Appendix 2

Brent's Third Local Implementation Plan 2019-2041

November 2018

Foreword

To be drafted in cooperation with Cllr Tatler.

Signature

Councillor Sharma Tatler

Lead Member for Regeneration, Highways and Planning

Executive summary

To be drafted in cooperation with Cllr Tatler.

1. Introduction and preparing a LIP[1]

1.1. Introduction[2]

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] Requirement R1: No response required in LIP submission. It is a requirement for the borough to provide a response to every Mandatory Requirement.

[2] Requirement R2: Boroughs are required to include in their LIP an explanation of the statutory background of the LIP process.

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[3]

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

1.2.2. This Final LIP was considered by Cabinet on 15th October 2018 for submission to Transport for London and subsequently approved by the Portfolio Holder on DD Month 201X to be submitted to the Mayor.

1.2.3. Information regarding consultation and approval is further detailed in the Cabinet Report (*include link to website*).

1.3. Statutory duties[4]

1.3.1. 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.

1.3.2. 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 LIP and/or the following changes have been made to the LIP.

1.3.3. 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).*

---

[3] Requirement R3: The boroughs are required to outline the democratic processes taken to approve the submission of the LIP at a borough level.

[4] Requirement R5: There is a requirement to undertake a Strategic Environmental Assessment and it is recommended that an Equalities Impact Assessment is also done (which addresses the borough's Public Sector Equality Duty). The boroughs are required to consider whether it is appropriate for the LIP to be assessed against other matters, for example crime and disorder, health, economic and business issues, air quality and climate change.

1.4. LIP approval[5]

1.4.1. The LIP was submitted and approved by the Mayor on DD Month 2019.

[5] Requirement R6: Boroughs must meet all of the following requirements for the submission of their LIP set out below under the following headings: a. Name of document b. Submitting the document to TfL c. Submission milestones.

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[6]

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

[6] Requirement No R7: Boroughs are required to set out the local context including the geographical, demographic and other characteristics of their boroughs, cross-referencing existing policy and context documents as appropriate. Alternatively, please provide web-link(s) to a borough document that contains this information and reference the section and page numbers where this information can be found.

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 (OFFICE FOR NATIONAL STATISTICS 2017).

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.” (OFFICE FOR NATIONAL STATISTICS 2011)) 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.

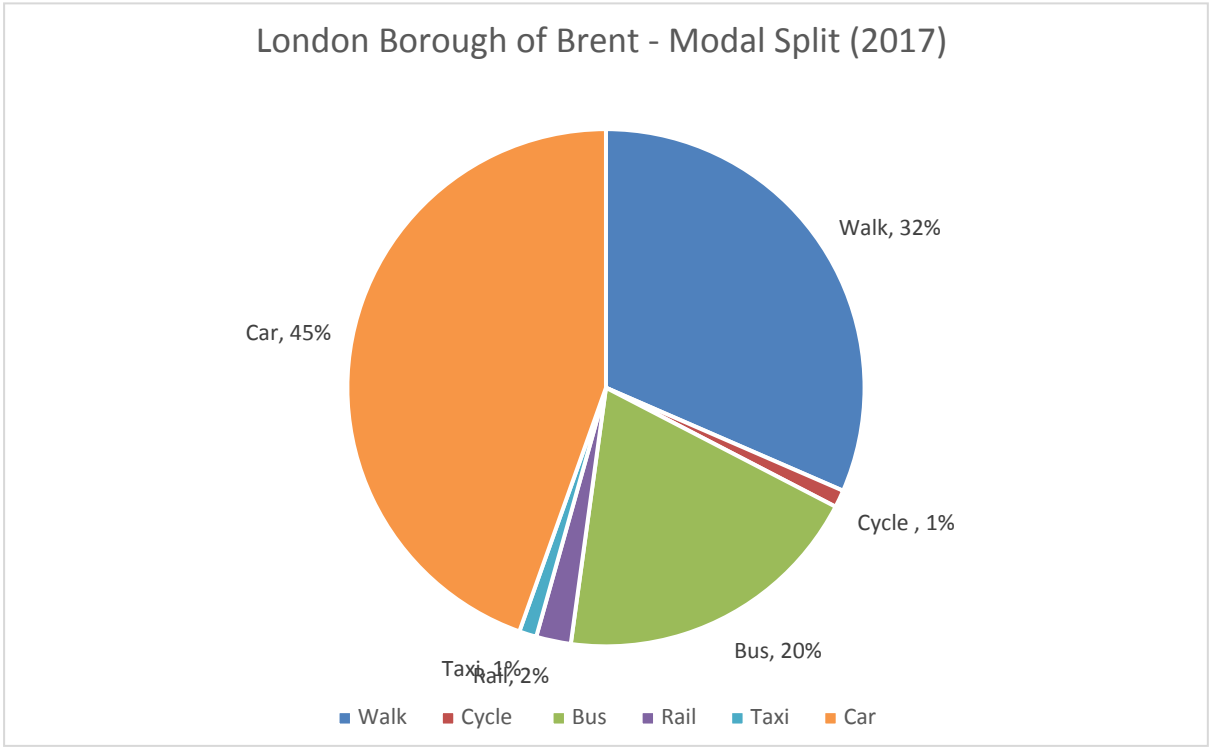
2.2.3.6. Whilst many of Brent's residents are affluent, parts of the borough continue to suffer high levels of social and economic disadvantage. The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation for small areas in England. In 2015, Brent was ranked within the 15% 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 have 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 of the borough in the historically affluent areas of Kenton, Preston and Queensbury and, all of them have become more deprived.

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 tbc illustrates the modal split, indicating the share of the different modes in the total traffic volume of the borough (TRANSPORT FOR LONDON 2018).



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).

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 (OFFICE FOR NATIONAL STATISTICS 2012).

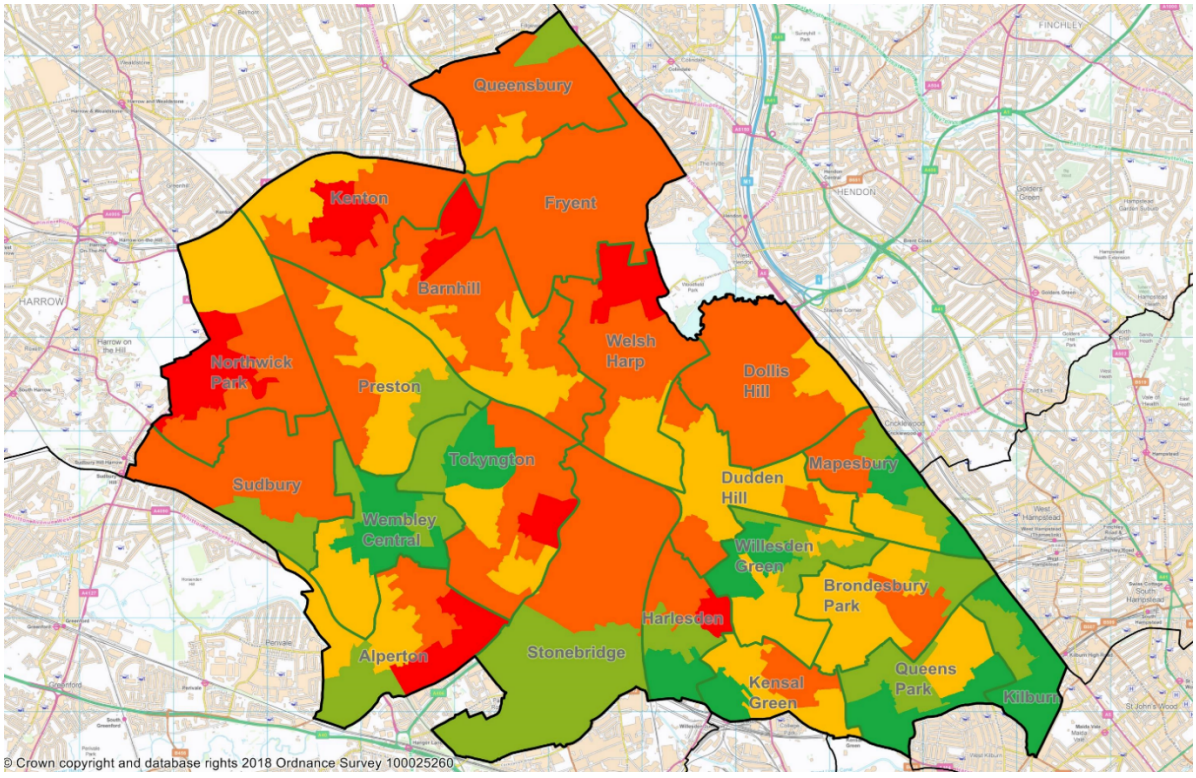
2.2.4.2.3. However, there is a distinct north-south divide as in many ways transport challenges in the south of the borough are more typical of people living in Inner London while those in the north are more typical of an Outer London Borough. The differences are marked. On average less than 50% of households in the south of the borough own a car and, residents there use a car for only a quarter of journeys (OFFICE FOR NATIONAL STATISTICS 2012). 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 (IBID 2012).

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, around tbc pupils use the local bus network to get to their place of education.

2.2.4.3.3. *Insert map of Brent's bus route network similar to the one below*.



2.2.4.3.4. 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.

2.2.4.3.5. London Underground serves 21 stations and 96 million passengers per year (TRANSPORT FOR LONDON 2017) on the four lines running through Brent, comprising the Bakerloo, Jubilee, Metropolitan and Piccadilly lines. Night Tube services are running Fridays and Saturdays on the Jubilee line with trains running on average every ten minutes across the entire line.

2.2.4.3.6. *Insert a map of both Brent's rail network (both Overground and Underground).*

2.2.4.3.7. London Overground (as well as London Underground Bakerloo Line) trains provide a key service across Brent, from Kenton to Queens Park and onwards into Central London. This includes some of the most deprived areas within the borough such as Stonebridge Park, Harlesden and Kensal Green (cp. BRENT JSNA 2015). The service to Euston shares platforms and track with London Underground Bakerloo Line trains between Queens Park and Harrow and Wealdstone.

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

2.2.4.3.9. 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.

2.2.4.3.10. 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.

2.2.4.3.11. There are only six stations in the borough with step-free access from the streets to platforms: 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).

