) | £5k | £5k | £5k |
| Car Clubs | £5k | £5k | £5k |
| Local Safety Schemes - Investigation | £230k | £230k | £230k |
| Local Safety Schemes - Implementation | £1,190k | £1,190k | £1,190k |

| | | | |
|---|---|---|---|
| Review/Amendments of Existing and Future 20mph Zones | £10k | £10k | £10k |
| Walking and Cycling Supporting Engineering Measures (incl. STP Schools) | £220k | £220k | £220k |
| Bike It Project | £35k | £35k | £35k |
| Adult and Child Cycle Training Programme | £100k | £100k | £100k |
| West Sub-region Travel Planners | £37k | £37k | £37k |
| Walking and Cycling Supporting Non-Engineering Measures (incl. STP Schools) | £45k | £45k | £45k |
| Education, Training & Publicity (ETP) initiatives | £50k | £50k | £50k |
| Environmental Health Initiatives – Air Quality | £15k | £15k | £15k |
| Waiting and Loading Restriction Reviews | £80k | £80k | £80k |
| Accessibility & Disabled Person's Parking Places | £25k | £25k | £25k |
| Signing and Lining Reviews | £25k | £25k | £25k |
| Sub-total | £2,147k | £2,147k | £2,147k |
| DISCRETIONARY FUNDING | £k | £k | £k |

| | | | |
|---|---|---|---|
| Liveable Neighbourhoods | | | |
| Park Royal | | £2,000k | £4,000k |
| Principal Road Renewal | 0 | £882k | £882k |
| Bridge strengthening | 0 | 0 | 0 |
| Sub-total | 0 | £2,882k | £4,882k |
| STRATEGIC FUNDING | | | |
| Bus Priority | £500k | £1,000k | £1,000k |
| Borough Cycling Programme | £200k | £200k | £200k |
| Cycle Future Route 23[44] | tbc | tbc | tbc |
| Low Emission Neighbourhoods | 0 | £100k | £100k |
| Sub-total | £700k | £1,300k | £1,300k |
| All TfL borough funding | £2,947k | £6,429k | £8,429k |

**TABLE ST05 - Three-year indicative programme of investment for the period 2019/20 to 2021/22**

The table summarises, at a programme level, the borough's proposals for the use of other funding secured by the borough in the period 2019/20 – 2021/22.

[44] Subject to confirmation by TfL.

| All schemes detailed in this table are funded solely from Brent Capital. | | | |
|---|---|---|---|
| London Borough of Brent<br><br>BOROUGH FUNDING 2019/20 TO 2021/22 | Programme budget | | |
| | 2019/20 | 2020/21 | 2021/22 |
| North End Road Connector<br><br>Scheme to improve congestion in the area to make the regeneration environment better for pedestrians and cyclists. It provides improves accessibility, particularly on Wembley Event Days which could enable buses to continue serving the Wembley area without the need to curtail services or divert them. | £5,000k | 0 | 0 |
| Wembley Two-way working (Phase 1)<br><br>Scheme to remove existing one-way operation that will enable future growth of an industrial area in the future whilst improving the environment for pedestrians, cyclists and buses. | £1,000k | 0 | 0 |
| South Kilburn Regeneration Area Transport Improvements<br><br>Implementing one-way streets, 20mph zone, and improved cycle crossing of Carlton Vale to link with the Open Space and facilitate new growth. | £320k | £200k | 0 |
| All borough funding | £6,320k | £200k | tbc |

### 3.6.2. Supporting commentary for the three-year programmes

3.6.2.1. The schemes identified above are provisionally listed. Completion of the schemes is subject to change based on budgetary constraints, community support, policy compliance and impact on other schemes. Therefore, no assurance can be given that all schemes listed in Table ST04 above will be delivered.

3.6.2.2. In order to identify where investment should be directed over a three year programme (2019-22), schemes have been identified through a number of sources, including requests from Members and residents; strategic schemes that support the Council's objectives; schemes that have been committed in previous years for multi-year funding; and schemes that have the potential to improve road safety.

3.6.2.3. Given that funding is limited, it is not possible to deliver all of these schemes, so officers assesses the proposed schemes in a clear and transparent manner, using a prioritization matrix scoring each scheme against its likely benefits. These benefits reflect the new MTS outcomes and Brent's corporate objectives (linked to regeneration, high streets, public health and air quality).

