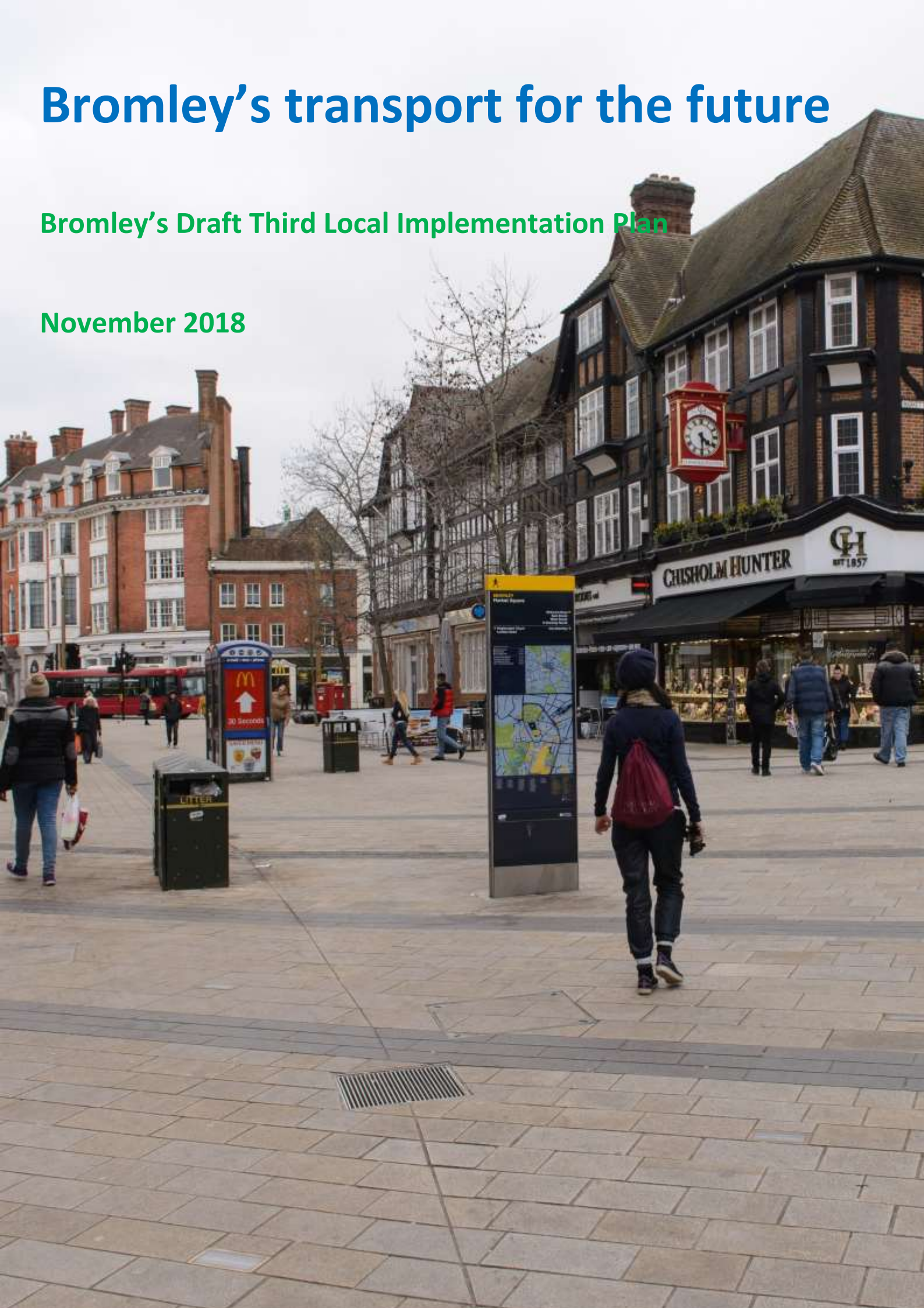
Bromley's transport for the future

Bromley's Draft Third Local Implementation Plan

November 2018



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Foreword

These are exciting times for the transport sector with potentially large changes in the way we travel over the next two to three decades. Providing residents and visitors to Bromley with high quality transport infrastructure to enable them to make choices about the way they travel is at the centre of this third Local Implementation Plan (LIP3) document. I am determined to see the development of new public transport infrastructure in the Borough, to provide new connectivity to other parts of London and Kent, offering the opportunity for continued economic regeneration in Bromley and improved access for visitors to our Borough. In addition to allowing Bromley residents greater and easier access to jobs in Docklands and East London for example.

In Bromley, transport plays a key role in supporting our own Borough objectives such as vibrant town centres, maintaining independence, healthy residents and a quality environment. This LIP3 strategy sets out how we will deliver new transport infrastructure to support these outcomes in the short and long term. I am especially keen that new transport infrastructure contributes positively to the qualities that Bromley has and what attracts so many people to live and spend time in the Borough.

Much of what is proposed in the LIP3 builds on the good work we have undertaken as a Borough. For example KSIs have been reduced by 53% since 1999. We have achieved all Mayoral targets early although we do not intend to rest on our laurels. Through this LIP we a reaffirming our drive to reduce those being killed and seriously injured on our roads with an ambition to reduce this to zero by 2041. This will be challenging to deliver and needs the efforts of many working together, but is the right approach to take for the future.

Cllr William Huntington-Thresher

Portfolio Holder for Environment & Community Services


SOUTHERN RAILWAY
PETER MORRIS
COINS MEDALS
BANKNOTES &C.
INSIDE THIS STATION
Tickets

Executive summary

This document is Bromley's transport strategy for the next three years and is the Local Implementation Plan (LIP) of the Mayor of London's wider transport objectives for London as set out in the Mayor's Transport Strategy (MTS).

In the context of a growing city, Bromley's population is predicted to increase by almost 30,000 by 2032. This level of population growth will present challenges for the Borough's transport networks, to ensure that residents can still move about safely and efficiently to access employment, education, health provision, retail and leisure opportunities. Providing an efficient transport network has a central role in ensuring the quality of life in Bromley and promoting economic growth across the Borough and capital.

If this growth in demand for travel were to be accompanied by an equal growth in car use, congestion and traffic would get worse, with slower journeys for residents and businesses and air quality will deteriorate. To accommodate this increase in demand requires us to make the most efficient use of the capacity we have on our transport networks, through the use of space efficient modes. Essentially this means that high quality, attractive alternatives to car travel need to be developed to provide genuine transport choice and to avoid gridlock in the more built up parts of the Borough. We need to focus on the most efficient use of the available capacity and encourage residents to choose the most appropriate mode for their particular journey, thereby enhancing the Borough's quality of life, health and local economy.

The Borough's high level objectives are set out in "Building a Better Bromley", these are:

- A Quality Environment
- Regeneration
- Vibrant Thriving Town Centres
- Supporting our Children and Young People
- Supporting Independence
- Safe Bromley
- Healthy Bromley

Transport has a key role to play in delivering these objectives, for example by providing attractive walking and cycling infrastructure, residents will be able to undertake exercise as part of their everyday routine, such as travelling to the station, improving their health and reducing the chance of disease, thereby supporting independence and promoting a healthy Bromley. Similarly, whilst the Borough does not have the same air quality problems as inner and central London, the Borough will work to maintain and improve its air quality in a targeted way that supports the ambition for a Quality Environment and Healthy Bromley.

The Mayor of London has set an ambitious target for 80 per cent of all trips in London to be made on foot, by cycle or by public transport by 2041, compared to 63

per cent today. This is not a one size fits all target for the whole of London and instead there are specific mode share targets for each borough, which contribute to the overall 80% target. In the case of Bromley the target is for 60% of trips to be made by public transport, walking and cycling by 2041. A shorter term mode share target is for 47% of trips to be made by those sustainable modes by 2021. This represents a 1 percentage point change from the current public transport, walking and cycling mode share of 46%

As an Outer London Borough, a number of destinations in Bromley are rural in nature with low Public Transport Accessibility Levels (PTALs); these areas have higher levels of car ownership and are often dependant on the car for access to employment, education and services. Therefore, without investment in new public transport connectivity, improved weekend and bank holiday services alongside walking and cycling investment, the potential to achieve mode shift will not be met with residents still reliant on private vehicles to make trips that are currently inconvenient and significantly longer by public transport.

The strategy sets out how the Borough will deliver the MTS locally for the benefit of residents in the long term. There is great potential for walking and cycling in Bromley so the Borough will seek to work alongside TfL to deliver high quality strategic cycle network routes in the Borough, something which has already begun with the proposed Quietways. It will also look to deliver a series of local routes including upgrades to the existing London Cycle Network to create routes that serve town centres, stations and act as feeders to the strategic cycle network. This will be complemented by investment in cycle parking and small scale local schemes to reduce barriers to cycling. Consideration will also be given to how an electric bike hire scheme can be implemented alongside private sector partners to open up cycling to a wider range of people.