2.2.4.3.12. 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. 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. *Insert map detailing the modal uptake of cycling at a ward level.*

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 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

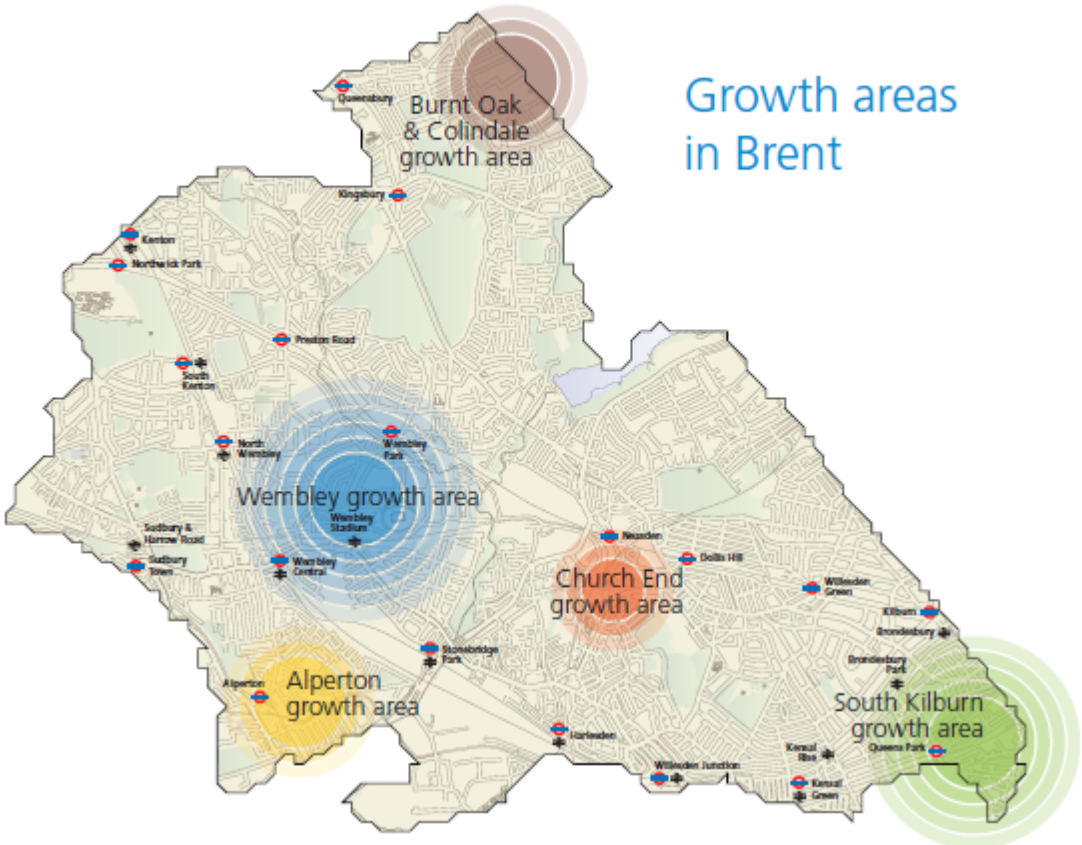
2.2.4.5.1. As with cycling, Brent is also conducive to encouraging walking due to the relatively flat topography and it containing a number of town centres all of which provide services accessible within a short walking distance. Despite this, walking only represents around 4.6% of journeys to work,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

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. 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 (GREATER LONDON AUTHORITY 2018). Estimates show the number of one person households to grow by around 12,500 (35%).



2.2.5.2. 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 Neasden, Staples Corner and Northwick Park. 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. 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.

2.2.5.3. 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[7]

2.3.1. Challenges and opportunities[8]

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 (OFFICE FOR NATIONAL STATISTICS 2012).

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

[7] Requirement R9: Boroughs are required to set out local issues, challenges and opportunities within the context of contributing towards the achievement of the nine Mayor's Transport Strategy outcomes and the relevant polices and proposals.

[8] Requirement R8: Boroughs are required to identify key opportunities for shifting trips and journey stages to walking, cycling and public transport to contribute to achieving the overarching aim for 80 per cent of trips to be made by active, efficient and sustainable modes by 2041.

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 (OFFICE FOR NATIONAL STATISTICS 2012). 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 (IBID 2012).

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%.

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** (TRANSPORT FOR LONDON 2018) – 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 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. Accessibility

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 SURVEY (2017). 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 a little. For those of working age (16 to 64), these figures were 5.14% and 6.41% respectively (ONS 2013).

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 (ONS 2013).

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. Road Safety

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

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.

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.

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. 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[9]

2.3.2.1. 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 capacity 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 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.

[9] Requirement R10: Boroughs are required to set objectives that explicitly assist with meeting the Mayor's Transport Strategy aim of increasing the sustainable travel mode share.

2.3.2.2. Local policies and approaches to date have largely focussed on trying to improve provision for active and sustainable modes and encourage people to use them. However, they have not been sufficient to generate any notable change in travel behaviour in the medium to long term. Brent acknowledges the need for a push and pull approach which combines mobility management to encourage and enable more active and sustainable travel choices with demand management to reduce the ease and convenience of the private car.

2.3.2.3. Drawing on the Sustainable Travel Towns project carried out in Darlington, Peterborough and Worcester between 2004 and 2008, however, the Council acknowledges the potential of behaviour change interventions. The Sustainable Travel Towns showed that car use could be cut by up to 9% through a targeted programme of tailored smarter travel behaviour measures with only small scale complementary infrastructure changes to improve the infrastructure for walking and cycling.

2.3.2.4. The Council will, subsequently, continue to develop and deliver initiatives that have the potential to change travel behaviour within the borough.

2.4. Mayor's Transport Strategy outcomes [10]

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.

2.4.2. Brent Council does not have control of all modes of transport available to its residents and highway assets, such as London buses which are managed by TfL through contracts with private operators and traffic signals. As such there are limitations to what the Council can directly implement in achieving the Mayor's Transport Strategy Outcomes.

[10] Requirement R11: Boroughs are required to identify a set of locally specific LIP objectives that contribute to achieving the nine outcomes of the Mayor's Transport Strategy, and the relevant policies and proposals.

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

2.4.3.1. Challenges and opportunities

2.4.3.1.1. Improved provision and support for active and sustainable modes is clearly required. Evidence suggests, however, that on its own investment to improve provision for and encourage walking, cycling and public transport is not sufficient to change existing travel behaviours away from the car, and deliver the required modal shift.

2.4.3.1.2. 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 (NHS DIGITAL 2016). Similarly, the most recent figures show that over 28% of Brent children in reception are overweight, 14% of whom are classified as obese (NATIONAL CHILD MEASUREMENT PROGRAMME 2017). 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.

2.4.3.1.3. 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.

2.4.3.1.4. 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.

2.4.3.1.5. In line with the recommendations of both the NATIONAL INSTITUTE FOR CLINICAL EXCELLENCE (2008) and the NATIONAL INSTITUTE FOR CLINICAL EXCELLENCE (2010) for encouraging active travel, the Council will prioritise and promote walking and cycling for short trips. 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.

2.4.3.1.6. In the past years, The Council has progressed the development of a strategic cycling and walking network and, has consistently applied a methodology for prioritising investment in respective infrastructure schemes.

2.4.3.1.7. 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.

2.4.3.1.8. 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.

2.4.3.1.9. Cycling is considered particularly beneficial in terms of health and wellbeing, with those who cycle regularly reporting less stress, less ill-health and improved cardiovascular fitness levels. Brent Council is, therefore, committed to increase cycling throughout the borough. Recent evidence suggests, however, 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%.

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

2.4.3.1.11. 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. Bus services in particular are also important in enabling access to services, employment and education for those who do not have access to a car. They therefore perform a vital function in reducing social exclusion and enhancing social cohesion for borough residents.

2.4.3.2. Borough Objectives

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

2.4.3.2.1. Increasing the uptake of cycling and walking will actively contribute to a reduction in congestion and air pollution and improve the health of Brent's residents. Over the past years, Brent Council has work towards these outcomes by identifying activities and resources under the following outputs:

i. Walking and cycling infrastructure improvements;
ii. Complementary behaviour change, training and promotion activities.

2.4.3.2.2. There are a number of recent policy and guidance documents that are all influential in terms of the latest thinking on smarter choices. Both Brent's Cycling and Walking Strategies have been developed taking into account the challenges and opportunities that Brent faces in implementing some of the associated measures.

2.4.3.2.3. Cycling

2.4.3.2.3.1. It is expected that the main method employed in encouraging more residents to cycle more often will be the successful implementation of the current Brent Cycle Strategy and subsequent refreshed strategies.

2.4.3.2.3.2. The Council will shortly introduce a dockless bike hire scheme to operate in the borough. The scheme will enable residents to register and to locate and hire a bike without having to access it via a fixed docking station and, is hoped to encourage more people to get out of their car and use clean, sustainable transport. It will support the objectives of the Council's Cycling Strategy and other council plans which aim to encourage more residents to travel more actively and sustainably more often. The scheme has approval to operate for a pilot period of 12 months.

2.4.3.2.3.3. The Council has also progressed the development of a coherent network of direct, comfortable and attractive walking and cycling routes in the past, both at regional and local level to facilitate everyday active travel. Many services and amenities within the borough are often within walking distance of where people live and, therefore, improvements to the infrastructure for pedestrians have been often planned for this distance. On the other hand, where origins and destinations are further afield, the Council has focussed on improvements to the cycle network linking those origins and destinations. Where these networks overlap, the distinctive needs of both user groups have been accommodated, such as along Carlton Vale. This is particularly important as walking is the most common mode of transport for children and older residents. Likewise, people with disabilities often rely on the walking network for independent or assisted mobility.

2.4.3.2.3.4. Working with Transport for London, Brent Council has progressed Quietway 3 which links Regents Park and Gladstone Park. Quietways are continuous and convenient cycle routes on less-busy backstreets across London and, the Brent section of Quietway 3 links Kilburn to Gladstone Park via Chatsworth Road, St Paul's Avenue and Park Avenue North. The scheme comprises improved crossing facilities on Walm Lane and Mapesbury Road and, a new shared use path through Gladstone Park.

2.4.3.2.3.5. Adequate maintenance of facilities for cyclists is an important element in encouraging cycling and keeping people cycling rather than reverting to car use. It is, therefore, important that the Council's Highway Asset

Management Plan adequately reflects the maintenance needs of cycle infrastructure.

2.4.3.2.4. Walking

2.4.3.2.4.1. The Council is committed to afford walking and pedestrians a higher level of priority and to fully support the uptake of this mode by implementing the Brent Walking Strategy and subsequent refreshed strategies.

2.4.3.2.4.2. There are a number of factors that are important in encouraging or discouraging walking, however the quality of the environment is vital in persuading individuals that the streets are both safe and accessible and that therefore walking to their destination is not just practical but also pleasant.

2.4.3.2.4.3. Place making plays an important role in this and will be instrumental in increasing the uptake of walking going forward. The Council acknowledges the importance of place making being incorporated into any scheme development. This will enhance the sustainability of the development and encourage greater uptake of walking and will encourage application of the most recent best practice principles.