3.6.2.4. The Mayor's vision is to provide Londoner's with healthy streets. Road safety also plays a part in achieving this and therefore road traffic collision records are also assessed for the area or street under consideration in each scheme to identify schemes that would contribute the most to improving road safety. This is in line with the Mayor's aim to have no fatal or serious injuries on the road network by 2041, and work towards achieving his 'Vision Zero' action plan for London.

3.6.2.5. Schemes are ranked on their total score and the estimated project costs are added up until the accumulated total scheme costs exceed the provisional LIP funding allocation provided by TfL. Some adjustments are made for existing and ongoing schemes where borough priorities necessitate exceptions.

3.6.2.6. This prioritization matrix was established in 2015 and subsequent matrix revisions have been approved by Cabinet. The matrix has been fully updated to reflect the current MTS and LIP3 guidance.

3.6.2.7. The programme consists of the following projects:

- LIP Policy, Programme & Monitoring
  Resource related funding for development work relating to future year's LIP schemes/programme and monitoring of progress against targets.

- Travel Awareness
  Events and promotional activities, press articles and adverts to further promote and raise awareness for sustainable transport across Brent.

- Car Clubs
  Delivering TMOs, signs and lines for on-street bays to promote the concept of car clubs and increase for demand for car clubs - particularly in the north of Brent.

- Installation of Electric Vehicle Charge Points (EVCPs)
  Licence to enable online- EVCP requests and information on the network via dedicated website.

- Local Road Safety Schemes (Investigation)
  Brent Council receives a number of requests from residents for formal crossings, either signalled or zebras, each year, usually as a result of perceived danger ("near misses") rather than collisions.

  All requests are evaluated and traffic engineering or traffic management solutions are agreed. It can include traffic calming, improvements subject to consultation with residents. Includes investigation, design and consultation of new local safety schemes aimed at areas of existing poor history of road traffic collisions.

- Local Road Safety Schemes (Implementation)
  Implementation of local safety schemes after investigation has been completed.

- Review/amendments of existing and future 20MPH zones
  Amendment and review of existing 20MPH zones.

- Walking and Cycling supporting engineering measures (inc. STP schools)
  Development and delivery of accessibility and pedestrian safety measures around and on the routes to various schools, including places with barriers to walking in the borough.

- Bike It Project, Sustrans/Brent Council
  A partnership project with Brent NHS and Sustrans targeting cycling development, offering training and promoting the health/lifestyle benefits of cycling.

- Adult & child cycle training programme
  An annual programme of cycle training activity delivered on behalf of the Council by Cycle Training UK.

- West Sub-region Travel Planners
  Contribution in each year to the WestTrans Strategic partnership of west London boroughs. Current focus is on reducing impact of HGVs, e.g. with “last mile” delivery schemes using low or zero emission vehicles, and monitoring and promotion of business, college, and faith group travel plans.

- Walking and Cycling supporting Non-Engineering measures (inc. STP schools)
  Smarter Choices interventions linked to the development of School Travel Plans (STPs) across Brent. Funding used for initiatives, such as supporting materials for STP work within schools.

- Education, Training & Publicity (ETP) initiatives
  Road danger reduction related activities across the borough, such as awareness raising campaigns and other promotional activities related to making a Brent's roads safer for all users. Increased allocation which now incorporates the highly successful and well received "Theatre in School" Programme.

- Environmental health initiatives – Air Quality
  Continued support for Brent's Environmental Health team for localised air quality monitoring linked to traffic-borne air pollution/roadside diffusion tubes and reports/studies linked to this area. Linkage with WestTrans/sub-regional air quality monitoring. Support to progress the development of Low Emission Neighbourhoods in Brent.

- Waiting and Loading restriction reviews
  Development and delivery of new/review existing waiting & loading restrictions/addressing problematic locations in the borough to address accessibility issues for pedestrians and cyclists, aiding their mobility and ensuring the highway network is appropriately managed.

- Accessibility & Disabled person's parking places
  Providing disabled person's parking spaces across Brent to improve accessibility for disabled persons.

- Signing & lining reviews
  Reducing sign clutter throughout the Borough to improve the public realm for pedestrians and cyclists, creating, where possible, more space and aiding their mobility.