Walking is already a popular mode of transport in the Borough and to unlock further potential for walking the Borough will continue to invest in improved footways and new crossing facilities including on the Walk London network to make walking an attractive and enjoyable choice for local trips. Walking investment will also be directed towards promoting walking to school to reduce the negative traffic and parking impacts associated with the school run and promote healthy, active lifestyles from a young age. Larger area based schemes will also be considered to promote walking including ones that benefit public realm in town centres and supports the Building a Better Bromley priority of vibrant town centres.

The LIP3 reaffirms the Council's long term commitment to make the Borough's roads safer by adopting the Vision Zero ambition of no deaths or serious injuries on the roads by 2041. This is a challenging target and one that the borough can't achieve alone. However the Borough will play its part by working to improve safety at collision hot spots, especially for vulnerable road users who make up a disproportionately high number of those Killed and seriously Injured (KSI) compared

to mode share. The borough will also continue its education programme to encourage safe use of roads and smarter travel choices.

Reducing the impact of excess parking are key Borough priorities. Therefore to manage demand the Borough will continue to develop the car club network to encourage residents to think more about their mode choice and to reduce the need to own multiple cars by providing residents with the choice of a car when they need one as part of the modal mix. By enabling residents to choose to own fewer cars and enjoy the cost savings this brings, there will be less demand for overstretched supplies of parking, addressing a key resident concern. The Borough will also look to work with communities to implement appropriate parking controls around stations and town centres to reduce the impact and better manage parking around these high demand areas.

The borough will also seek to develop the car club offer for businesses to allow them greater choice of low emission vehicles at an affordable cost. Working through Business Improvement Districts, the Borough will seek to work with local businesses to make deliveries more efficient and reduce the impact of freight on peak hours' traffic and the reliability of the network.

The Borough will focus initiatives to reduce the impact of air pollution in the areas of highest exceedance, primarily within the Air Quality Management Area (AQMA) or where vulnerable people may spend significant amounts of time, for example schools. These interventions will be developed in detail in the Borough's Air Quality Action Plan review which will be assessing how various Air Quality issues might be tackled most effectively in future years. From a transport perspective the Borough will consider how it can reduce unnecessary pollution and waste through anti-idling education campaigns, continued introduction and facilitation of the switch to alternative fuel technologies and measures to reduce emissions from its own fleet where cost effective, practical and reliable. The Borough will also seek to reduce emissions from on street car club vehicles, requiring suppliers to move to hybrid and electric cars and vans. It will also lobby TfL to speed up the greening of the bus fleet in outer London. Tree planting as part of transport schemes will also act to provide a green lung to capture pollutants and improve the environment with shade and shelter.

The provision of efficient and high quality public transport is a key priority for the Borough, especially the fast rail links to central London from the Borough's town centres. However a key challenge is to provide additional capacity on these services to accommodate growth in Bromley Town Centre. Also, orbital public transport connectivity from many areas of outer London is poor, creating conditions where the car is the default choice for many of these trips. Therefore providing frequent, fast convenient and reliable public transport on key orbital routes will play an important role in mode shift and reducing congestion and traffic volumes in the Borough and outer London.

A further key connectivity gap is between Bromley town centre and Canary Wharf /Docklands. Improving connectivity on this corridor is a key Borough priority because it will improve residents' access to jobs and support the Borough's regeneration of office space. The Borough is therefore looking to work with TfL and other industry partners to develop deliverable and cost effective solutions that offer fast, frequent and convenient public transport services at an affordable cost for funders.

Considering connectivity to the wider south east region, journeys from Bromley to North West Kent are often slow and circuitous. The Borough therefore supports proposals from Network Rail's draft Kent Route Study for a direct service between Bromley and Ebbsfleet International. Improving connectivity on this corridor by rail will importantly act to reduce car dependency in this part of Kent and open up employment and leisure opportunities including in the proposed Paramount Leisure Resort on the Swanscombe peninsula.

The way that the rail network has developed has meant that much of it is not accessible to those with mobility issues, heavy luggage or travelling with young children. The Borough is therefore strongly supportive of measures to make the rail network more accessible and will lobby for funding to make more of the Borough's stations step free. This will be complemented by the Borough's own station access improvements on the routes to stations.

Buses form an important part of the Borough's public transport network and could be further developed, incrementally, based on changes in demand. The Borough, however, wishes to work closely with TfL to develop the network and new and innovative bus services. The Borough will seek to work with TfL to support the potential limited stop bus corridor identified in the MTS between Beckenham and Bexleyheath, which connects with the London Tram network at Beckenham Junction. The Borough will also seek to work with TfL to understand whether there is a case to provide interchange opportunities between this corridor and the Elizabeth Line at Abbey Wood.

To support the development of the Biggin Hill Strategic Outer London Development Centre (SOLDC) including proposals such as a new Hotel and Aviation Technology College, and to reduce car dependence along with minimising any increase in car

borne trips as a result of the development, the Borough will work with TfL to reduce to improve bus reliability through Keston Mark junction, making buses more competitive with car journey times, offering an attractive alternative to driving. In addition to this, the Borough would like to see whether express or limited stop services to the SOLDC could reduce car borne trips that the employment and expected education growth in this area will create.

The Borough will also lobby TfL to improve bus services throughout the borough, notably to improve weekend services, improve connectivity with hospitals, provide good connectivity to new developments and provide new school bus routes. Promoting and expanding public and active travel options for school journeys is essential to reduce school run trips which cause congestion, local parking issues and safety concerns at the beginning and end of the school day. Based on past experience the borough has observed the difficulty in changing established travel modes. Each year a new cohort of residents reach adulthood and the possibility of switching to car travel. A good experience of public and active travel during education should make these the default travel options later in life. It should also maintain good health.

An efficient, convenient and reliable bus network is essential in providing a good public transport experience in the Borough and in many areas of the Borough that aren't served by rail or tram, buses are the only form of public transport available. In such cases they play a vital role in reducing car dependence and isolation for those without access to a car. So maintaining and expanding a reliable network is important in providing a quality public transport network. This includes tackling longstanding issues with bus reliability, particularly in rural areas and those areas only served by one or two low frequency routes. Whilst much of this rests with the operators, the Borough will play its part by undertaking schemes to reduce congestion on bus routes and reviewing existing bus priority measures.

Public transport investment will be linked to housing growth which is detailed in the Borough's draft Local Plan. By focusing growth in the areas of highest accessibility the impact on the Bromley's road network can be minimised. The Council recognises that achieving its housing targets will be likely to mean some residential development also occurring in areas with lower PTALs. The Council may also seek developer contributions, in line with its adopted Planning Obligations SPD, to improve transport infrastructure serving the development. Although, given the pressure that this growth will put upon existing transport networks, the Council will lobby TfL, Network Rail and other funders to deliver new public transport capacity and connectivity.

Introduction & Preparing a LIP

Introduction and preparing a LIP[1]

Introduction[2]

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 of the projects that will be required to achieve the overarching mode share targets and Mayor's Transport Strategy (MTS) outcomes as well as setting out broad approaches and local policies which will help deliver the MTS and inform the development of schemes. The chapter also considers the link between the LIP and other key frameworks against which the Borough plans and delivers local services.

During the development of the LIP, the Borough has made use of a wide evidence base and analysis of local needs and issues. The spatial interpretation, policies and approaches set out under each of the MTS outcomes in this chapter have been developed within the wider context of the MTS vision, the MTS Healthy Streets Approach and the MTS policies, proposals and outcomes.

This Local Implementation Plan (LIP) is a statutory document, prepared under Section 145 of the Greater London Authority Act 1999. This sets out how the Council proposes to implement the Mayor's Transport Strategy (MTS) as well as contributing to other locally and sub-regionally important goals. It has been developed in accordance with Guidance on Developing the Third London Local Implementation Plan and with reference to the MTS itself as well as taking account of the transport elements of the draft London Plan and other relevant Mayoral and local policies.

This document is the third LIP for the London Borough of Bromley and covers the period 2019/20 to 2021/22 including delivery proposals for this period. It also sets targets and outcomes that the Borough is seeking to achieve with the most detailed delivery plan provided for the first year under which the LIP3 will apply, 2019/20. Furthermore it includes references to longer term aspirations the Borough believes are necessary to achieve the MTS outcomes by 2041.

Bromley's LIP3 identifies how the Borough will seek to work in a locally appropriate manner to achieve the MTS objectives of:

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

[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.

As already described, the Borough's mode share target for 2041 is for 60% of resident trips to be made by public transport, walking and cycling by 2041. Whilst this is ambitious it recognises the nature of many parts of the Borough, where walking, cycling and public transport are unlikely to be viable modal choices for many residents or are unsuitable for the type of journeys being made. We need to focus on the most efficient use of the available capacity and encourage residents to choose the most appropriate mode for their particular journey, thereby enhancing the Borough's quality of life, health and local economy.