2.4.3.2.4.4. The Council's masterplans which have been developed for the identified Growth Areas 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

2.4.3.2.5. Public Transport

2.4.3.2.5.1. Use of public transport and car clubs instead of the private car also contributes to reduced congestion and is important in enabling access to services. Car clubs are recognised as a demand management measure to reduce overall car dependence, encourage use of more sustainable modes of travel and provide for London's urban mobility needs. Over the past years, the Council has progressed the development of various car club models, and has recently approved a flexible car club to operate in the borough which will be launching in autumn of 2018.

2.4.3.2.5.2. When used by people who would otherwise choose to own a car, the model will, subsequently, assist in freeing up kerb space by removing privately owned vehicles from the road network. In this context, each

flexible car club vehicle holds the potential to replace up to 10.5 private cars on the road according to Annual Survey by Carplus (2016/17). This enables kerbside space to be reallocated and utilised for other purposes, such as bike hangers or pocket parks.

2.4.3.2.5.3. Uptake can be influenced by effective travel planning measures and, the Council has worked with both primary and secondary schools to develop and implement travel plans. There are currently 42 primary schools and four secondary schools with an active travel plan in Brent. All of these schools comply with Transport for London's STAR (School Travel Accredited and Recognised) framework.

2.4.3.2.5.4. Most recently, the Council has initiated the No Idling campaign as part of Brent Council's initiative to improve the air quality in and around Brent Schools, with the schools establishing a No Idling zone around their school. This zone is an area where all vehicle owners are asked to turn their engines off whilst they wait. The aim is to educate and engage with parents, students and members' of the public and try to reduce idling of vehicles near schools. A toolkit is available to all schools and, there are currently *tbc* primary schools and *tbc* secondary schools signed up to the No Idling campaign.

2.4.3.2.5.5. Over the past decade, smarter choices, including travel plans have become a key element of Local Implementation Plans. Typically, they are initiatives, measures or techniques aimed at influencing travel behaviour towards more sustainable options.

2.4.3.2.5.6. Evidence shows, that if managed effectively, these types of measures 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.

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

2.4.4.1. Challenges and opportunities

2.4.4.1.1. 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 2016 there were still 917 reported collisions resulting in 1,147 casualties. Of these, 98 were classed as a Killed or Seriously Injured (KSI), with this comprising 3 fatalities.

2.4.4.1.2. *Include map here*

2.4.4.1.3. A wide range of factors contribute to road traffic collisions and the severity of injury, with speed continuing to be a factor, especially in higher severity collisions.

2.4.4.1.4. It is important 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.

2.4.4.1.5. Furthermore to successfully accelerate the transition from delivering car-based capacity to a balanced approach which caters for all modes of transport, and seeks to encourage mode shift and more people to travel more actively and sustainably more often, Brent will continue to address the perception held by some that Brent's roads are too dangerous and uncomfortable for such alternative modes.

2.4.4.1.6. Crime and Perception of Crime

2.4.4.1.6.1. Metropolitan Police Service statistics show the percentage of total crimes committed in Brent as have fallen around 1.75% in 2018.

2.4.4.1.6.2. 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.

2.4.4.1.6.3. 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.

2.4.4.2. Borough Objectives

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

2.4.4.2.1. Improving road safety is essential in encouraging behaviour change to achieve greater levels of active travel and an associated reduction in car usage by addressing concerns over personal injury. As outlined above, road safety is the primary reason given by non-cycling residents as a main barrier stopping them to consider and taking up cycling. It is therefore of great importance that road safety in the borough is improved in order to enable sustainable transport objectives to be met.

2.4.4.2.2. Road traffic collisions also have significant social and economic costs. The total cost of a fatal accident to the economy is estimated at over £1m, accounting for all aspects including lost revenue that would have been generated by the individual. Accidents can therefore have a significant negative impact on economic growth.

2.4.4.2.3. Brent residents of areas which see serious accidents can also suffer from reduced confidence in the safety of their environment, which discourages use of the street scene and can lead to feelings of social isolation. As noted elsewhere in this document, a high-quality environment is important in encouraging active travel, particularly walking.

2.4.4.2.4. Poor road safety is 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.

2.4.4.2.5. 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.

2.4.4.2.6. 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.

2.4.4.2.7. 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. It should be noted that all incidents impact the environment and the quality of life of Brent residents and therefore it is also desirable to reduce slight incidents.

2.4.4.2.8. Addressing slight accidents 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.

2.4.4.2.9. Cycle training has a strong positive impact on both the actual and perceived safety and, Brent's since 2013 and in total over 9,700 Brent school children have been trained at both primary and secondary schools to national standard Bikeability training, equipping them with important skills to help them cycle confidently and safely on quiet roads (level 2). More advanced level 3 training has been provided for secondary school pupils and covers handling traffic and junctions, preparing young people to make longer and more complex journeys by bike.

2.4.4.2.10. In total over 2,325 adults have been trained.

2.4.4.2.11. Complementary to the training, Brent Council also 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.

2.4.4.2.12. 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 (London Assembly Transport Committee 2018).

2.4.4.2.13. Locally, they comprise approximately a quarter of Brent's fatal or serious injuries (DfT 2017). 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.

2.4.4.2.14. 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. 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.

2.4.4.2.15. On2Wheels is the latest addition to the Brent Safer Roads initiative to ensure everyone looks out for themselves and others as they travel around the borough.

2.4.4.2.16. Furthermore, the Borough will continue to lobby for advanced rider training which helps reduce collisions by giving riders additional skills and awareness of developing risks in their road environment rather than the Compulsory Basic Training (CBT) in its current application.

2.4.4.2.17. 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 on top of that already allocated.

2.4.4.2.18. 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.

2.4.4.2.19. To achieve neighbourhoods that are well connected and secure, the Council will ensure that developments have regard to the principles detailed within the Brent Place Making Guide (2010) which takes account of the benefits of a public realm that provide clear, direct and well-overlooked routes that lead to where people want to go make neighbourhoods safer as well as more attractive places within which people want to live. Direct walking and cycling routes to local shops, schools, leisure and open spaces, also promote social interaction and a greater sense of community identity and subsequent opportunities for improved natural surveillance throughout day and night. This in turn can alter people’s existing perceptions and reduce the fear of crime.

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

2.4.5.1. Challenges and opportunities

2.4.5.1.1. For Brent, 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 Harlsden, Kilburn and Wembley. The major routes such as the North London Circular experience congestion over longer periods - reflecting the longer distance trips they carry.

2.4.5.1.2. Congestion have been identified as a key priority within Brent's Long Term Transport strategy and, subsequently, within the LIP3. High levels of congestion reduce the quality of life of Brent residents and have a negative effect on economic growth. They also suppress the uptake of active travel modes by degrading the environment for cyclists and pedestrians.

2.4.5.1.3. On current trends, rising car ownership at a rate higher than the Outer London average from a low base (cp. LONDON DATASTORE 2018) coupled with increasing journey distances (cp. OFFICE FOR NATIONAL STATISTICS 2012) are set to significantly increase traffic volume. As a consequence, congestion and network disruptions are likely to increase resulting in increasingly unreliable journey times. 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.

2.4.5.1.4. While there is limited evidence of modal shift from cars to more sustainable modes 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 (OFFICE FOR NATIONAL STATISTICS 2012). 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) (OFFICE FOR NATIONAL STATISTICS 2012). Of the people whose journey to work originates in Brent, half of them commute by private car (10,599) (IBID 2012).

2.4.5.2. Borough Objectives

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

2.4.5.2.1. This is not about reducing the total number of trips on the network as mobility is highly important for local economic growth and for those residents who struggle to travel by other means, and require motorised travel to facilitate independence. Our focus is on reducing the number of non-essential vehicular trips that occur at peak times and encourage the use of less polluting vehicles.

2.4.5.2.2. The LIP3 therefore does not aim to reduce the total number of trips on the network over a 24 hour period, but to enable many of these trips to take place either in cleaner vehicles or at different times of the day. This will contribute to two main effects:

- Spreading of demand for trips over a longer time period thereby reducing congestion at peak times. This will work in conjunction with increased use of sustainable modes to enable the road network in Brent to flow more freely and therefore avoid buses becoming caught in congestion.
- Transferring many trips which need to be carried out by car into electric or other low-emission vehicles which do not emit NO_2 or carbon dioxide. They also contribute far less than conventional vehicles to the production of particulate matter. This will result in improved air quality throughout the borough.

2.4.5.2.3. Achieving this will mainly require demand management measures.

2.4.5.2.4. Freight

2.4.5.2.4.1. Brent has a number of industrial estates of both local, regional and, indeed, national importance. They rely on and generate freight movements. This has a significant impact on the local network in terms of congestion, road safety and air quality.

2.4.5.2.4.2. HGVs only form part of the delivery and servicing fleet that operates within the area. Vehicles delivering to private residences and construction traffic also contribute significantly to the number of vehicle movements on the network.

2.4.5.2.4.3. Due to the high percentage of vehicle kilometres attributable to freight, it is important that the LIP3 also aspires to reduce the amount of peak time freight trips and to encourage where possible the use of alternative

vehicles. This supports Transport for London's *Delivering a Road Freight Legacy* document and the Draft London Plan.

2.4.5.2.4.4. Out of hours deliveries and changing driver behaviour to enable deliveries to be made over-night without disturbing local residents could be instrumental in achieving this as it moves trips out of peak time traffic and thereby reduces the impact of freight on the most congested times of day. This has been successfully trialled in London during the 2012 Olympic Games, and more recently in Wembley, where out of hours deliveries were encouraged through working with operators and retailers to inform them of the benefits of receiving goods out of normal business hours, without negatively impacting on residents in the immediate areas.

2.4.5.2.4.5. Brent has worked with WestTrans and the other boroughs that form the WestTrans group to formulate a Freight Strategy for the six north-west London boroughs. This strategy seeks to outline an approach and develop schemes to reduce the impact of freight on air quality, road safety and congestion.

2.4.5.2.4.6. Brent will also develop the Brent-specific Servicing and Delivery Strategy under the LIP3 in coordination with WestTrans. This approach is taken to reflect the fact that freight cannot effectively be controlled on a borough-wide basis, but that a larger geographical area is required in order for policies to have full effect.

2.4.5.2.4.7. The Servicing and Delivery Strategy 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.

2.4.5.2.5. <u>Car Clubs</u>

2.4.5.2.5.1. Car clubs have been proven to be effective in reducing the number of vehicles privately owned by car club members. This in itself is beneficial as it reduces the dominance of the private car in the street scene and will in the future make space available for other user groups. Due to the clear advantages that car clubs can generate in terms of reduced car ownership, car club expansion is and, will be encouraged within Brent.

2.4.5.2.5.2. There are currently limited car club facilities within Brent and hence it is difficult to predict how much demand for both car club models operating in the borough, including a flexible car club model, may be present once the facilities are available.

2.4.5.2.6. Parking

2.4.5.2.6.1. Parking is an important part of the transport infrastructure for many Brent residents and can have a significant impact on quality of life. However, it is also true that enabling large-scale free parking for residential vehicles can discourage use of sustainable modes, particularly public transport which can find it difficult to compete with the convenience of the private car.