### 3.6.3. Risks to the delivery of the three-year programmes

3.6.3.1. The delivery of Brent's Local Implementation Plan has been risk assessed. Table ST06 shows the principal risks associated with delivery of the LIP together with possible mitigation actions for the three-year programme. The risk register summarises the strategic risks identified that could impact on the three-year programme of schemes/initiatives.

| TABLE ST06 - LIP Risk Assessment for three-year programme 2019/20-2021/22 | | | | | |
|---|---|---|---|---|---|
| **Risk** | **Likelihood** | | | **Potential mitigation measures** | **Impact if not mitigated** |
| | **H** | **M** | **L** | | |
| **Financial** | | | | | |
| <u>Funding</u><br><br>Reduced Government funding to Local Authorities and TfL.<br><br>Failure to secure planned funding contributions such as S106. | H | | L | Explore alternative external funding sources.<br><br>Completion of S106 request forms and approval to appropriate timeline to ensure full approval to required timeline. | Major impact on funding source.<br><br>Service delivery.<br><br>Outcomes not achieved.<br><br>Schemes might need to be developed and delivered in a shorter timescale once funding is confirmed.<br><br>Reputational risk. Unable to demonstrate value of department's contribution to key outcomes.<br><br>Unable to deliver an effective programme.<br><br>Budget carry over/overspends. |

| | | | | | |
|---|---|---|---|---|---|
| Insufficient/ineffective use of available funding due to a lack in intelligence.<br><br><u>Costs</u><br><br>Actual inflation differs from assumed inflation rates.<br><br>Increase in scheme costs due to increase in material costs etc.<br><br><u>Procurement</u><br><br>The procurement process is delayed.<br><br>The chosen procurement strategy does not result in the appointment of sufficient suitable contractors.<br><br>The award of contracts to contractors is challenged. | H<br><br>H<br><br>H | M<br><br>M<br><br>M | | Appropriate allowance for inflation given to each scheme at the outset.<br><br>Use of long term existing framework agreements where costs are well established and known in advance. Some contracts allow for Value Added Band to allow for increase in costs where necessary.<br><br>Existing contractor arrangements to be utilised wherever possible.<br><br>Early contractor involvement via existing framework arrangements will help to identify any risk at an early stage where appropriate mitigation can be put in place.<br><br>Use of existing frameworks already operating and procured via the appropriate mechanisms, ensuring that any financial limits are adhered to. | Service delivery.<br><br>Outcomes not achieved.<br><br>Unable to demonstrate value for money.<br><br>Service delivery.<br><br>Outcomes not achieved.<br><br>Schemes might need to be developed and delivered in a shorter timescale once funding is confirmed.<br><br>Reputational risk. Unable to demonstrate value of department's contribution to key outcomes.<br><br>Unable to deliver an effective programme.<br><br>Budget carry over/overspends. |

| | | | | | |
|---|---|---|---|---|---|
| **Statutory / Legal** | | | | | |
| Changes in legislation.<br><br>Consultation impacting on project timescales, potentially resulting in the scheme not being able to be progressed. | H | | L | Appraisal of proposal and approach has taken place for first three years.<br><br>Implement a comprehensive communications strategy to ensure general public are kept informed as progress is made on individual schemes. | |
| **Third Party** | | | | | |
| Impacts to work load planning caused by third parties. | H | | | Proactive approach to engagement with third parties. Seeking to ensure regular contact with third parties. | Service delivery.<br><br>Outcomes not achieved.<br><br>Low morale.<br><br>Stressed/Overworked staff. |

| | | | | | |
|---|---|---|---|---|---|
| Failure of key partnerships; ineffective partnerships. | | | L | Ongoing dialogue with neighbouring boroughs.<br><br>Regular communication/liaison with TfL on the LIP Delivery Programme and engagement to understand position and implications. | Relationships with third parties strained.<br><br>Public dissatisfaction with delays.<br><br>Inefficient use of resources.<br><br>Service delivery.<br><br>Outcomes not achieved.<br><br>Low morale.<br><br>Reputational risk – less likely to be welcomed into new partnerships.<br><br>Less value for money. |
| **Public / Political** | | | | | |
| <u>Public</u><br><br>Negative publicity.<br><br>Programme lacks support from the general public. | | M<br><br>M | | Implement a comprehensive communications strategy to ensure general public are kept informed as progress is made on individual schemes. | Inefficient use of resources.<br><br>Service delivery.<br><br>Outcomes not achieved.<br><br>Low morale. |