Major transport investment in the next few years makes this target attainable although the quality of infrastructure provided is essential to successfully achieving this short term target.

To achieve the 2041 target will require significant investment in the Borough's public transport and cycling network and the Borough has concerns about the limited scope of proposed public transport investment in outer South and South East London especially in relation to new connectivity to the East of London and other town centre destinations in outer London. It is also important to recognise that this also applies to the connectivity of destinations and Town Centre's in the London Borough of Bromley to residents of surrounding boroughs. Realistically journeys of the shortest distance are more likely to be completed by public transport, cycling or walking and so it is a key focus to provide attractive alternatives to switch unnecessary short trips from cars. This LIP therefore seeks to support the Building a Better Bromley Priorities of Vibrant Town Centres, and Regeneration to ensure that the Borough's town centres act as destinations in their own right, reducing the need to travel long distances for employment, leisure and shopping purposes and therefore making active modes a more viable option. For those visiting Borough destinations new public transport connectivity will be key to supporting regeneration and reducing car trips into town centres.

The document also outlines how the Council will work with TfL and other stakeholders such as Network Rail, to assist with delivering the outcomes, polices and proposals of the MTS in a locally appropriate way that supports the quality of life, health and economy of the Borough.

Local approval process[3]

As part of the development of the draft LIP3 document, a small working group of Members chaired by the Chairman of the Environment & Community Services PDS has met to inform and debate approaches to the challenges and objectives as set out by the Mayor.

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

The draft LIP3 was considered by the Environment Policy Development and Scrutiny Committee on 10th October 2018 who endorsed it and recommended that the Portfolio Holder for Environment permit public consultation to take place.

Statutory consultation[4]

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

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

The Borough plans to undertake a public consultation exercise between 5th November 2018 and 13th January 2019 and this will be publicised on the Council's website, any member of the public will be able to respond. Consultees will be able to submit responses via an online e-form or via email.

Additionally, a total of 58 bodies will be directly consulted, including the statutory consultees mentioned above. Representatives of all direct consultees will be written to; drawing attention to the consultation, where it can be found on the Borough's website, and the closing date, consultees will be able to request a printed copy of the documents if they require them.

The direct consultees fall into a number of broad categories as follows:

Statutory consultee	Number consulted
TfL	1
Police	1
Disability groups	5
Local authorities	10

[4] Requirement R4: Boroughs are required to provide evidence to show that all statutory consultees and any other organisations/groups have been engaged with during the formal statutory consultation period. They must also demonstrate how the views of their consultees have been taken into account.

Non-statutory consultee	
Emergency services	2
National agencies	5
Transport & environment groups and operators	25
Business groups	6
Community groups	9
Residents' groups and associations	150

A report of the consultation results with changes that have been made to the final LIP3 document will be taken to PDS and published on the council's website.

Statutory duties[5]

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.

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.

The SEA, including a non-technical summary and an EQIA are available to view on the Borough's website during the consultation period and comments are invited on the two documents. The final SEA and final EQIA will remain on the website alongside the final LIP document and links to relevant committee reports.

LIP approval[6]

The draft LIP will be submitted to the Mayor of London on 16 February 2019 for approval.

[5] 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.

[6] 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.

Local context[7]

Borough Context

Bromley is geographically the largest of the 32 London Boroughs, which, together with the City of London, make up the 33 local planning authorities in London. Covering 64 square miles, Bromley borders the London Boroughs of Bexley, Croydon, Greenwich, Lambeth, Lewisham and Southwark, the Surrey district of Tandridge and the Kent districts of Sevenoaks and Dartford.

The Borough has just over 9000 hectares of Green Belt or Metropolitan Open Land (MOL), 120 miles of public rights of way, and over 2,900 acres of council-owned parks and open space. (Taken from the LDP (para 7.3 p37). Housing densities and typologies vary across the Borough, from higher density areas in the North West, to rural areas in the South. The mixture of rural space and suburban development defines much of the Borough's unique character. The borough also has an undulating typography.

Bromley's Population

The latest (2017) estimate of the resident population of Bromley is 330,909 (estimate based on a capped household size model from the GLA's SHLAA population projections.) Mottingham and Chislehurst North and Cray Valley West have the highest proportion of young people (aged 0-19 years), whereas Copers Cope has the lowest. In turn, Farnborough and Crofton has the highest proportion of elderly people (aged 75 and over), and Crystal Palace has the lowest.

The Borough's population will continue to grow and, it is predicted that by 2031 Bromley's population will rise to 370,369, a 13% increase over fifteen years. The predicted population increase in the Borough will vary by ward and the GLA ward-led projections estimate that there will be a 39% increase in Bromley Town Centre, a 21% increase in Petts Wood and Knoll and a 17% increase in Kelsey and Eden Park. Authority Monitoring Report (2018)

The proportion of older people in Bromley (aged 65 and over) is expected to increase gradually from 17% in 2017 (57,800) to 20% in 2032 (76,100). This equates to an additional 18,300 older people living in the Borough over the next fifteen years, including 7,900 additional people aged 80 and over. Bromley's Joint Strategic Needs Assessment (JSNA) notes that health and social care planning will need to take account of this rise in older residents. However, transport will play an important role in keeping people independent and supporting active lifestyles to improve health outcomes.

[7] 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.

Bromley's main commercial centres are:

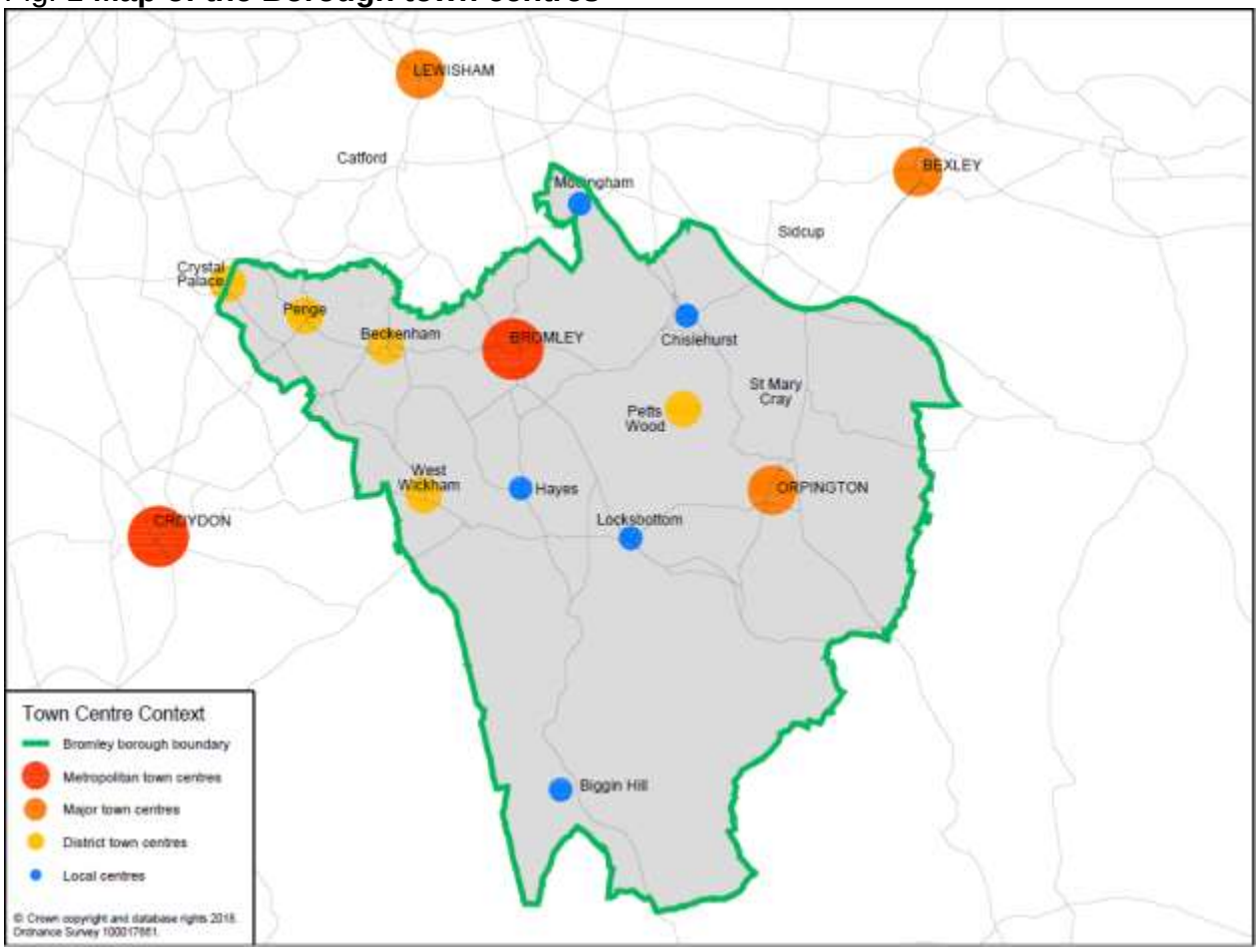
- Bromley Metropolitan Centre
- Orpington Major Town Centre
- Beckenham District Centre
- Crystal Palace District Centre (across 5 boroughs)
- Penge District Centre
- Petts Wood District Centre
- West Wickham District Centre

Each of these centres has a rail connection and is served by buses. Beckenham is also served by the London Tram network.