2.4.5.2.6.2. The local economy is also influenced by parking provision, particularly at service and retail hubs and employment locations. Again, a balance needs to be achieved between providing sufficient parking to support the growth of the local economy and the need to encourage residents and visitors to access these areas by means other than the private car.

2.4.5.2.6.3. Parking provision going forward therefore needs to aim to achieve a balance between competing needs. It is known that parking management, particularly at destinations, can play a significant role in influencing travel choice and therefore in encouraging trips to be carried out by sustainable modes.

2.4.5.2.6.4. Permit sacrifice schemes can go some way to reducing demand for residential parking in areas covered by Controlled Parking Zones, as they provide incentive to reduce household car ownership on a voluntary basis.

2.4.5.2.6.5. Less on-street parking enables highway space to potentially be re-allocated to other user groups via the provision of cycle paths, improved footways or better public realm. This in turn encourages use by pedestrians and cyclists or other uses such as pocket parks to improve air quality and a green space for the community.

2.4.5.2.6.6. The Council is committed to monitoring parking in Brent and identify problems and opportunities for improvement, such as a revised approach for a Parking Permit Sacrifice Scheme. With the scheme aiming to achieve a balance between the needs of residents to park, access to local employment and local retail and service providers, and the need to reduce trips by conventional cars throughout the borough.

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

2.4.6.1. Challenges and opportunities

2.4.6.1.1. 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.

2.4.6.1.2. Evidence shows that fine and ultra-fine particulate matter present in air pollution increases the risk of cardiovascular morbidity and mortality. Conventional vehicles are responsible for 41% to 60% of air pollutants in the UK, which have an impact on cardiovascular and respiratory diseases.

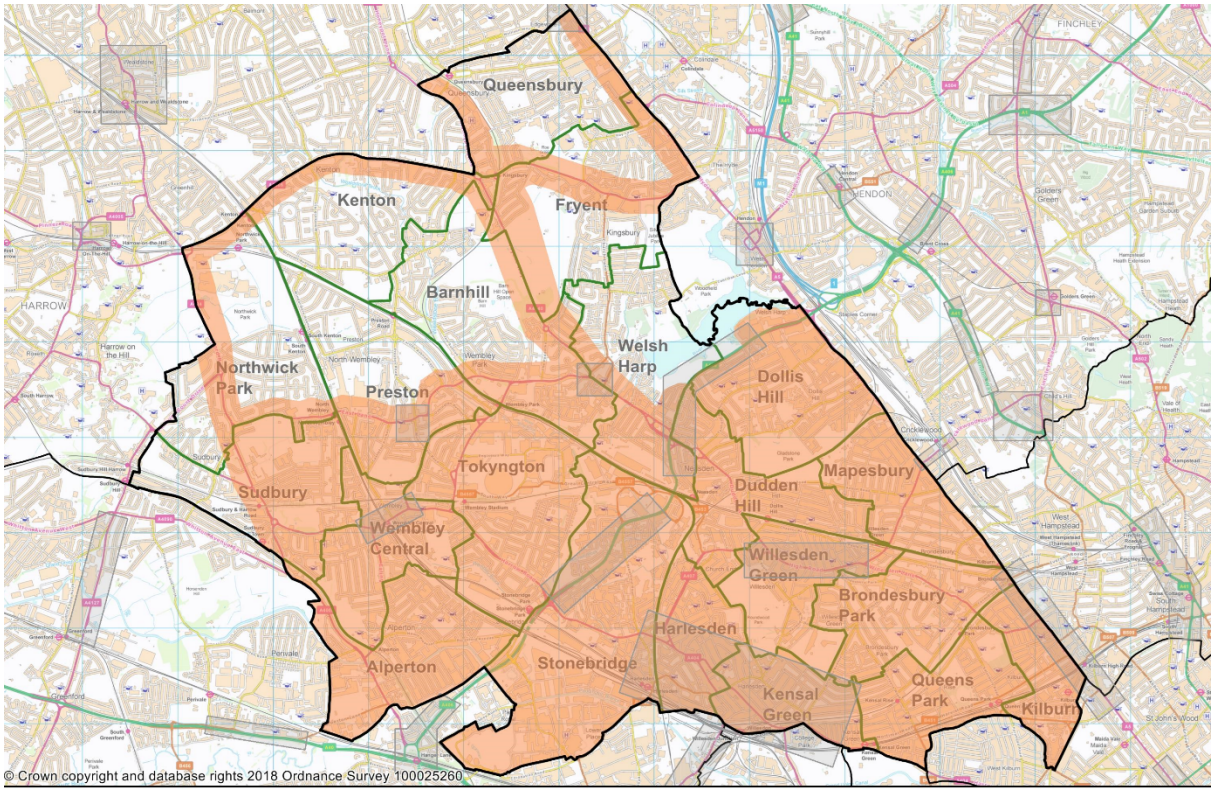
2.4.6.1.3. It has been shown that NO_2 acts as an irritant, exacerbating respiratory conditions and contributing to premature deaths, particularly in vulnerable members of the population such as those with asthma. NO_2 is generated as part of the combustion process that takes place in conventional cars.

2.4.6.1.4. Particulate matter can enter the body through the lining of the lungs and creates inflammation. In particular, particulate matter has been shown to contribute to conditions that have an inflammatory element, such as heart attack and stroke. It is uncertain precisely how many deaths are brought forward by the presence of particulate matter, however, it is estimated to be a significant number.

2.4.6.1.5. Though not all particulate matter is generated by transport, transport is a significant contributor to a number of environmental challenges facing Brent. 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}).

2.4.6.1.6. The most recent consultation on Brent's Long Term Transport Strategy highlighted the wide support for measures to improve air quality, with 89% of respondents agreeing to measures to improve air quality. All the more as air quality limits are exceeded in a wide range of locations in the borough. Since the last LIP, the number of Air Quality Management 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 were selected based on traffic volumes and levels of traffic emissions, and, as Growth Areas, have been identified as areas of planned development (AIR QUALITY ACTION PLAN BRENT 2017).



2.4.6.1.7. The health impacts of poor air quality are striking. The Committee on 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.

2.4.6.1.8. 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.

2.4.6.2. Borough Objectives

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

2.4.6.2.1. Reducing the exposure of Brent residents to both of these substances will directly contribute to improved health and longer life. Though it is not achievable through this strategy to reduce exposure from the transport network to zero due to the nature of transport and the built environment, there are some measures that are achievable that will both reduce overall levels of air pollution and lessen the exposure of individuals.

2.4.6.2.2. There are two main ways in which the exposure of Brent residents to this type of pollution can be controlled and reduced. These are reduction in the overall production of the pollutants and avoidance of the pollutants that are still produced.

2.4.6.2.3. Reduction of Particulate Matter (PM) and Nitrogen Dioxide (NO_2) generated by the transport network

2.4.6.2.3.1. All the objectives of this LIP3 will contribute to improved air quality through reduced vehicle trips on the network. In particular increased use of sustainable modes and reduced peak-time freight movements combined with greater use of Low and Ultra Low Emission Vehicles (LEVs and ULEVs) will contribute to improved air quality. However, there are some specific measures that relate more closely to air quality.

2.4.6.2.3.2. While continuing to increase, numbers of ULEVs in Brent continue to be restricted due to charging infrastructure in Brent being still insufficient to enable proper expansion of the use of ULEVs.

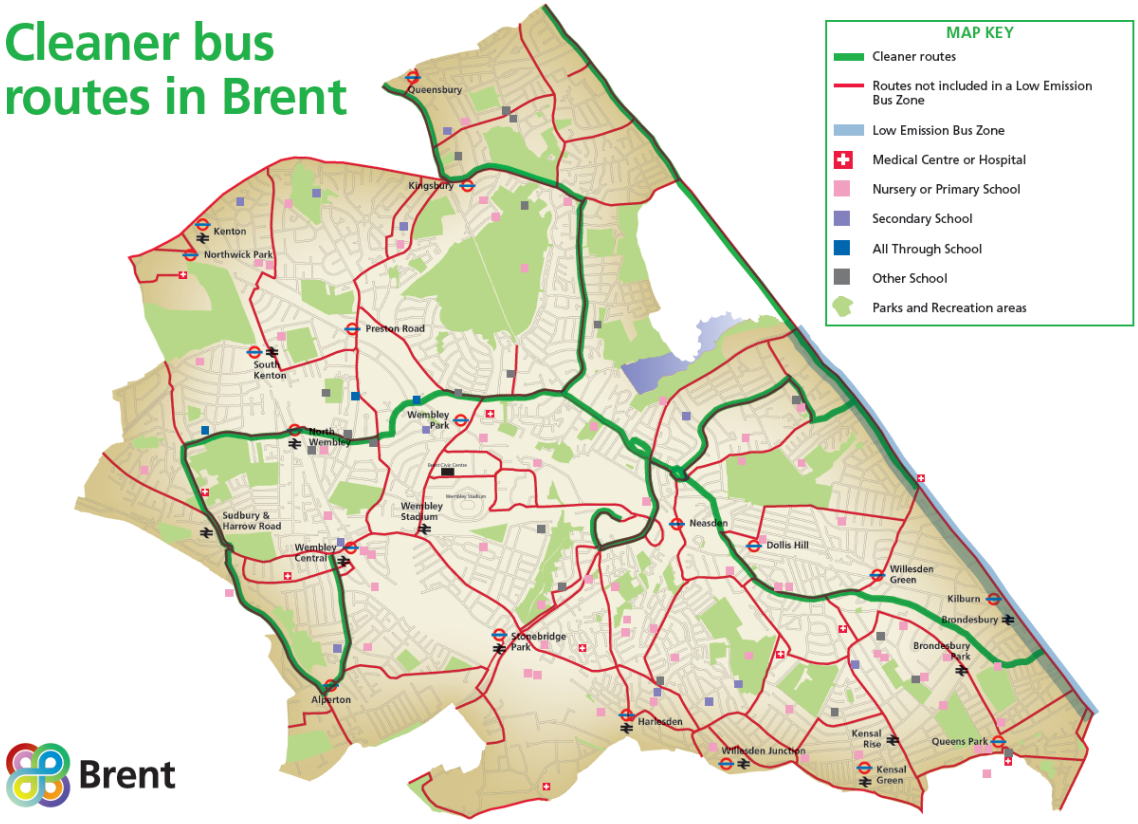
2.4.6.2.3.3. The Council acknowledges this and is committed to provide the required infrastructure in coming years by installing both rapid and lamp column chargers under the Go Ultra Low Cities Scheme (GULCS) as well as exploring innovative options for providing for electric vehicle charging in the densely populated residential areas situated to the south of the borough.

2.4.6.2.3.4. It must also be considered that the vast majority of the current Transport for London bus fleet runs on diesel, which produces high levels of particulates.