| | | | | | |
|---|---|---|---|---|---|
| The use of schemes is lower than expected, so that the expected benefits of the programme are not realised. | H | M | | Undertake communications and promotional activity once schemes are complete. | Reputational risk – public dissatisfaction with programme.<br><br>Less value for money. |
| Benefits of the project are unevenly distributed amongst different societal groups or benefits are not experienced amongst hard to reach groups. | | | | Consider most appropriate and effective methods of engagement in the Communications Strategy. Target appropriate activity at appropriate groups to maximise benefit distribution. | Service delivery.<br><br>Outcomes not achieved.<br><br>Reputational risk – public dissatisfaction with programme.<br><br>Unable to deliver an effective programme. |
| <u>Political</u><br><br>Change of local political administration. | | | L<br><br>L | Engagement with all Members and political parties to ensure understanding and level of 'buy-in' to the ambitions of the strategy. | Service delivery.<br><br>Outcomes not achieved.<br><br>Impact on less financial resources on staffing levels and skills.<br><br>Reputational risk. |

| | | | | | |
|---|---|---|---|---|---|
| Changes of national, regional and/or local policy direction and priorities. | | | | Appraisal of proposal and approach has taken place for first two years both at a local and national level. | Unable to deliver an effective programme. |
| **Programme & Delivery** | | | | | |
| Move away from a strategy led investment. | | M | | Continued engagement with members, including briefings and reports. | Critical decisions not in line with LIP3; decisions either not made or overturned.<br><br>Delays.<br><br>Outcomes not achieved. |
| Insufficient staff available for programme management and delivery. | H | | | Identify necessary resources at the outset of the programme. Utilise experienced external resources to fill gaps. | Outcomes not being delivered.<br><br>Significant impact on Brent's ability to deliver a transport network that supports good growth. |
| Changes in the team responsible for programme management and delivery; loss of key staff; delays in appointment of new team members. | H | | | Shared responsibility with regular communication meetings with partners and information sharing as appropriate. | Low morale.<br><br>Lack of capacity/capability<br><br>Reputational risk. |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | Potential increased costs of employing consultants/agency staff.<br><br>Major impact on funding sources. |
| Poor communication and co-ordination between the programme management team and LIP delivery partners. | H | | | Regular progress meetings and communication and appropriate record keeping. | |
| Poor communication and co-ordination with contractors responsible for delivery. | H | | | Regular progress meetings and communication and appropriate record keeping. | Outcomes not being delivered.<br><br>Significant impact on Brent's ability to deliver a transport network that supports good growth.<br><br>Reputational risk. |
| The construction of the physical assets is not completed on time and to specification by contractors. | H | | | Early involvement of contractors via frameworks and joint preparation of programmes for delivery.<br><br>Regular progress meetings with contractors and project management team at a local level to identify and mitigate against any potential delays or risk to delivery. | Opportunities for efficiencies are lost.<br><br>Unable to identify priorities. |

| | | | | | |
|---|---|---|---|---|---|
| Lack of wider intelligence to develop forward programme up to 2041. | | M | | Robust evidence base developed.<br><br>Development of Brent Local Plan.<br><br>Engagement through publishing open data to strengthen public accountability. | Ineffective delivery programme.<br><br>Loss of staff resources/skills.<br><br>Reputational risk.<br><br>Impact on ability to develop business case for future funding. |

## 3.7. Annual programme of schemes and initiatives

**3.7.1.** The annual programme of schemes for 2019/20 has been submitted to TfL. The programme of schemes mentioned previously will be updated annually prior to submission to TfL.

### 3.7.2. Supporting commentary for the annual programme

3.7.2.1. The program reflects the local borough objectives established in Chapter 2 and supports the borough's objectives of enabling and encouraging more people to travel more actively and more sustainably more often and, subsequently, supports the long term mode share target of 80 per cent of all trips in London to be made on foot, by cycle or, by using public transport by 2014 and, the associated strategic nine outcome indicators as outlined in the Mayor's Transport Strategy at a local level.

3.7.2.2. The annual programme includes a series of proposals aimed at reducing road danger and road risk, plus others intended to increase the sense of personal safety. The programme includes a series of hard engineered measures to provide infrastructure improvements at identified high casualty locations and, locations where perceptions of road danger and road risk are potentially acting as a deterrent to more active and more sustainable mode choices for short trips. Higher vehicle speeds are linked to many of the more severe casualties. Many of the hard measures proposed to reduce road casualties are aimed at reducing the numbers of speeding vehicles.

3.7.2.3. The proposed programme of infrastructure interventions is supplemented by a programme of smarter choices measures, such as education, training and publicity initiatives aimed at adjusting attitudes and changing behaviour and reducing the number and severity of casualties.