Additionally, the Borough has designated the following as Local Centres in the (Draft) Local Plan:

- Biggin Hill
- Chislehurst
- Hayes
- Locksbottom
- Mottingham

Fig. 1 **Map of the Borough town centres**



Bromley's Draft Local Plan also sets out the spatial strategy for development in the Borough, as well as areas where protection and more constrained development is anticipated. At a high level, the focus of the spatial strategy is:

- Bromley Town Centre – a focus for sustainable growth of retail, office, homes, and leisure and cultural activities.
- Cray Business Corridor - the main industrial and business area within the Borough, providing accommodation for a full range of businesses, and improving the offer for modern business.
- Biggin Hill SOLDC a cluster of businesses focused on aviation and high tech related industries.
- Crystal Palace SOLDC.
- Protect and enhance the quality and character of all Bromley's Places.
- Protect and enhance the Borough's varied open spaces and natural environment.
- Improvement of Renewal Areas.
- Maintain and enhance the network of town centres, local centres and neighbourhood parades.

Transport has a major role to play in these areas, not only through supporting regeneration and increasing opportunities for residents, but through sustainable development that reduces the overall environment impact and need to travel.

Bromley has also identified five 'Renewal Areas,' which include the areas considered as most deprived by the English Indices of Deprivation (2015). Deprivation is measured based on information about income, employment, health deprivation and disability, education, skills/training, barriers to housing and crime. The following places, which incorporate the most deprived areas in line with the Mayoral "Areas of Regeneration," are listed as follows:

- Crystal Palace, Penge & Anerley
- Bromley Common
- The Cray Valley, including the two adjacent 'places' of:
    - Cray Valley, St Paul's Cray, St Mary Cray; and
    - Orpington, Goddington & Knoll
- Mottingham
- Ravensbourne, Plaistow and Sundridge.

Bromley's Transport Geography

Bromley is served by a range of public transport modes although the level of service and modal mix is not consistent throughout the Borough, with more densely populated areas enjoying better access to public transport with rural areas having limited options. As an Outer London Borough, a number of destinations in Bromley are rural in nature with low PTAL scores; these areas have higher levels of car ownership and are often dependant on the car for access to employment, education and services.

Figure 2 shows ward profiles taken from the GLA data store relating to cars per household, PTAL and cycling to work data to give a high level view of the transport mix in each ward.

Fig. 2 **Ward Profiles**

Bromley Ward Names	**Cars per Household - 2011**	**Average PTAL Score - 2014**	**% Travel by cycle to Work - 2011**
Bickley	1.4	2.4	1.3
Biggin Hill	1.7	1.8	0.5
Bromley Common and Keston	1.3	2.3	1.5
Bromley Town	1.0	3.8	1.7
Chelsfield and Pratts Bottom	1.5	2.1	1.0
Chislehurst	1.4	2.1	1.2
Clock House	1.0	4.0	2.1
Copers Cope	1.0	3.3	1.7
Cray Valley East	1.0	2.1	1.1
Cray Valley West	1.1	2.3	1.1
Crystal Palace	0.6	4.6	3.2
Darwin	1.7	1.3	0.9
Farnborough and Crofton	1.3	2.5	1.1
Hayes and Coney Hall	1.4	2.3	1.6
Kelsey and Eden Park	1.3	2.7	1.8
Mottingham and Chislehurst North	1.0	2.5	1.1
Orpington	1.2	2.9	1.0
Penge and Cator	0.8	4.2	2.5
Petts Wood and Knoll	1.4	2.8	0.9
Plaistow and Sundridge	1.0	2.9	1.9
Shortlands	1.3	2.7	1.4
West Wickham	1.4	2.2	1.2
Borough	1.2	2.8	1.5
London	0.8	3.8	4.0

Public Transport

The level of public transport provision varies throughout the Borough, with rural areas in the south of the Borough having limited public transport services. In many cases the only public transport options available are low frequency bus routes. The north west of the Borough, lying closest to Central London and the Borough's main town centres, including Bromley Metropolitan Centre, Orpington and Beckenham town centres, have good transport links to central London via the rail network. Beckenham additionally has good westwards connections towards Croydon and Wimbledon via the London Trams network.

Public transport within the Borough includes, bus, trains, London Trams and the London Overground. Bromley has recently benefited from increased frequency of Thameslink services as part of the Thameslink programme and. there are 26 railway stations in the Borough, served by South Eastern, Thameslink and London Overground.

What is orbital travel?

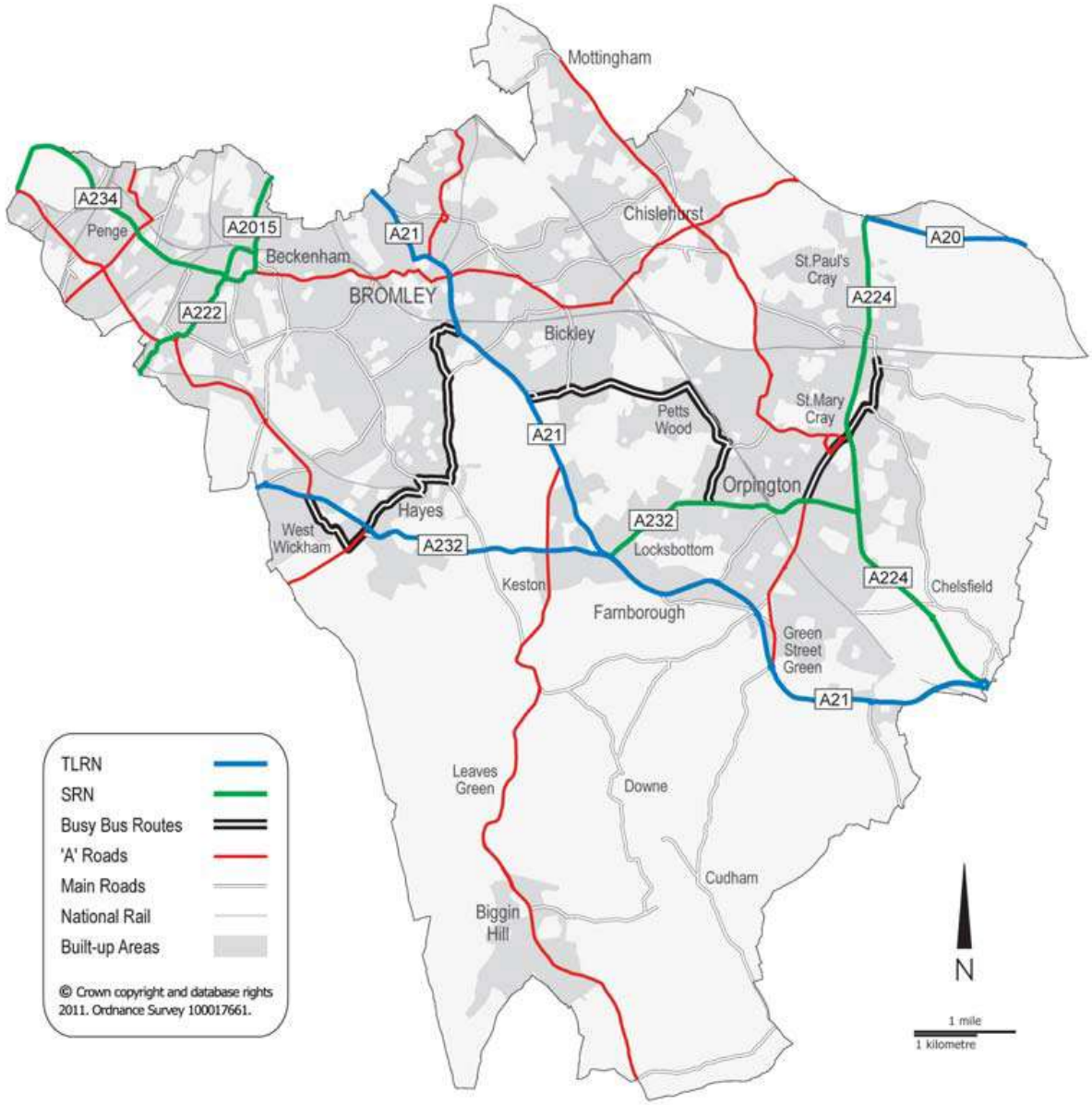
Orbital travel is travel to destinations in inner and outer London from other inner and outer locations e.g. Bromley to Wimbledon on the Tram network. Radial travel is travel to and from the centre of London e.g. Bromley South to Victoria

The current system primarily provides radial travel opportunities which are well suited to many residents for employment purposes, so to deliver mode shift investment in new orbital facilities and routes for leisure purposes are required. Whilst other areas of London have or are soon to benefit from major transport investment such as Crossrail 2, Bromley, is currently set to receive no major investment in rail capacity or new connectivity. The Borough is therefore keen to work with TfL and the rail industry to develop the proposals of the MTS for rail in south London in more detail, focusing on capacity and connectivity i.e. new corridors. Without this investment the potential to achieve mode shift will not be met with residents still reliant on private vehicles to make trips that are currently inconvenient and significantly longer by public transport.