2.4.6.2.3.5. Brent, subsequently, welcomes the implementation 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.

2.4.6.2.3.6. 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.



2.4.6.2.3.7. 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.

2.4.6.2.3.8. 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.

2.4.6.2.3.9. 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.

2.4.6.2.4. Avoidance of Particulate Matter (PM) and Nitrogen Dioxide (NO_2) generated by the transport network

2.4.6.2.4.1. In addition, it has been shown that for particulate matter distance from the source of pollution makes a significant difference to the level of exposure suffered. Therefore, increasing the distance and introducing barriers could help to reduce the exposure of residents to this type of pollution.

2.4.6.2.4.2. In some areas this may not be achievable due to the constrained nature of the network. However in new schemes and in particular schemes that incorporate a strong element of place making, enabling a greater distance between the road surface and shop fronts and footways would be of benefit to the health of local workers and visitors.

2.4.6.2.4.3. In some areas it may also be possible to introduce barriers such as suitable street greening that constrains the particulate matter and reduces the amount that reaches the footway and frontages. The Council acknowledges the importance of place making in this regard and for it being incorporated into any scheme development, especially with regard to the identified Growth and Regeneration Areas, such as Alperton and South Kilburn where the Council's commitment to address the issue is further demonstrated by the development of Liveable Neighbourhood proposals for both the Park Royal and Kilburn High Road areas. The development of both schemes will be guided by the principles detailed

within the Brent Place Making Guide (2010) which takes account of the need to make places inviting for pedestrians to spend time in and feel safe.

2.4.6.2.4.4. Furthermore, in partnership with neighbouring boroughs it is proposed to develop outline proposals for the Strategic A5 Road Corridor which 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.

2.4.6.2.4.5. Currently the corridor is heavily vehicle dominated which makes it difficult to cross from one side to the other by pedestrians and cyclists. With the new and future development and growth occurring along its length there is a need to provide for the ability to cross the A5 where new desire lines have been created and enable residents to access services and facilities that are being provided – creating communities and a sense of place. It also has potential to improve access to central London for users.

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

2.4.7.1. Challenges and opportunities

2.4.7.1.1. While Brent Council does not directly fund, manage or control any public transport services, the Borough seeks to secure service improvements from Transport for London and other operators. Brent works closely with TfL in developing schemes and strategies in order to ensure public transport is well catered for within the Borough and will continue to do so.

2.4.7.1.2. 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.

2.4.7.1.3. Public transport makes more efficient use of road space to transport people than the private car, reducing volumes of congestion and improving traffic flows for all.

2.4.7.1.4. Although the overall mode share for public transport in Brent is less than the Outer London average, public transport journeys account for

approximately 35 per cent of all trips in the borough between 2 and 10 kilometres.

2.4.7.1.5. 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 (OFFICE FOR NATIONAL STATISTICS 2012). A further 40% of households in Brent have access to a single car (IBID 2012), often leaving others in the household reliant on other modes of transport.

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

2.4.7.1.7. 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.

2.4.7.1.8. 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.

2.4.7.1.9. 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.

2.4.7.1.10. 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 SURVEY (2017). These show a strong trend in reliance on the bus in lower income groups.

2.4.7.1.11. 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.

2.4.7.2. Borough Objectives

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

2.4.7.2.1. 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.

2.4.7.2.2. The Draft London Plan encourages higher density housing provision in locations with good public transport accessibility. Brent currently has five identified growth areas around the borough, providing a focus for increased employment, housing and population, with more identified in the emerging new Local Plan. These growth areas establish development in locations with good public transport accessibility. Further stations have been identified at selected locations where investment will not only unlock housing growth but also provide interchange options crucial to improve both accessibility to the public transport network and connectivity.

2.4.7.2.3. 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, 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 locality, including potential improvements to extant transport infrastructure such as Willesden Junction station. This could improve access to and within Brent significantly.

2.4.7.2.4. 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.

2.4.7.2.5. A further aspiration for a Crossrail spur to Wembley would, if realised, increase the catchment of the investment in the strategic rail infrastructure such as Crossrail and HS2 at Old Oak Common and, subsequently, provide for greater connectivity for Brent businesses and residents.

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

2.4.8.1. Challenges and opportunities

2.4.8.1.1. 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.

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

2.4.8.1.3. 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 (OFFICE FOR NATIONAL STATISTICS 2012). 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% (NHS BRENT CLINICAL COMMISSIONING GROUP 2016).

2.4.8.1.4. 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% (OFFICE FOR NATIONAL STATISTICS 2017).

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

2.4.8.1.6. Through the Bus Accessibility Programme 96% 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. This has improved access to transport for groups who may otherwise struggle to move around the borough.

2.4.8.1.7. However, the majority of train stations in the borough are still without step-free access, and improvements for a number of these to provide step-free access to public transport services over the coming years remain key.

2.4.8.1.8. In accordance with the objectives of Brent's LTTS, this will be undertaken to maximum effect through the public and private partnerships with which the Borough engages.

2.4.8.1.9. Brent will also seek to engage 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.

2.4.8.1.10. We will continuously seek engagement with all public transport operators to influence decisions to benefit Brent residents. Our aim is to increase accessibility by public transport throughout the borough by requesting new services, more capacity and greater service frequencies on appropriate routes.

2.4.8.2. Borough Objectives

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

2.4.8.2.1. 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.

2.4.8.2.2. While Brent Council does not directly fund, manage or control any public transport services, the Borough seeks to secure service improvements from Transport for London (TfL) and other operators.

2.4.8.2.3. Through the Bus Accessibility Programme 96% 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. This has improved access to transport for groups who may otherwise struggle to move around the borough.

2.4.8.2.4. However, the majority of train stations in the borough are still without step-free access, and improvements for a number of these to provide step-free access to public transport services over the coming years remain key.

2.4.8.2.5. There are currently only six stations in the borough with step-free access from the streets to platforms: 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).

2.4.8.2.6. Recent discussions at Brent's Public Transport Forum have identified a need for step-free access both at Alperton (Piccadilly Line) and Queens Park (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.

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

2.4.9.1. Challenges and opportunities

2.4.9.1.1. 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.

2.4.9.1.2. Feedback from residents indicate there is scope for improvements in local cross-borough bus service provision, however services to meet

access needs are under significant funding pressure, and there are limitations to how alternative models of provision to timetabled buses such as demand responsive transport can fill the gap left by service reductions.

2.4.9.2. Borough Objectives

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

2.4.9.2.1. With many bus and rail services serving the London Borough of Brent, it is important that public transport corridors within the borough enable swift and accessible travel for bus and rail users. 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 upgrade programmes to increase frequency and capacity of services.

2.4.9.2.2. Along with lobbying for new bus services to close existing gaps in the network, the Council has progressed its programme to provide bus priority supported by TfL's ongoing Bus Priority programme on the main routes linking key origins and destinations within the borough and, has, for example, progressed 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.

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

2.4.10.1. Challenges and opportunities

2.4.10.1.1. 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.

2.4.10.1.2. 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 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.

2.4.10.1.3. If the draft London Plan 2017 housing target for Brent is delivered, this will add a minimum of 29,150 dwellings in Brent.

2.4.10.1.4. 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.

2.4.10.1.5. Increased pressure on the road network in the coming years up to 2041 is likely to be unavoidable. Traffic management and capacity enhancements will have a role to play to accommodate the committed pattern of growth as identified in the London Plan.

2.4.10.1.6. While there is limited evidence of modal shift from cars to more active and sustainable modes in the borough in recent years, the travel pattern between adjacent boroughs and the containment of trips within some larger town centre areas indicate there is potential for sustainable travel modes to assume a greater role than at present. For Wembley Town Centre, for example, there are around 6,000 cyclable trips with either their origin or destination there and, around 2,600 walkable trips.

2.4.10.1.7. Improved provision and support for sustainable modes is clearly required. 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.

2.4.10.2. Borough Objectives

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

2.4.10.2.1. Brent is expected to see high levels of growth over the next 20 to 30 years, focussing on the growth areas. Adequate transport investment will be required to ensure this development takes place on a sustainable basis, is accessible for all users and does not place undue pressure on the transport networks.

2.4.10.2.2. Brent currently has five identified growth areas around the borough, providing a focus for increased employment, housing and population.

2.4.10.2.3. These growth areas establish development in locations with good public transport accessibility. They comprise:

2.4.10.2.4. Wembley, delivering a total of 11,500 new homes by 2026. This represents over half of all the new houses expected borough-wide. Given the scale of this development, a more bespoke transport strategy for the area has been developed to meet the needs of regeneration and economic growth, though this will largely focus on connections to existing rail stations at Wembley Park, Wembley Stadium and Wembley Central.

2.4.10.2.5. Burnt Oak/Colindale, delivering a total of 2,500 additional homes to be built in this area by 2026.

2.4.10.2.6. It is intended to work with our neighbouring boroughs in developing 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.

2.4.10.2.7. Currently the corridor is heavily vehicle dominated which makes it difficult to cross from one side to the other by pedestrians and cyclists. With the new and future development and growth occurring along its length there is a need to provide for the ability to cross the A5 where new desire lines

have been created and enable residents to access services and facilities that are being provided – creating communities and a sense of place.

2.4.10.2.8. Alperton, delivering a total of 2,900 additional homes to be built in this area by 2026. To support this the Supplementary Planning Document of the Alperton Masterplan developed a series of transport improvements for Alperton. Alperton Growth Area lies between Alperton Station (Piccadilly Line) and Stonebridge Park Station (Bakerloo Line and London Overground). These stations provide frequent and direct services to central London.

2.4.10.2.9. While the areas in immediate proximity to Alperton Station benefit from good accessibility to bus services, most of the remaining area are only served infrequently providing a connection to Alperton Station but not to Stonebridge Park Station. The Public Transport Accessibility Level (PTAL) across parts of the Alperton Growth Area is, subsequently, currently low.

2.4.10.2.10. The Alperton Masterplan proposals are looking to address this and set out a sustainable approach to developing transportation in Alperton with prioritising walking and cycling resulting in reduced provisions for cars and, with improved connections to public transport.

2.4.10.2.11. South Kilburn, delivering a total of 2,400 new homes within South Kilburn. This area will experience substantial transformation to a compact district set around a traditional street pattern with a substantial increase in the proportion of owner occupied households. This will also impact significantly on the demand for travel within the area. The transport strategy for this area will develop improvements to facilitate better access from South Kilburn into the transport network. This will include improved connectivity to local centres, such as Queen's Park and Kilburn, along with easier access to transport into central London and other town centres in the borough.

2.4.10.2.12. Church End, delivering a total of 800 new homes. Delivery of this growth area will require improved access to public transport inter-changes, including making safer, more convenient connections to local town centres.