3.7.2.4. The annual programme has been appraised using an evaluation framework to score each scheme against set criteria, with criteria reflecting both the long term mode share target of 80 per cent of all trips in London to be made on foot, by cycle or, by using public transport by 2014 and, the associated strategic nine outcome indicators as outlined in the Mayor's Transport Strategy. Schemes were also appraised against local borough objectives and priorities.

3.7.2.5. The 2019/20 LIP Programme contains the overarching projects that are contained in section 3.6.2.

3.7.2.6. The following schemes can be subject to change based on community support and budgetary constraints. Therefore, no assurance can be given that all schemes listed will be delivered.

I. Walking and Cycling supporting engineering measures (inc. STP schools)

- Furness Primary
  Introduction of a new zebra crossing on Furness Road (NW10)

- Oliver Goldsmith Primary
  Introduction of one way/banned vehicles turns (am and pm) on Coniston Road (NW9)

- Ark Franklin and Malorees Primary
  Introduction of a new zebra crossing on Wrentham Avenue (NW10)

- Kingsbury High
  New signs, lines and railings on Bacon Lane (NW9)

- Uxendon Manor Primary
  New signs, lines and railings on Falcon Way (HA3)

- John Keble Primary
  Development and implementation of measures supporting the borough's School Streets programme Crownhill Road (NW10)

- Ark Franklin Primary
  Development and implementation of measures supporting the borough's School Streets programme. Harvist Road (NW10)

II. Brent Local Safety Scheme – Investigations

- Kingsbury Road – East of Church Lane to A5
  Collision Reduction/Road Danger Reduction Programme – Investigation to commence March 2019

- Sudbury Court Drive

Collision Reduction/Road Danger Reduction Programme – Investigation to commence March 2019

- Hay Lane – Stag Lane to A5
  Collision Reduction/Road Danger Reduction Programme – Investigation to commence March 2019

- Fryent Way (Fryent Close to S of Valley Drive)
  Collision Reduction/Road Danger Reduction Programme – Investigation to commence March 2019

III. Brent Local Safety Scheme – Implementation

- Church Lane (North of Reeves Ave to jw Church Lane)
  Scheme to support Collision Casualty/Road Danger Reduction Programme particularly pedestrian and P2W related safety issues. Proposals include a new zebra crossing near St Andrews Church and targeted VMS. Design ongoing.

- Edgware Road (Humber Road to Gladstone Park Gdns)
  Road Safety Scheme. Further minor measures to supplement Vehicle Activated signage introduced in 2018/19.

- High Road Willesden (St Andrew's to Park Avenue)
  Works to complete 20mph scheme to include junction entry treatments, speed cushions and VMS.

- Dudden Hill Lane (Chapter Road to Meyrick Road)
  Works to complete 20mph scheme to include junction entry treatments, speed cushions and VMS.

- Stag Lane (Holmstall Ave to Goldsmith Ln)
  Works to complete the implementation of a 20mph scheme. Scheme has been extended to cover Stag Lane/Roe Green between Mollison Way and Kingsbury Road. The scheme is designed to be self-enforcing through the introduction of traffic calming measures including: speed cushions, new pedestrian refuge islands on Stag Lane, by Carlisle Road and Goldsmith, footway widening (kerb build outs) at the junction of Carlisle Road and Tewkesbury Gardens, VMS signs and changes to waiting restrictions.

- A5 Kilburn High Road Corridor Safety and Urban Realm Scheme
  Funding contribution to support major public realm improvement scheme pending a decision on the Kilburn High Road Liveable Neighbourhood Bid. The LIP funding will be used to deliver a package of minor measures if the bid is unsuccessful.

- Watford Road collision reduction
  Golf club access highways safety improvements, including signalising and relining Northwick Park Roundabout.

- Ealing Road (Lyon Park Ave to Mount Pleasant)
  To deliver further works associated with road safety/public realm improvement scheme begun in 2018/19. Scheme includes a new 20mph speed limit on Ealing Road from High Road to Mount Pleasant. 12 VMS, 5 new raised speed tables, new and wider zebra crossings, wider pavements and road width narrowed to 6.4m (between Douglas Avenue and Stanley Avenue), loading and parking bays inset into the footway (between Douglas Avenue and Stanley Avenue), new Advisory Cycle Lanes, de-cluttering and new street trees.

- Kingsbury Town Centre (between West of Honeypot Lane to Church Lane)
  Finishing works to complete the implementation of a major town centre public realm/road safety improvement scheme. The scheme includes major footway widening and enhancement, segregated cycle lanes, pedestrian crossing improvements, tree planting, inset parking arrangements and a comprehensive streetscene/street furniture upgrade.