Buses are a key part of the public transport system in the Borough and, along with Trams, account for 10.0% of trips made by residents. There are 61 bus routes in Bromley, providing links within the Borough and to/from destinations in neighbouring boroughs. Some 93% of Bromley's population lives within 400 metres of a bus stop. The Borough's town centres and principal railway stations are relatively well served by buses, although services away from town centres especially in more rural areas are often infrequent, unreliable and do not offer an attractive alternative to car use. At weekends and especially on Sundays some areas have little or nothing in the way of bus services. Bus routes need to evolve as destinations change in attractiveness for residents e.g. new schools. The Borough is therefore supportive of proposals to reallocate underutilised bus capacity from central London to areas of outer London where it can deliver mode shift and cope with population growth.

Borough Transport Map

Fig. 3 **Map of the Borough's road network**



Cycling and Walking

The Borough has over 100 miles of cycle ways including London Cycle network routes and is served by National Cycle Network route 21. These routes are predominantly in the north of the Borough although the quality of a number of routes does not meet current standards.

There are 870 miles / 1,400km of footway throughout the borough and the Borough has two walking routes as part of the Walk London Network, The Green Chain and

The London LOOP; these are made up of a mixture of footways, footpaths and paths through parks and greenspaces.

Car Ownership

The lack of public transport in many parts of the Borough and poor orbital connectivity means that car travel remains the main mode share in the borough at 56%. This is reflected in the car ownership level of 1.18 cars per household compared with an outer London average of 1.02. 77% of households have access to one or more cars. Areas of lower car ownership are primarily located in the denser, urban areas of the Borough that are also broadly identified as the most deprived. Provision of good public transport and walking and cycling options is therefore essential to provide access to education, employment and health provision.

Changing the Transport Mix[8]

With limited road space and an anticipated growth in trips to 2041, limiting any increase in the number of trips made by cars (so that the mode share falls) in favour of space efficient modes is essential if the Borough is to accommodate predicted growth in demand without suffering serious negative consequences of congestion. Across London, the Mayor has set very ambitious targets to increase the sustainable transport mode share (as already described), however, it is accepted that this will vary across London although the Mayor expects each Borough to reach their own locally appropriate but still ambitious mode share target, in the Borough's case, 47% by 2021.

Whilst the PTALs give an indication of the public transport provision of an area, they do not take into account the destination of services. Therefore the higher PTALs are reflective of frequent services to Central London, which almost disguises the fact that the Borough suffers from poor orbital connections to other outer London destinations. Providing improved orbital connectivity will therefore be a key opportunity for mode shift. Bromley is not simply a dormitory town and has town centres, employment areas and quality leisure opportunities that make it a destination in its own right, reflected by Bromley Town Centre's status as a Metropolitan Town Centre. Economic growth and vibrant town centres are key Borough priorities, therefore, new orbital connectivity from other parts of outer London and Kent are vital for supporting Bromley's town centres as destinations and delivering mode shift into the Borough's town centres for both commuting and leisure purposes.

It must also be recognised that the borough is also a destination and improved connectivity from other boroughs and Kent is also key for mode shift.

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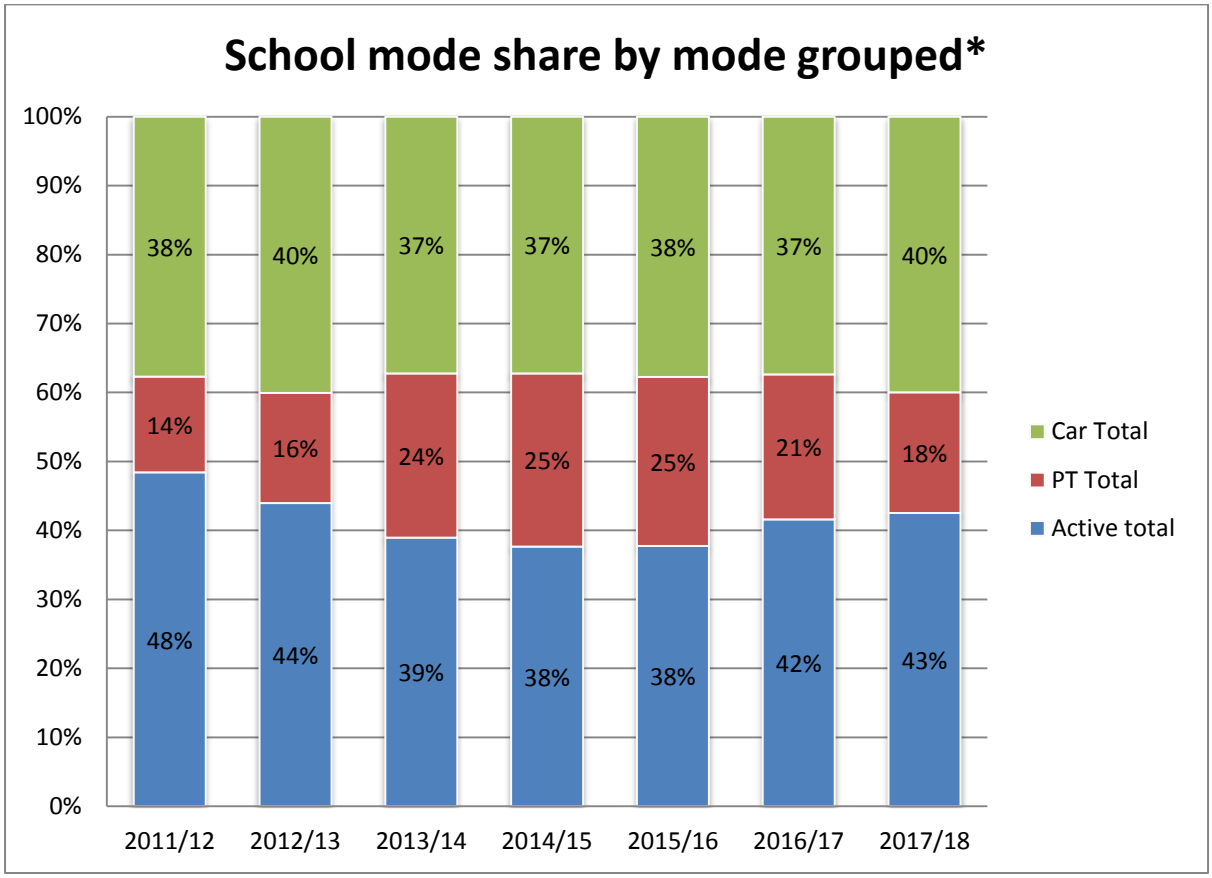
[8] Requirement R8: Boroughs are required to identify key opportunities for shifting trips and journey stages to walking, cycling and public transport to contribute to achieving the overarching aim for 80 per cent of trips to be made by active, efficient and sustainable modes by 2041.

The average borough PTAL is 2.8, which is less than the London average of 3.8 which reflects the limited public transport provision in many parts of the Borough compared with much of London. Whilst the average PTAL is 2.8, 14 of the Borough's wards have a PTAL below this, with the lowest being 1.3 in Darwin ward. The higher PTAL areas are located in the north west of the Borough and generally have the highest development density.

Across London it is estimated that 25% of peak hours traffic is associated with the school run, in Bromley, around 40% of Children are driven to school (Fig. 4). Driving to school creates issues for local residents including peak hours congestion that impacts on the reliability of the bus network and parking issues for local residents as well as concerns about safety, in the vicinity of schools. Providing and adjusting school bus services as the catchment area evolves and schools expand will form an increasingly important part of the Borough's public transport network. Reducing the car mode share for travel to school trips by promoting mode shift to both public transport and active modes is a key Borough objective and is seen as important for encouraging healthy lifestyles from an early age. A good experience of public and active travel during education should make these the default travel options later in life and minimise those who choose car travel when reaching driving age.