2.4.10.2.13. The emerging Brent Local Plan will identify three further Growth Areas, namely Neasden Stations, Northwick Park and, Staples Corner. While

still at an early stage, it is expected that the masterplans, due to be developed for each of the Growth Areas, will also comprise public transport improvements, including an assessment of options to provide step-free access at Northwick Park Station, enhancements to the public realm and better pedestrian and cycling routes to Northwick Park Station.

2.4.10.2.14. In the Neasden Growth Area, it is expected that an ambitious plan to provide high quality infrastructure for both pedestrians and cyclists will be realised over the coming years. The Neasden Connection will provide a clear opportunity to deliver a step change in active and sustainable travel in Neasden and further afield while, at the same time, strongly supporting the regeneration of the wider area by unlocking further development in Neasden.

2.4.10.2.15. The levels of growth identified above make it imperative that trips to and from development areas are carried out by sustainable modes to control impacts on the network. Growth areas have been selected to ensure new development is co-located with high quality public transport and to minimise the need for residents to own a private vehicle.

2.4.10.2.16. However, it is also important that new residents are provided with high-quality information regarding the travel choices available to them. New residents moving into the area are potentially more open to behaviour change and the development of a sustainable transport culture than existing residents, who have already formed habits regarding transport.

2.4.10.2.17. There are a number of recent policy and guidance documents that are all influential in order to provide consistent guidance to developers on the access and transport requirements for new development across the London Borough of Brent by:

- Ensuring a reasonable choice of access by all modes of transport to new development;
- Reducing the environmental impact of travel choices, by reducing pollution, and improving the local environment;
- Improving road safety;
- Promoting healthier lifestyles by providing opportunities for people to walk or cycle to work or for leisure;

- Reducing the level of traffic growth and congestion on the local road network; and
- Encouraging opportunities to improve the quality of development proposals by better use of space through the provision of less car parking spaces where appropriate.

2.4.10.2.18. Brent Council recognises that travel plans are an effective and important means of controlling the traffic generation of new developments and establishing long-term sustainable travel patterns. As such travel plans are an important part of the planning system as well as the Long Term Transport Strategy and the West London Travel Planners initiative run by the WestTrans Partnership.

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

2.4.11.1. Challenges and opportunities

2.4.11.1.1. The anticipated scale of development in Brent is such that major changes can be expected in the transport networks.

2.4.11.1.2. <u>High Speed 2 – Old Oak Common</u>

2.4.11.1.2.1. 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.

2.4.11.1.2.2. The regeneration of Old Oak and Park Royal Opportunity Area (with Park Royal being identified in the Daft 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.

2.4.11.1.2.3. 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.

2.4.11.1.3. West London Orbital

2.4.11.1.3.1. 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.

2.4.11.1.3.2. 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.

2.4.11.1.4. Brent Cross West Thameslink

2.4.11.1.4.1. 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.

2.4.11.2. Borough Objectives

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

2.4.11.2.1. Brent is expected to see high levels of growth over the next 20 to 30 years, focussing on the growth areas. Adequate transport investment will be required to ensure this development takes place on a sustainable basis, is accessible for all users and does not place undue pressure on the transport networks.

2.4.11.2.2. 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.

2.4.11.2.3. 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.

2.4.11.2.4. 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 Draft 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.

2.4.11.2.5. Brent's Town Centre Investment Plan (2016) also acknowledges the role that investment in transport infrastructure has the potential to support the regeneration of Brent's town centres and makes reference to the Growth Centres outlined above.

2.5. Other Mayoral Strategies[11]

2.5.1. The Greater London Authority (1999) Act places a statutory requirement on London Boroughs to produce a Local Implementation Plan and to regularly monitor this document.

2.5.2. The wider policy context for this Local Implementation Plan reflects a mixture of policies, strategies and guidance which complement the Mayor's Transport Strategy and, have influenced the policy direction contained within this LIP, including 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).

[11] Requirement R12: Other Mayoral strategies are also relevant to LIPs, and boroughs should have regard to these as they are published.

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[12]

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.

[12] Requirement R13: Boroughs are required to outline projects and programmes that contribute to the delivery of the Mayor's Transport Strategy – including the overarching mode share aim, each of the nine outcomes and the relevant policies and proposals – in preparing a Delivery Plan.

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	Sustainable and active travel	✓	✓	✓	✓	✓		✓		
3	Demand management	✓	✓	✓	✓	✓	✓	✓		
4	Supporting growth areas and town centres	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	Air Quality	✓	✓			✓				

6	Road Safety	✓	✓	✓						
	Highways Capital Maintenance Programme	✓	✓			✓		✓		✓
4	Major footway	✓	✓	✓	✓	✓		✓		✓
5	Major carriageway	✓		✓	✓	✓	✓	✓		✓
6	Short Section footway	✓	✓	✓	✓	✓		✓		✓
7	Short Section carriageway	✓		✓	✓	✓	✓	✓		✓
	Bus Priority									
8	Minor works (such as lining and signing)	✓		✓	✓	✓	✓		✓	
9	Major works (such as signal modifications)	✓		✓	✓	✓	✓		✓	
	Cycling									
10	Quietway Wembley Park to Harrow Weald	✓	✓	✓	✓	✓		✓		✓

	Liveable Neighbourhoods									
	Kilburn	✓	✓	✓	✓	✓		✓		✓
	Park Royal	✓	✓	✓	✓	✓		✓		✓

3.3. TfL Business Plan[13]

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

[13] Requirement R14: When preparing their LIPs, boroughs are required to take into account the major projects and investment in all modes of transport, as well as the investment in the road network that may impact on their borough, as set out in the TfL Business Plan.

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. Modern Bus Fleet

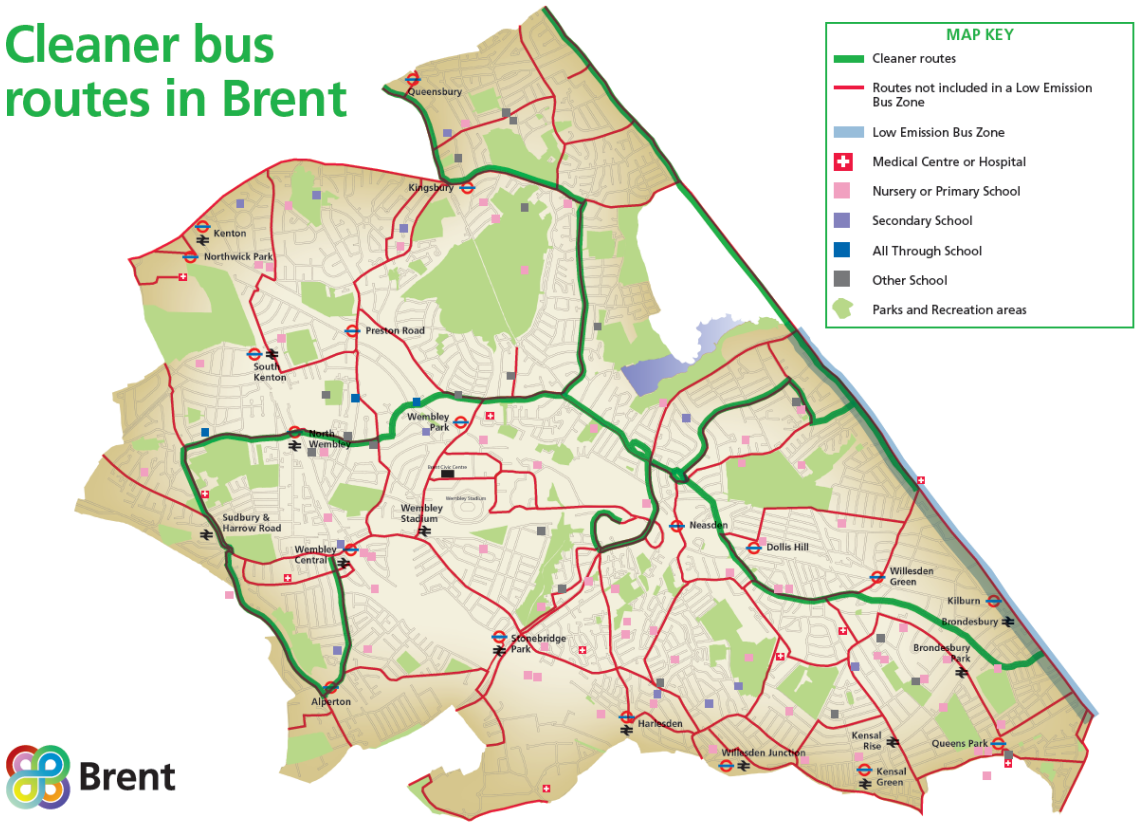
3.3.5.1. The Mayor has made a commitment to providing a cleaner and greener bus fleet in London to assist in tackling the capital's poor air quality. All new double-deck buses will be hybrid, electric or hydrogen to focus on only buying the greenest, cleanest buses. By 2037 all 9,200 of London's bus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



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. <u>Ultra-Low Emission Zone (ULEZ)</u>

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[14]

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, cycle quietways and MAQF. 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.

[14] Requirement R15: Boroughs are required to identify all interventions that are intended to be wholly or partly funded using LIP funding in the borough's Programme of Investment. Boroughs should identify the proposed funding source for each of these interventions, ie how much is from LIP funding allocations and how much comes from other sources (for example, the council's own capital and revenue sources, Section 106/CIL contributions, or other sources of TfL/GLA funding, such as Growth Areas).