- Shoot Up Hill – Kilburn High Road
  Scheme to support Collision Casualty/Road Danger Reduction Programme. Design options, including possible 20mph zone, currently being considered to reduce accidents and other identified traffic issues.

- East Lane, Sudbury Ave and Harrowdene Road, Wembley

Congestion alleviation measures to improve bus journey times. Proposed one-way traffic flow on Sudbury Avenue and Harrowdene Road. Design ongoing.

- Kingsbury roundabout
  Introducing a new signalised crossing and re-lining of Kingsbury Roundabout.

- Kenton Road east of Woodrange Ave to east of Kinross Close
  Scheme to support Collision Reduction/Road Danger Reduction Programme. Design works ongoing.

- Harrow Road, Wembley (Tring Ave to Wyld Way)
  Accident reduction measures. This junction is on the route of TfL Cycle Future Route 23. Ongoing design work and discussions with TfL on CFR23.

- Blackbird Hill – Forty Lane roundabout
  Collision Casualty/Road Danger Reduction Programme. Design and consult in 2018/19, implementation 2019/20 - 2020/21. Consultant commissioned to develop options for signalisation of the junction with dedicated pedestrian phase.

- Harrow Road (Greyhound Road to Wakeman Road)
  A 20mph scheme to include junction entry treatments, speed cushions and VMS signs. Design/consultation ongoing.

- Barn Hill Area 20mph
  A 20mph scheme to include junction entry treatments, speed cushions, new zebra crossing and VMS signs. Design/consultation ongoing.

- Harrow Road/District Road junction (near church)
  Accident prevention scheme. Design ongoing.

### 3.7.3. Risk assessment for the annual programme

3.7.3.1. Table ST07 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.

| ST07 - LIP Risk Assessment for annual programme - 2019/20 | | | | | |
|---|---|---|---|---|---|
| **Risk** | **Likelihood** | | | **Potential mitigation measures** | **Impact if not mitigated** |
| | **H** | **M** | **L** | | |
| **Financial** | | | | | |
| Further reduction in funding levels available from TfL, the Council's own resources or, from third parties. | | M | | Consider re-prioritising of remaining funding and/or identify and deliver lower cost solutions where possible.<br><br>Consider extending the planned delivery period for both short, medium and long term programmes where possible. | Some schemes identified in short, medium and long-term programme may well not proceed if re-prioritising is required, potential impact on Service delivery.<br><br>Outcomes not achieved.<br><br>Schemes might need to be developed and delivered in a shorter timescale once funding is confirmed. |
| Increases in programme or individual project costs. | | M | | Use effective project management to keep effective control of costs. Use of long term existing framework agreements where costs are well established and known in advance. Some contracts allow for Value Added Band to allow for increase in costs where necessary. | Reputational risk. Unable to demonstrate value of department's contribution to key outcomes.<br><br>Unable to deliver an effective LIP programme. |

| | | | | | |
|---|---|---|---|---|---|
| **Statutory / Legal** | | | | | |
| Council is required to implement LIP3 under Section 151 of the GLA Act without sufficient external funding support.<br><br>Changes in legislation.<br><br>Consultation impacting on project timescales, potentially resulting in the scheme not being able to be progressed. | H | | L<br><br>L | Explore possibility for legal challenge, if possible consider joint action with other affected bodies.<br><br>Appraisal of proposal and approach has taken place for first three years.<br><br>Implement a comprehensive communications strategy to ensure general public are kept informed as progress is made on individual schemes. | Unknown as this provision has never been challenged. In the worst case, there could be a severe impact on service delivery across services.<br><br>Appraisal of proposal and approach has taken place for first three years.<br><br>Implement a comprehensive communications strategy to ensure general public are kept informed as |
| **Third Party** | | | | | |
| Partners/Stakeholders do not implement projects and schemes for which they lead and for which they hold responsibility.<br><br>Impacts to work load planning caused by third parties. | | M | | Proactive approach to engagement with third parties. Seeking to ensure regular contact with third parties.<br><br>Engage in lobbying activity, jointly with neighbouring local authorities and others. Consider re-prioritisation of borough funding to support alternative projects and schemes. | Potential impact on service delivery.<br><br>Outcomes not achieved, with potential adverse impact on economic regeneration. Congestion levels, public transport overcrowding etc.<br><br>Low morale. Stressed/Overworked staff.<br><br>Relationships with third parties strained.<br><br>Public dissatisfaction with delays. |