Fig. 4 **School Mode Share 2011/12-2017/18**



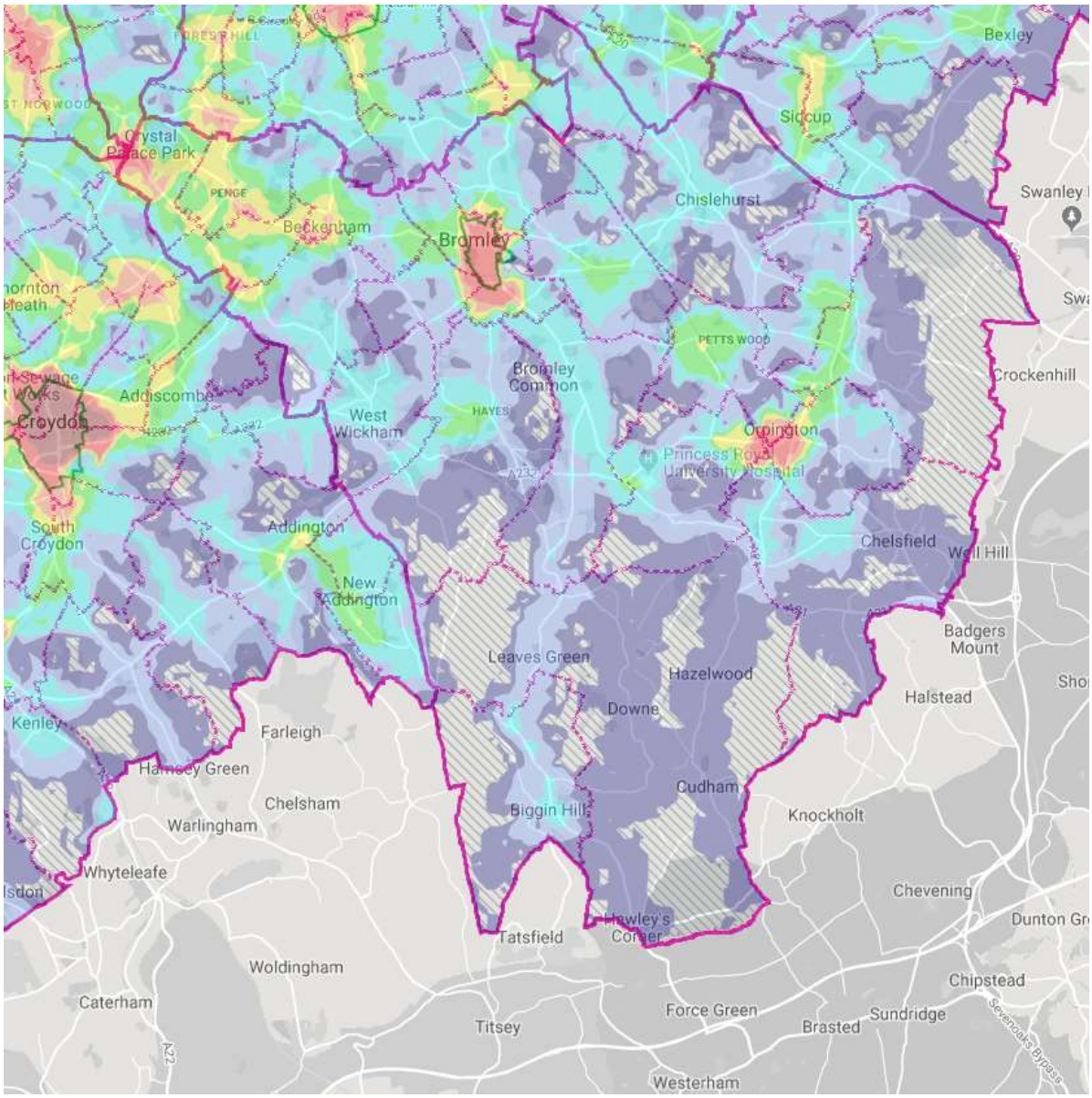
*Active Total- Walking, Cycling and Scooting

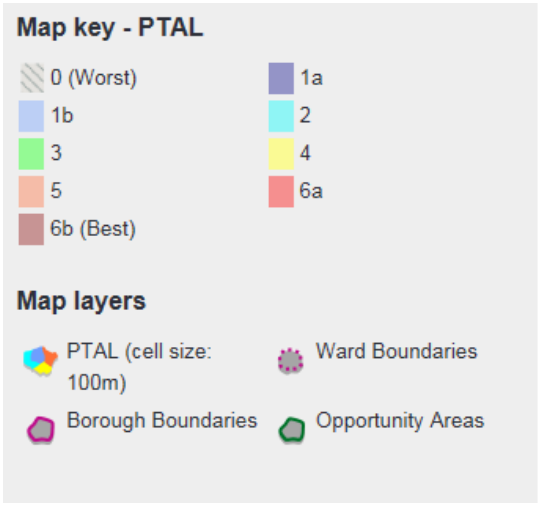
*PT Total- Bus, School Bus/Taxi, Tram, Train

*Car Total- Car/ Motorbike, Car share, Park and stride

(N.B. rounding means that some totals are over 100%)

Fig. 5 **PTAL map of Bromley**





Connectivity to the growing employment centre of Canary Wharf is also poor. This limits residents' access to employment opportunities in this key growth area and improving connectivity between these locations remains a Borough priority. Previous options to extend the DLR to Bromley North have not yet proceeded, however, the Borough remains committed to the aspiration of improved connectivity on this corridor and believes that an extension of the London Overground or Bakerloo Lline may enable this through better links to interchange hubs. Additionally these projects would contribute to the delivery of new homes and jobs in areas where active, efficient and sustainable travel are the best travel options.

Bromley has an extensive network of bus routes, although in the south of the Borough around Biggin Hill and Downe for example, are often infrequent and therefore do not offer an attractive alternative to car use. Furthermore, some of these routes do not run on Sundays or Bank Holidays, contributing to higher levels of car trips because no alternatives are available. Enhanced weekend and bank holiday services and frequencies for routes that do run should be considered to both deliver mode shift and open up Biggin Hill and Downe as leisure destinations, supporting accessibility to, for example, the new Biggin Hill Memorial Museum.

Improving reliability of bus services and reducing journey times are important factors in increasing bus use, therefore addressing congestion hot spots that impact on bus reliability are an important opportunity for the borough to improve the quality of the public transport network and deliver mode shift. In order to do this, the Borough will look to work with TfL to develop proposals for interventions as part of the Bus Priority Programme. A number of schemes to improve bus reliability have already been successfully delivered, notably a series of improvements on the route of the 176 through Penge and Crystal Palace.

As the London Borough covering the largest area, it is often difficult or impossible to reach a destination on a single bus route. The 'hopper' fare has improved the situation; however the Borough would also like to explore with TfL the possibility for TfL to similarly reduce the bus fare cost where a bus is used to access other modes of public transport, particularly off peak.

There is potential for short trips to deliver mode shift and relieve congestion in Bromley through the promotion of cycling and walking. However, although there are already a significant number of walking trips made every day in the Borough, unlocking the potential of cycling is a challenge. Bromley's topography makes cycling in some areas challenging, however, this does not take away from the great potential that exists in many parts of the Borough and therefore delivering safe and high quality cycle routes represents a key opportunity to deliver mode shift. Pedal assisted electric bikes may reduce this as an issue; however other barriers such as the availability of secure storage of these bikes (at home and destination) may still limit the attractiveness of cycling for some.

Borough objectives[9]

In order to meet the Borough's mode share targets, it will be necessary to deliver a new public transport and cycling infrastructure for both longer and short local trips, enabling residents and visitors to the Borough to make the choice of not driving, but still having convenient and efficient access to employment and leisure opportunities as well as keeping the Borough's town centres thriving and vibrant destinations.

In order to deliver mode shift, new connectivity along key corridors will be necessary. Corridors prioritised for new connectivity by the Borough are:

- Reduced Journey time between Bromley town centre and Canary Wharf
- Higher frequency rail service on Southeastern Metro services to Lewisham
- Reduced Journey times between other boroughs and Bromley to support regeneration and economic growth in the Borough, including emerging plans for office quarter regeneration around Bromley South.

These are long term objectives and it is recognised that they will take until 2041 to be fully realised. In the period of the LIP3 delivery plan to 2022, the Borough will aim to work with TfL, Network Rail and other partners to undertake or contribute to studies that provide costed options for delivering the above connectivity objectives.

The bus network is vital for providing connectivity within the Borough and to/from other areas of south London. In some more rural areas of the Borough it is the only form of public transport available. The Borough is therefore aiming for an increase in weekend and bank holiday services to serve destinations in the South of the Borough. It is also keen to explore the potential for new types of services to deliver mode shift. Public transport reliability is vital for it to be an attractive alternative for the car; therefore a key objective is to maintain Bus Excess Wait Time (the additional wait experienced by passengers due compared with the scheduled wait time between buses) at 1.0 minute or less.