SAMPLE TABLE ST02 - Potential funding for LIP delivery				
Funding source	2019/20	2020/21	2021/22	Total
	£k	£k	£k	£k
TfL/GLA funding				
LIP Formula funding –Corridors & Supporting Measures	2,147	2,147	2,147	6,441
Discretionary funding				
Liveable Neighbourhood Park Royal				
Liveable Neighbourhood Kilburn		1,000	5,000	6,000
Strategic funding				
Bus Priority	1,000	1,000	1,000	3,000
Cycle Quietway				
GLA funding				
Housing Infrastructure Fund South Kilburn				
Housing Infrastructure Fund Northwick Park				
Sub-total	3,147	3,147	3,147	15,441

Borough funding				
Capital funding	3,500	3,500	3,500	10,500
Revenue funding	921	921	921	2,763
Parking revenue	12,572	12,572	12,572	37,716
Workplace parking levy	0	0	0	0
Sub-total	16,993	16,993	16,993	50,979
Other sources of funding				
S106	Annual review			
CIL	6,000	tbc	tbc	
European funding	0	0	0	0
Sub-total	6,000			6,000
Total	26,140	20,140	20,140	71,420

3.5. Long-Term interventions to 2041[15]

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

[15] Requirement R16: Boroughs are required to provide a list of potential schemes up until 2041, together with a short explanation of the reasons for their inclusion in the Delivery Plan.

the economic and social vitality of the borough. These are shown in Table ST03 below with indicative funding and indicative but 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	2019-2021	£tbcm	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.
Workplace Parking Levy	2019-2021	£tbcm	LB Brent, TfL	Progress a feasibility study to review the potential for introducing a workplace parking levy in the borough or, in selective areas such as Park Royal.
Controlled Parking Zone (CPZ) Policy	2019-25	£tbcm	LB Brent	Building on the above review, developing, consulting and implementing a borough-wide policy on the number of eligible permits to be obtained within the borough's

				CPZs.
Parking Permit Sacrifice Scheme	2019-2025	£tbcm	LB Brent	Based on the above, review, consultation and implementation of a revised permit sacrifice scheme
Bus rapid transit network for orbital links between Brent Cross and Ealing		£tbcm	LB Brent, WestTrans, TfL and developer contributions	Improve orbital accessibility complementing existing conventional London bus services.
Demand Responsive Transport Offer for Brent Pilot.	2019-2025	£tbcm	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	2020-2025	£tbcm	LB Brent, TfL and, developer contributions	Consolidate existing zones to improve road safety and encourage mode shift in a phased approach.
Delivery and Service Plan (DSP) Management Policy	2019-2025	£tbcm	LB Brent, WestTrans, TfL and developer contributions	Review of current arrangements and development of a DSP Policy to ensure efficiency of deliveries.
Neasden Transport Improvements	2021 - 2025	£tbcm	LB Brent , TfL and developer contributions	Review the highway layout to provide improved public realm, air quality and accessibility to services

				and public transport.

1.1. Three-year indicative Programme of Investment[16]

1.1.1. 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 TfL BOROUGH FUNDING 2019/20 TO 2021/22	Programme budget		
	Allocated 2019/20	Indicative 2020/21	Indicative 2021/22
Local Transport Initiatives			
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

[16] Requirement R17: Boroughs are required to produce a costed and funded high-level indicative Programme of Investment that covers, by year, the three-year period 2019/20 to 2021/22.

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	£40k	£40k	£40k
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	tbc	tbc	tbc
Park Royal			
Kilburn		1,000	5,000
Principal road renewal	0	0	0
Bridge strengthening	0	0	0
Traffic signal modernisation			
Sub-total	£k	£1,000k	£5,000k
STRATEGIC FUNDING	£k	£k	£k
Bus Priority	£1,000k	£1,000k	£1,000k
Borough cycling programme			
Low Emission Neighbourhoods	0	0	0
Sub-total	£k	£k	£k
All TfL borough funding	£k	£k	£k

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.			
London Borough of Brent BOROUGH FUNDING 2019/20 TO 2021/22	Programme budget		
	2019/20	2020/21	2021/22
North End Road Connector	£5,000k	0	0
Wembley Two-way working (Phase 1)	£1,000k	0	0
Wembley Transport Improvements			
Wembley High Road			
South Kilburn Regeneration Area Transport Improvements			
A406 North Circular Road Transport Improvements			
Northwick Park			
All borough funding	£6,000k	£k	£k

1.1.2. Supporting commentary for the three-year programmes[17]

1.1.2.1. The schemes identified above are provisionally listed. Completion of the schemes is subject to change based on budgetary constraints,

[17] Requirement R18: Boroughs are required to provide supporting commentary on: a. How the three-year Programme of Investment has been derived, including how potential interventions have been

community support, policy compliance and impact on other schemes. Therefore, no assurance can be given that all schemes listed below will be delivered.

1.1.2.2. In addition, the budget estimates for 2020/21 and 2021/22 are likely to be above the provisional LIP funding allocations the borough received from TfL. However, the identified schemes are key in delivering against the overarching MTS mode share target and the nine strategic outcomes of the MTS. The provision of adequate LIP funding is subsequently key and the borough wishes to highlight the need for adequate LIP funding allocations to the boroughs going forward.

1.1.3. Risks to the delivery of the three-year programmes[18]

1.1.3.1. The delivery of Brent's Local Implementation Plan has been risk assessed. Table ST05 below shows the principal risks associated with delivery of the LIP together with possible mitigation actions for the three-year programme. The risk register summarises the strategic risks identified that could impact on the three-year programme of schemes/initiatives.

identified and prioritised, and practical considerations relating to timescales, capacity and consultation b. The role of revenue-based investment, policy decisions, and third-party actions (including commitments outlined in TfL's Business Plan and investment programme) in delivering the borough's LIP objectives c. How the delivery of the Mayor's priorities will be supported at a local level.

[18] Requirement R19: Boroughs are required to include a concise section on risk assessment and mitigation in preparing and considering options for their Delivery Plan.

TABLE ST05 - 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> Reduced Government funding to Local Authorities and TfL. Failure to secure planned funding contributions such as S106. Insufficient/ineffective use of available	H		L	Explore alternative external funding sources. Completion of S106 request forms and approval to appropriate timeline to ensure full approval to required timeline.	Major impact on funding source. Service delivery. Outcomes not achieved. Schemes might need to be developed and delivered in a shorter timescale once funding is confirmed. Reputational risk. Unable to demonstrate value of department's contribution to key outcomes. Unable to deliver an effective programme. Budget carry over/overspends.

funding due to a lack in intelligence. <u>Costs</u> Actual inflation differs from assumed inflation rates. Increase in scheme costs due to increase in material costs etc. <u>Procurement</u> The procurement process is delayed. The chosen procurement strategy does not result in the appointment of sufficient suitable contractors. The award of contracts to contractors is challenged.	 H H H 	M M M		Appropriate allowance for inflation given to each scheme at the outset. 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. Existing contractor arrangements to be utilised wherever possible. 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. Use of existing frameworks already operating and procured via the appropriate mechanisms, ensuring that any financial limits are adhered to.	Service delivery. Outcomes not achieved. Unable to demonstrate value for money. Service delivery. Outcomes not achieved. Schemes might need to be developed and delivered in a shorter timescale once funding is confirmed. Reputational risk. Unable to demonstrate value of department's contribution to key outcomes. Unable to deliver an effective programme. Budget carry over/overspends.

Statutory / Legal					
Changes in legislation. 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. 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. Failure of key partnerships; ineffective	H			Proactive approach to engagement with third parties. Seeking to ensure regular contact with third parties.	Service delivery. Outcomes not achieved. Low morale. Stressed/Overworked staff. Relationships with third parties strained. Public dissatisfaction with delays.

partnerships.			L	Ongoing dialogue with neighbouring boroughs. Regular communication/liaison with TfL on the LIP Delivery Programme and engagement to understand position and implications.	Inefficient use of resources. Service delivery. Outcomes not achieved. Low morale. Reputational risk – less likely to be welcomed into new partnerships. Less value for money.
Public / Political					
<u>Public</u> Negative publicity. Programme lacks support from the general public. The use of schemes is lower than expected, so that the expected benefits of the programme are not realised.	H	M M		Implement a comprehensive communications strategy to ensure general public are kept informed as progress is made on individual schemes. Undertake communications and promotional activity once schemes are complete.	Inefficient use of resources. Service delivery. Outcomes not achieved. Low morale. Reputational risk – public dissatisfaction with programme. 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.		M		Consider most appropriate and effective methods of engagement in the Communications Strategy. Target appropriate activity at appropriate groups to maximise benefit distribution.	Service delivery. Outcomes not achieved. Reputational risk – public dissatisfaction with programme. Unable to deliver an effective programme.
<u>Political</u> Change of local political administration. Changes of national, regional and/or local policy direction and priorities.			L L	Engagement with all Members and political parties to ensure understanding and level of 'buy-in' to the ambitions of the strategy. Appraisal of proposal and approach has taken place for first two years both at a local and national level.	Service delivery. Outcomes not achieved. Impact on less financial resources on staffing levels and skills. Reputational risk. 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. Delays. 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. 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. Lack of capacity/capability Reputational risk. Potential increased costs of employing consultants/agency staff.
Poor communication and co-					Major impact on funding sources.

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. Significant impact on Brent's ability to deliver a transport network that supports good growth. 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. 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.
Lack of wider intelligence to develop forward programme up to 2041.		M		Robust evidence base developed. Development of Brent Local Plan. Engagement through publishing open	Unable to identify priorities. Ineffective delivery programme. Loss of staff resources/skills. Reputational risk. Impact on ability to develop business

				data to strengthen public accountability.	case for future funding.

1.2. Annual programme of schemes and initiatives[19]

1.2.1. The annual programme of schemes has been submitted to TfL. The programme of schemes mentioned previously will be updated annually prior to submission to TfL.

1.2.2. Supporting commentary for the annual programme[20]

1.2.2.1. 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.

1.2.2.2. 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.

1.2.2.3. 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.

---

[19] Requirement R20: Boroughs are required to provide a detailed and costed programme of schemes and initiatives for the first year of the plan, with the programme to be updated in subsequent years. Boroughs should submit their Programme of Investment using Proforma A (as shown at Part three – Appendix F). Proformas will need to be uploaded to the Borough Portal.

[20] Requirement R21: Boroughs are required to provide supporting commentary on: a. How the annual Programme of Investment has been derived, including how potential interventions have been identified and prioritised, and practical considerations relating to timescales, capacity and consultation b. The role of revenue-based investment, policy decisions, and third-party actions (including commitments outlined in TfL's Business Plan and investment programme) in delivering the borough's LIP objectives c. How the delivery of the Mayor's priorities will be supported at a local level

1.2.2.4. 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.

1.2.3. Risk assessment for the annual programme[21]

1.2.3.1. Table ST06 below shows the principal risks associated with delivery of the LIP together with possible mitigation actions for the annual programme. The risk register summarises the strategic risks identified that could impact on the annual programme of schemes / initiatives.

[21] Requirement R22: Boroughs are required to identify any projects that have significant potential of risk within the planned programme of works and identify any mitigation measures for these high-risk projects.

ST06 - 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. 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. Outcomes not achieved. 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. 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. Changes in legislation. Consultation impacting on project timescales, potentially resulting in the scheme not being able to be progressed.	H		L L	Explore possibility for legal challenge, if possible consider joint action with other affected bodies. Appraisal of proposal and approach has taken place for first three years. 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. Appraisal of proposal and approach has taken place for first three years. 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. 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. 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. Outcomes not achieved, with potential adverse impact on economic regeneration. Congestion levels, public transport overcrowding etc. Low morale. Stressed/Overworked staff. Relationships with third parties strained. Public dissatisfaction with delays.

Public / Political					
<u>Public</u> Negative publicity. Individual schemes lack support from the general public and, do not receive public support at consultation stage. The use of schemes is lower than expected, so that the expected benefits of the schemes and, ultimately, LIP programme are not realised. Benefits of the project are unevenly distributed amongst different societal groups or benefits are not experienced amongst hard to reach groups. <u>Political</u> Individual schemes are not approved by Brent Members.	H	M M 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. Consider scheme redesign to overcome objections. Undertake communications and promotional activity once schemes are complete. Consider most appropriate and effective methods of engagement for communication with the public. Target appropriate activity at appropriate groups to maximise benefit distribution 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. Inefficient use of resources. Service delivery. Outcomes not achieved. Reputational risk – public dissatisfaction with programme. Unable to deliver an effective LIP3 programme. Less value for money.