| **Public / Political** | | | | | |
|---|---|---|---|---|---|
| <u>Public</u><br><br>Negative publicity.<br><br>Individual schemes lack support from the general public and, do not receive public support at consultation stage.<br><br>The use of schemes is lower than expected, so that the expected benefits of the schemes and, ultimately, LIP programme are not realised.<br><br>Benefits of the project are unevenly distributed amongst different societal groups or benefits are not experienced amongst hard to reach groups.<br><br><u>Political</u><br><br>Individual schemes are not approved by Brent Members. | H | M<br><br>M<br><br>M | L | Ensure adequate public engagement at the earliest possible stage. Consider implementing a comprehensive communications strategy to ensure general public are kept informed as progress is made on individual projects and schemes.<br><br>Consider scheme redesign to overcome objections.<br><br>Undertake communications and promotional activity once schemes are complete.<br><br>Consider most appropriate and effective methods of engagement for communication with the public. Target appropriate activity at appropriate groups to maximise benefit distribution<br><br>Ensure adequate engagement at the earliest possible stage. Consider scheme redesign to overcome objections. | Scheme may not proceed. Impact will depend on original scheme objectives.<br><br>Inefficient use of resources.<br><br>Service delivery.<br><br>Outcomes not achieved.<br><br>Reputational risk – public dissatisfaction with programme.<br><br>Unable to deliver an effective LIP3 programme.<br><br>Less value for money. |

| **Programme & Delivery** | | | | | |
|---|---|---|---|---|---|
| Insufficient staff available for LIP3 programme management and delivery.<br><br>Changes in the team responsible for programme management and delivery; loss of key staff; delays in appointment of new team members.<br><br>Projects and programme do not deliver expected outputs and outcomes.<br><br>Delays to individual projects caused both by Members and the Public which impact upon the delivery of the LIP3 programme, can add considerable to staff cost and affect morale.<br><br>Delay to individual projects and schemes for reasons other than those listed separately above. | H<br><br>M<br><br>H<br><br>M | | | Utilise experienced external resources to fill gaps. Possibly use agency staff, charged directly to individual projects and schemes.<br><br>Scheme benefits may need to be reviewed and confirmed at each stage of the project, scheme or, indeed, programme. Consider modifications if there is early indication of failure to deliver anticipated outcomes and outputs.<br><br>Introduce a limit on the number of overall scheme iterations to scheme design by each Members and set a time limit for reply.<br><br>Re-prioritise and re-programme expenditure to bring forward other appraised projects and schemes. | Outcomes not being delivered and programme objectives not being achieved.<br><br>Delivery period for the LIP3 programme may need to be extended or, projects may not proceed.<br><br>Significant impact on Brent's ability to deliver a transport network that supports good growth.<br><br>Low morale.<br><br>Lack of capacity/capability.<br><br>Reputational risk.<br><br>Potential increased costs of employing consultants/agency staff.<br><br>Potential major impact on funding sources. |

## 3.8. Monitoring the delivery of the outcomes of the Mayor's Transport Strategy

### 3.8.1. Overarching mode-share aim and outcome Indicators

3.8.1.1. The monitoring of LIP objectives, the Delivery Plan and the outcomes of the Mayor's Transport Strategy at a local level is measured through a number of targets and respective indicators. Through this, the success of the LIP can be ascertained.

3.8.1.2. Locally specific targets have been set in line with the nine strategic outcomes as outlined in the Mayor's Transport Strategy in order to support the overall mode share outcome of 80 per cent of all trips in London to be made on foot, by cycle or, public transport by 2041.

3.8.1.3. TfL provided anticipated local trajectories for the borough to meet the Mayor's overarching aims and outcomes.

### 3.8.2. Delivery indicators

3.8.2.1. The borough will monitor and record the delivery indicators and report to TfL once a year in June.

### 3.8.3. Local targets

3.8.3.1. The Mayor has set a very challenging strategy and the trajectories provided to Brent show the considerable task we have been provided. Currently, Brent's transport strategies have targets in line with the resources available. Borough targets have been set based on what is likely to be achieved in working towards delivering the Mayor's Transport Strategy at a local level. In commitment to delivering the Mayor's Transport Strategy, our local strategy targets will be aligned to those in the MTS.

3.8.3.2. 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.

3.8.3.3. 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.

3.8.3.4. 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.