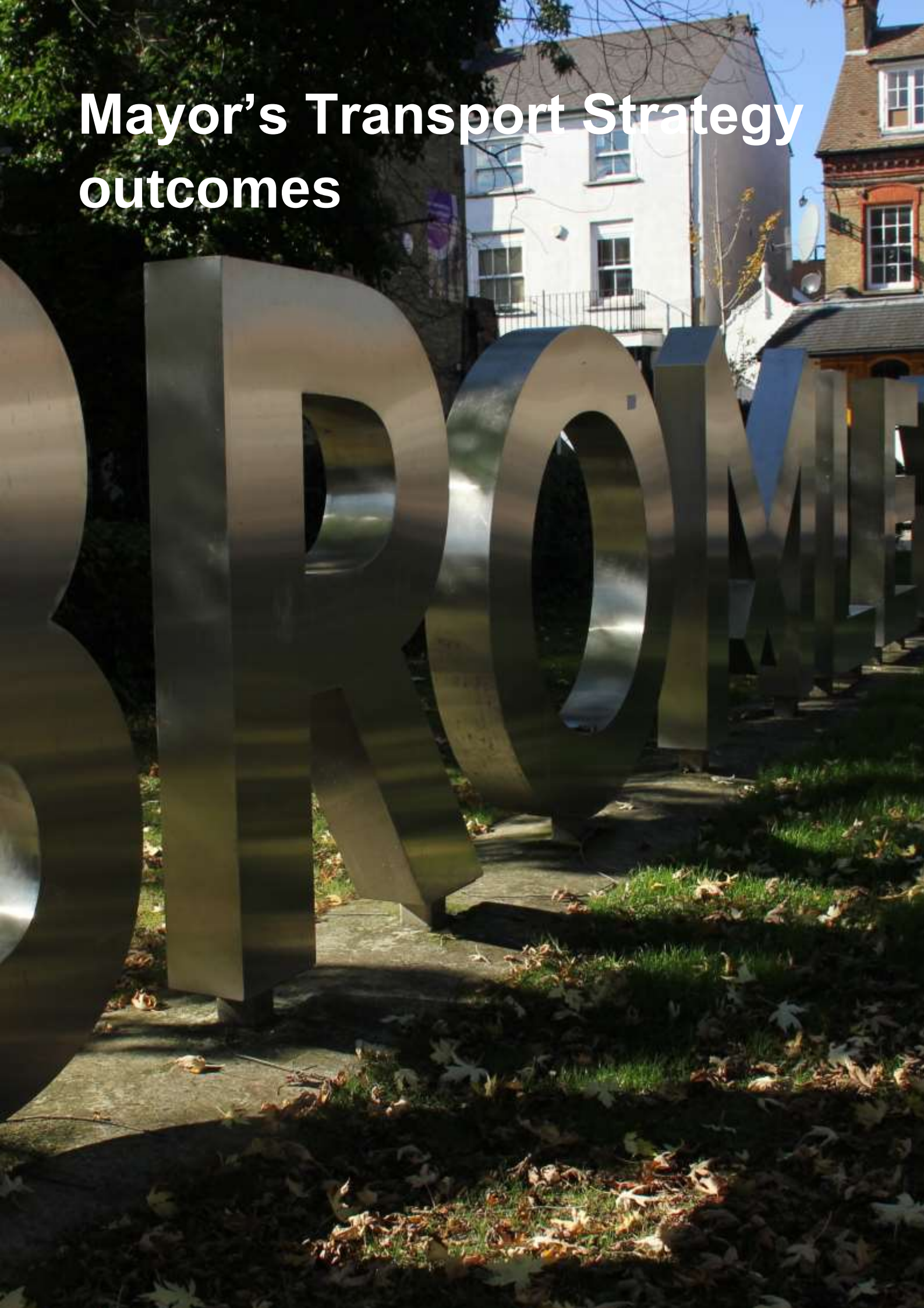
To increase the level of cycling in the Borough and to support mode shift for short local trips, the Borough will seek to complete the Lower Sydenham to Bromley and Greenwich to Kent House Quietways by 2021/22. This will require considerable effort and sustained investment from both the Borough and TfL to deliver high quality attractive cycle routes. This will be complemented by the Borough's own local cycle

[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.

network expansion which will seek to deliver at least one upgraded LCN route by 2021/22.

A key area of focus for the Borough is to shift switchable short local trips away from the car; this will reduce traffic on the Borough's streets importantly improving journey time reliability, releasing road space to make infrastructure for space efficient modes more attractive. In order to reduce switchable short car trips it will be necessary to deliver infrastructure that makes other modes more attractive as such new public transport connectivity, a strategic and local cycle network and streets that encourage walking for all age groups are key to the Borough's proposals to deliver the MTS objectives. As part of this it will be necessary to reduce the impact of the school run by shifting school trips from cars to other modes. The Borough will therefore aim for 50% of travel to school trips to be by active modes and 20% by Public Transport by 2021/22

Mayor's Transport Strategy outcomes



Mayor's Transport Strategy outcomes[10] [11]

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

Challenges and opportunities

Walking and cycling present significant opportunities for mode shift in Bromley and with it significant congestion relief benefits on the Borough's roads alongside other health and environmental benefits. It is important that these modes complement each other and that schemes are designed in order to offer benefit to both modes. Walking is already a popular mode in the Borough with over 25% mode share. Cycling has seen an increase in mode share in recent years to 1.2% of trips, however, a step change in the delivery of infrastructure to make cycling an attractive choice is required if its full potential is to be realised.

Undertaking just two ten minute sessions of physical activity per day helps to improve the health of individuals and significantly reduces their chance of succumbing to a number of serious diseases (Fig. 6). Although many people struggle to fit exercise into their daily lives, this activity can be embedded into their everyday routines by walking or cycling short trips or trip stages, including walking to the bus stop and railway station. At present only 30% of the Borough's residents undertake this level of active daily travel.

In the long term, this preventative approach should help reduce the health burden upon the Council and NHS, and supports the Borough's Building a Better Bromley objective of focusing on Wellbeing and Prevention. In the local context, the JSNA identifies the most common causes of death in Bromley as cancer (29.5% of deaths) and circulatory disease (27.9%), both of which can be minimised through physical activity.

[10] 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.

[11] 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.

Fig. 6 **Disease reduction through physical activity**

Disease	Reduction in risk of disease through physical activity
Type 2 diabetes	35–50%
Depression	20–30%
Coronary heart disease	20–35%
Alzheimer's disease	20–35%
Breast cancer	20%
Colon cancer	30–50%

The Borough on average has lower levels of childhood obesity than the London average with 7.8 % of children in reception obese compared to a London average of 10.8% and 16.2 % of children in year 6 compared to a London average of 22.5 %. There are however particular challenges in Plaistow and Sundridge, Orpington, Penge and Cator, Cray Valley East, Cray Valley West, Crystal Palace and Clockhouse wards where obesity levels are higher than the Borough average. Furthermore in Darwin and Mottingham & Chislehurst North obesity levels are higher than the London average amongst children in reception. Obesity levels amongst children in year 6 are above the London average in Crystal Palace, Mottingham & Chislehurst North and Penge & Cator. These locations are broadly correlated with the areas of deprivation identified in the Local Plan.

The potential for cycling

TfL analysis has shown that the greatest unmet potential for growth for mode shift to cycling is within outer London, where 55 per cent of London's potentially cyclable trips take place. Within this analysis, TfL defined a potentially cyclable trip as less than 10 km (6 miles) for the purpose of commuting.