Programme & Delivery					
Insufficient staff available for LIP3 programme management and delivery. Changes in the team responsible for programme management and delivery; loss of key staff; delays in appointment of new team members. Projects and programme do not deliver expected outputs and outcomes. 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. Delay to individual projects and schemes for reasons other than those listed separately above.	H H	 M M		Utilise experienced external resources to fill gaps. Possibly use agency staff, charged directly to individual projects and schemes. 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. Introduce a limit on the number of overall scheme iterations to scheme design by each Members and set a time limit for reply. Re-prioritise and re-programme expenditure to bring forward other appraised projects and schemes.	Outcomes not being delivered and programme objectives not being achieved. Delivery period for the LIP3 programme may need to be extended or, projects may not proceed. Significant impact on Brent's ability to deliver a transport network that supports good growth. Low morale. Lack of capacity/capability. Reputational risk. Potential increased costs of employing consultants/agency staff. Potential major impact on funding sources.

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

1.3.1. Overarching mode-share aim and outcome Indicators[22]

1.3.1.1. 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.

1.3.1.2. 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.

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

1.3.2. Delivery indicators [23]

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

1.3.3. Local targets[24]

1.3.3.1. The Mayor has set a very challenging strategy and the trajectories provided to Brent show the considerable task we have been provided. 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.

1.3.3.2. While the Council is committed to work towards delivering the mayor's trajectories, delivering these will be challenging for the borough and will be dependent on the funding available to implement appropriate

---

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

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

[24] See LIP Guidance p.62, paragraph 3.33.

schemes and the ability to deliver behavioural changes. The borough targets set are still challenging to achieve.

1.3.3.3. In setting targets, three principal inputs have been used:

i. Examination of past trends;
ii. Analysis of factors that would be expected to modify the projection of the trend in the future; and
iii. Benchmarking against trajectories chosen by the Mayor for each of the nine strategic outcomes.

1.3.3.4. Brent's targets are contained in the table below, which have a standard format presenting baseline and target data. The paragraphs below, however, set out a reasoning for supporting the targets chosen which differ to the provided trajectories.

- (1a) - Over the period 2016-2018, the trajectory for cycling mode share in Brent remained level. 2018 saw the opening of high quality infrastructure with the Carlton Vale Link and Quietway 3 complete and, the Council is progressing work to implement Quietway linking Wembley Park and Harrow Weald.

  Evidence linking cycle infrastructure improvements with progress towards the strategic outcome is not particularly strong within the borough. This is considered as a result of the lack of connected strategic infrastructure providing safe cycling routes to required destinations and limited resources in which to achieve it.

  Considering the level indicator trend noted until recently, the given target represents a significant challenge. Although not stretching according to the TfL LIP3 Guidance, local circumstances make this a challenging target requiring the full support of other partners and, the Borough looks to the Mayor to provide further financial support to achieve the targets.

- (1b) - Londoners have access to a safe and pleasant [strategic] cycle network 2018 saw the opening of the Quietway 3 and the Council is progressing work to implement Quietway 9 linking Wembley Park and Harrow Weald. Despite the significant lengths of routes comprising the London Strategic Cycle Network (LSCN) planned for Brent, the current level of investment available to

Brent to progress the development of the LSCN in the Borough, the Council anticipates a further development of the network over the period of the LIP3 which will see approximately tbc% of the borough's population living within 400m of the London-wide strategic cycle network.

Although not stretching according to the TfL LIP3 Guidance, local circumstances make this a challenging target requiring the full support of other partners and, the Borough looks to the Mayor to provide further financial support to achieve the targets.

- (2) - Deaths and serious injuries from all road collisions to be eliminated from our streets: the trajectory requires an average reduction of 17 KSI accidents per year. This is approximately 5 times the 2006 to 2016 rate. Accidents on roads have actually increased during the last year, this is as a result in how accidents are recorded and not specific to Brent alone.

  Brent's target is below the trajectories of accident reduction rates.

  Although not stretching according to the TfL LIP3 Guidance, local circumstances make this a challenging target requiring the full support of other partners and looks to the Mayor to provide further financial support to achieve the targets of the published Vision Zero Plan.

- 3a) - Reduce the volume of traffic in London: amongst London Boroughs, Brent has one of the highest traffic growth rates relative to population growth. Coupled with increasing journey distances the Borough is set to experience a significant growth in traffic levels. With the current lack of realistic alternatives to encourage more residents to travel more actively and sustainably more often, such as the lack of a direct, convenient, comfortable and safe segregated network of strategic cycle routes linking the borough's residential areas with key destinations and orbital bus routes, Brent's target for this strategic outcome remains, therefore, slightly under the projected trajectory.

  The balance of evidence, however, suggests that the revised target is correct for the current set of priorities and strategy.

- (4a)(4b)(4c) and (4d) - Reduced CO2, NOx, PM10 and PM2.5 emissions: from an air quality perspective, improvements in vehicle technology will enable the pollutant target to be met, provided that traffic growth is no more than the revised target.

1.3.3.5. Table ST07 below lists Brent's identified borough targets.

TABLE ST07 - Borough outcome indicator targets							
Objective		**Metric**	**2016 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.	65%	66% 78%	66% 78%	2021 2041	The targets are based on an annual 0.5% increase in the mode share of people travelling on foot, by bike or public transport. It is recommended that this is reviewed and an annual increase of 1.0% is considered once Quietway Wembley Park to Harrow Weald have been completed and, once the WLO Overground link is

Objective	Metric	2016 Baseline	Mayor's Trajectory Targets	Borough target	Target year	Additional commentary
						complete.
	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).	30%	38% 70%	33% 63%	2021 2041	The targets are based on an annual 1.5% increase of active travel mode share. It is recommended that this is reviewed and an annual increase of 1.0% is considered once Quietway Wembley Park to Harrow Weald have been

Objective	Metric	2016 Baseline	Mayor's Trajectory Targets	Borough target	Target year	Additional commentary
						completed.
Londoners have access to a safe and pleasant cycle network	Proportion of Londoners living within 400m of the London-wide strategic cycle network.	0%	12% 79%	Tbc% Tbc%	2021 2041	To be set in line with the catchment of Quietway Wembley Park to Harrow Weald. GIS analysis still to be completed.
	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)	105	47	88	2021	The targets are based on an annual 1% reduction of KSI numbers.
	Deaths and serious injuries (KSIs) from road collisions base year 2010/14 (for 2030 target).	98	0	79	2041	As above.
	Outcome 3: London's streets will be used more efficiently and have less traffic on them					

Objective	Metric	2016 Baseline	Mayor's Trajectory Targets	Borough target	Target year	Additional commentary
Reduce the volume of traffic in London.	Vehicle kilometres in given year. Base year 2015. Reduce overall traffic levels by 10-15 per cent.	895,000	854,000 811,000	886,072 838,539	2021 2041	Targets are based on an annual 0.5% reduction in annual vehicle kilometres.
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	N/A
Reduce car ownership in London.	Total cars owned and car ownership per household, borough residents. Quarter of a million fewer cars owned in London. Base period 2013/14 - 2015/16.	101,247	96,700 91,300	100,237 90,675	2021 2041	Targets are based on an annual 0.5% reduction in car ownership numbers.
		Outcome 4: London's streets will be clean and green				

Objective	Metric	2016 Baseline	Mayor's Trajectory Targets	Borough target	Target year	Additional commentary
Reduced CO_2 emissions.	CO_2 emissions (in tonnes) from road transport within the borough. Base year 2015/16.	203,200	185,300 51,200	193,167 71,070	2021 2041	Targets are initially based on an annual 2.5% reduction in carbon emissions from road transport up to 2021/22. Thereafter and, in the context of ULEZ expansion, targets are set at an annual 5% reduction in carbon emissions.
Reduced NO_x emissions.	NO_x emissions (in tonnes) from road transport within the borough. Base year 2013.	750	290 40	713 262	2021 2041	As above.

Objective	Metric	2016 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 year 2013.	73 (PM_{10}) 41 ($PM_{2.5}$)	62 (PM_{10}) 30($PM_{2.5}$) 37(PM_{10}) 18($PM_{2.5}$)	69 (PM_{10}) 39($PM_{2.5}$) 26 (PM_{10}) 14($PM_{2.5}$)	2021 2021 2041 2041	As above.
	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 trip origin. Reported as 3yr moving average. Base year 2013/14 - 2015/16.	202,000	233,000 318,000	208,105 312,205	2021 2041	Targets are based on an annual 1.5% increase of public transport (bus, rail, underground mode share) up to 2029/30. Thereafter and, in the context of the

Objective	Metric	2016 Baseline	Mayor's Trajectory Targets	Borough target	Target year	Additional commentary
						likely completion date of the WLO Overground link, they are set at an annual 2.5% increase target.
	Outcome 6: Public transport will be safe, affordable and accessible to all					
Everyone will be able to travel spontaneously and independently.	Reduce the difference between total public transport network journey time and total step-free public transport network			7 18	2021 2041	Targets are based on an annual 5% increase in the number of step-free accessible stations within the borough.
	Outcome 7: Journeys by public transport will be pleasant, fast and reliable					
Bus journeys will be quick and reliable, an attractive alternative	Annualised average bus speeds, base year 2015/16	9.0	9.3 10.3	9.1 9.8	2021 2041	Targets are based on an annual 0.5% increase in bus

Objective	Metric	2016 Baseline	Mayor's Trajectory Targets	Borough target	Target year	Additional commentary
to the car						speeds (mph).
	New homes and jobs					
	Outcome 8: Active, efficient and sustainable travel will be the best options in new developments **Outcome 9: Transport investment will unlock the delivery of new homes and jobs**					
Delivery of Section 106 agreements	Percentage of transport related Section 106 obligations met	N/A	N/A	100%	2021	S106 agreements secure funding / measures to make individual schemes acceptable in planning / highways scheme. Metric measures where subject obligations are being met by both the developer and the Council.

Objective	Metric	2016 Baseline	Mayor's Trajectory Targets	Borough target	Target year	Additional commentary
CIL funding allocations used for strategic transport initiatives	Percentage of CIL receipts allocated to transport initiatives that are used for strategic transport initiatives	N/A	N/A	100%	2021	CIL provides funding for broader infrastructure initiatives (i.e. not just infrastructure needs arising from individual developments), thereby unlocking the delivery of new homes and jobs. In reflection of this, the Brent CIL Charging Schedule indicates that where CIL is allocated to transport / highways related infrastructure, this should be spent on strategic infrastructure.