3.8.3.5. Table ST08 lists Brent's identified borough targets.

| TABLE ST08 - Borough outcome indicator targets | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Objective** | | **Metric** | **Baseline** | **Mayor's Trajectory Targets** | **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. | 62% | 66%<br>78% | 66%<br>78% | 2021<br>2041 | |
| | | **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). Base period 2014/15 to 2016/17. | 30% | 38%<br>70% | 38%<br>70% | 2021<br>2041 | |

| Objective | Metric | Baseline | Mayor's Trajectory Targets | Borough target | Target year | Additional commentary |
|---|---|---|---|---|---|---|
| Londoners have access to a safe and pleasant cycle network | Proportion of Londoners living within 400m of the London-wide strategic cycle network. Base period 2016. | 0% | 12%<br>79% | 12%<br>79% | 2021<br>2041 | |
| | **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) | 196 | 69 | 69 | 2022 | |
| | Deaths and serious injuries (KSIs) from road collisions base year 2010/14 (for 2030 target). | 156 | 47<br>0 | 47<br>0 | 2030<br>2041 | |
| | **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 [millions]. Reduce London's overall traffic levels by 10-15 per cent. Base year 2015. | 854 | 854<br>811 | 854<br>811 | 2021<br>2041 | |

| Objective | Metric | Baseline | Mayor's Trajectory Targets | Borough target | Target year | Additional commentary |
|---|---|---|---|---|---|---|
| Reduce the number of freight trips in the central London morning peak. | 10 per cent reduction in number of freight vehicles crossing into central London in the morning peak period (07:00am - 10:00am) by 2026. | N/A | N/A | N/A | 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 2016. | 101,247 | 96,700<br>91,300 | 96,700<br>91,300 | 2021<br>2041 | |
| | **Outcome 4: London's streets will be clean and green** | | | | | |
| Reduced $CO_2$ emissions. | $CO_2$ emissions (in tonnes) from road transport within the borough. Base period 2013. | 203,200 | 185,300<br>51,200 | 185,300<br>51,200 | 2021<br>2041 | |
| Reduced $NO_x$ emissions. | $NO_x$ emissions (in tonnes) from road transport within the borough. Base period 2013. | 750 | 290<br>40 | 290<br>40 | 2021<br>2041 | |

| Objective | Metric | Baseline | Mayor's Trajectory Targets | Borough target | Target year | Additional commentary |
|---|---|---|---|---|---|---|
| Reduced particulate emissions. | $PM_{10}$ and $PM_{2.5}$ emissions (in tonnes) from road transport within borough. Base period 2013. | 73 ($PM_{10}$)<br>41 ($PM_{2.5}$) | 62 ($PM_{10}$)<br>30($PM_{2.5}$)<br>37($PM_{10}$)<br>18($PM_{2.5}$) | 62 ($PM_{10}$)<br>30($PM_{2.5}$)<br>37 ($PM_{10}$)<br>18($PM_{2.5}$) | 2021<br>2021<br>2041<br>2041 | |
| | | **A good public transport experience** | | | | |
| | | **Outcome 5: The public transport network will meet the needs of a growing London** | | | | |
| More trips by public transport - 14-15 million trips made by public transport every day by 2041. | Trips per day by borough of residence. Reported as 3yr moving average. Base year 2014/15 - 2016/17. | 202,000 | 233,000<br>318,000 | 233,000<br>318,000 | 2021<br>2041 | |
| | | **Outcome 6: Public transport will be safe, affordable and accessible to all** | | | | |

| Objective | Metric | Baseline | Mayor's Trajectory Targets | Borough target | Target year | Additional commentary |
|---|---|---|---|---|---|---|
| Everyone will be able to travel spontaneously and independently. | Reduce the difference between total public transport journey time and step free public transport network journey time. Base year 2015. | 9mins<br>(84/75) | 5mins<br>(69/74) | 5mins<br>(69/74) | 2041 | |
| | **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 period 2015 | 9.0 | 9.3<br>10.3 | 9.3<br>10.3 | 2021<br>2041 | |
| | **New homes and jobs** | | | | | |
| | **Outcome 8: Active, efficient and sustainable travel will be the best options in new developments**<br>**Outcome 9: Transport investment will unlock the delivery of new homes and jobs** | | | | | |

| Objective | Metric | Baseline | Mayor's Trajectory Targets | Borough target | Target year | Additional commentary |
|---|---|---|---|---|---|---|
| | | N/A | N/A | | | No borough targets identified. |
| | | N/A | N/A | | | No borough targets identified. |