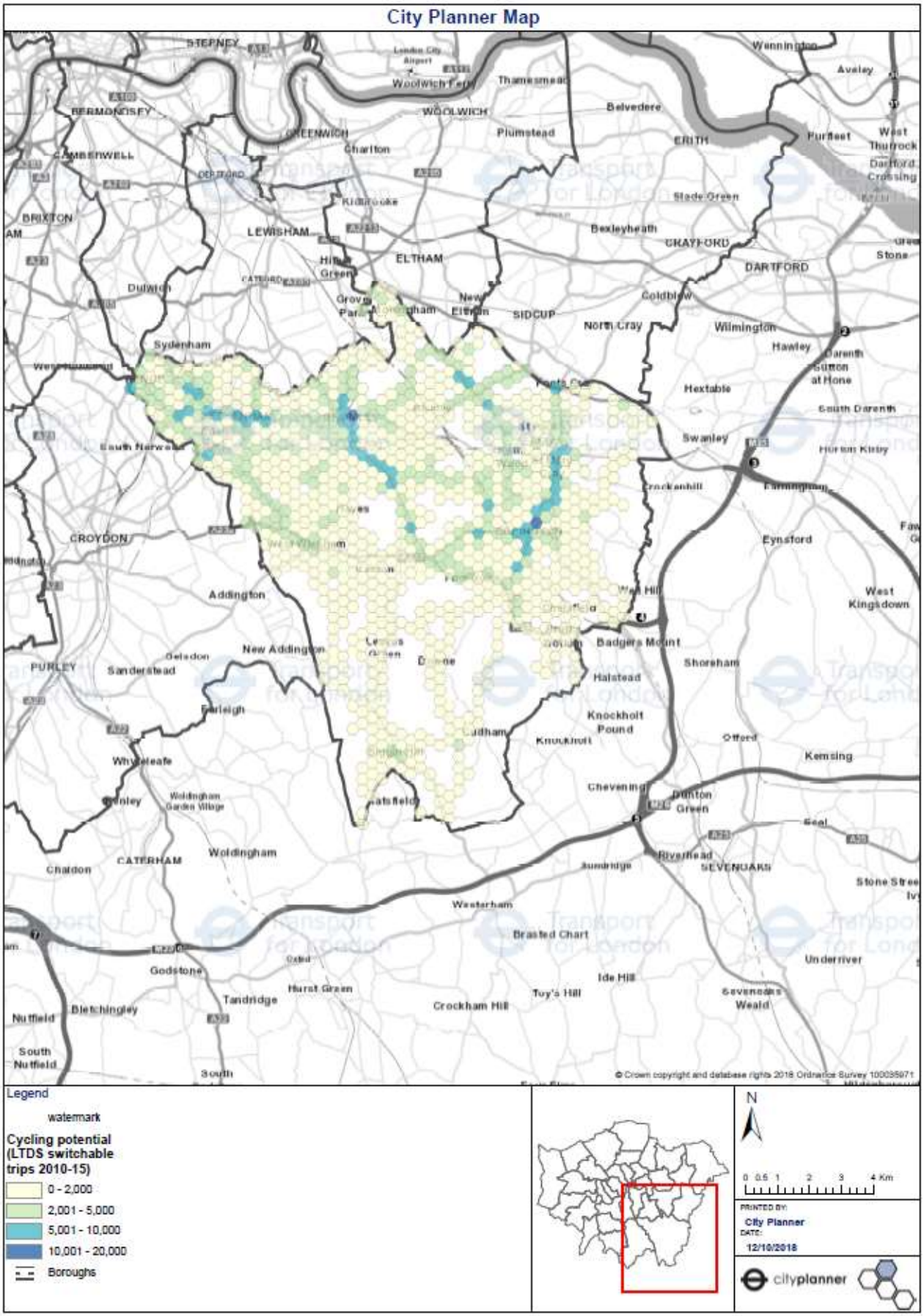
In total, there are 320,800 potentially cyclable trips per day made by Bromley residents, of which just 3% are currently cycled. There are 400,000 trips with an origin or destination in Bromley that could be cycled, highlighting the importance of good cross boundary cycle routes. The majority of these potentially cyclable trips are currently made by car rather than public transport.

Just over half (54 per cent) of all current, potentially cyclable trips are made entirely within outer London, therefore the development of an orbital cycle network and local routes that facilitate short intra borough trips is essential to release the potential mode shift and relieve congestion on routes where public transport alternatives to the car are poor. Furthermore, 64 per cent of the potentially cyclable trips in London have an origin or destination in outer London. The Borough will therefore continue to lobby TfL for funding and identify suitable opportunities for developer and third party funding.

Bromley Metropolitan town centre offers significant potential for growth in cycling, with over 40,000 potentially cyclable trips per day either to or from the town centre. Orpington, the Borough's second major town centre also has potential for over 21,000 trips per day. The Borough will therefore focus on developing and implementing strategic cycle routes to serve both of these town centres. It will also be important to improve local conditions for cycling in the two town centres, by reducing the severance caused by major roads on their approaches. Both locations are identified in the Draft London Plan as areas where higher levels of secure cycle parking will be required at new developments, which the Borough will enforce, along with strict quality standards to ensure that what developers deliver is of good quality to be useful and encourage the uptake of cycling.

There also exists the opportunity to incorporate cycling into longer journeys by cycling trip stages that are currently made by motorised modes. Such trips are generally considered to be cyclable if less than 5km (3 miles), for example, a short car trip made to the local station as part of a rail commute replaced by cycling. These short cycle trips and trip stages provide an easier way to encourage cycling and reduce traffic volumes than longer trips. Proposals to improve cycle/rail interchange are set out in detail in Outcome 5. However, the potential range of cycling can be extended with cycle technology such as pedal assisted electric bikes, which may make longer trips more realistically achievable than in the past.

Fig. 7 **Cycling potential analysis source TfL**



Building a cycle network

The Borough, working with TfL, will continue to develop strategic cycle routes that support London's Strategic cycle network. During the initial three year delivery plan, the proposed Greenwich to Kent House and Lower Sydenham to Bromley Quietways will be completed. These are designed to be high quality cycle routes that will contribute to unlocking demand for cycling in the north west of the Borough where potential for cycling is highest and, of particular importance, they link to five of the Borough's stations, thereby supporting cycle to rail. The Borough is also working to deliver pedestrian improvements such as new and improved crossings as part of the Quietways to support the Healthy Streets ambitions. Further extension of these routes would extend the catchment of the strategic cycling network in the Borough and provide opportunities for mode shift, potentially reducing car/motorcycle traffic volumes, increasing other space efficient mode traffic volumes and improving public health.

In the short term the Borough will seek extensions of the proposed Quietways in the Borough, The Borough will seek for the Greenwich to Kent House Quietway to be extended to the London Borough of Croydon (initially to Norwood Junction), offering an important cross Borough connection and reducing the severance caused by railways in the area. The borough will lobby for the Lower Sydenham to Bromley Quietway to be extended to Bickley, Petts Wood and Orpington, forming an important east/west spine through the Borough.

Quietway 7 currently ends in the London Borough of Lambeth on the Borough boundary with Bromley at Crystal Palace Parade, Bromley will therefore seek to have the route extended into the Borough, reducing severance across Crystal Palace Parade for cyclists. Consideration will also be given to extending the route further into the Borough towards Penge and onwards to link up with the Lower Sydenham to Bromley and Greenwich to Kent House Quietways at New Beckenham.

Continued development of the London wide strategic cycle network in south east London is a priority for the Borough and it is important for new routes to serve different areas of Bromley to sustain the attractiveness of the borough and to avoid increases in car/motorcycle traffic volumes with new developments. Whilst keen to see an increase in Bromley residents cycling it is equally important for other London boroughs' residents to reach destinations in Bromley by cycling or walking as for Bromley's residents to reach destinations out of the borough or switch to alternative in borough destinations in order to deliver wider mode shift targets and reduce traffic congestion.

The current extent of the planned Quietway network in the Borough is limited, and will need to be expanded if the target of 41 per cent of the Borough's residents being within 400m of the strategic cycle network by 2041 is to be met, from a current

baseline of 0 per cent. This is though heavily dependent on TfL bringing forward sufficient funding to enable barriers to cycling to be tackled in an ambitious and locally appropriate way.

Analysis of the Prioritised Strategic Cycling connections from TfL's CYNEMON model shows that there are a number of connections in the Borough classified as medium priority. Development of these connections would provide a network of routes throughout the Borough, with links to neighbouring boroughs, and the Borough will work with TfL to develop suitable designs. In broad terms the routes to be developed up to 2041 are:

- Catford to Bromley town centre and Farnborough (A21 Corridor)
- Orpington to Sidcup via Eltham, providing connections to Docklands
- St Paul's Cray, Chislehurst to Sidcup, providing connections to Docklands
- Orpington Station to Locksbottom
- Crofton to Petts Wood and A21
- Shortlands to Croydon
- Elmers End to Forest Hill via Penge
- New Beckenham to Streatham

To support growth ambitions in Bromley town centre, in line with the principles of 'Good Growth' and traffic reduction, the Borough will lobby TfL to prioritise investment in the Catford to Bromley corridor (A21) and respective junction improvements to allow for safe segregated cycle access to the town centre. The Borough is also keen to see links from Orpington developed to east London, via Elizabeth line stations and support growth in Orpington town centre.

These strategic cycle routes form an important part of providing genuine transport choice; however, as they are primarily radial need to be complemented by a network of local links and interventions to facilitate easy access to the strategic network and for local trips, where significant traffic reduction potential exists. The proposals for individual routes will vary depending upon the location but may include reducing inappropriate rat running in residential streets and reducing the dominance of motor traffic to reduce road danger and improve the environment for walking and cycling. Segregation from motorised traffic is likely to be a more suitable option on more heavily trafficked streets.

In a number of cases areas of the Borough are already served by the London Cycle Network but this is often of poor quality and poorly signed. Therefore, to deliver quick wins, the Borough will initially focus on upgrading the LCN to improve the level of service.

Consideration will be given as to how these upgraded routes are branded as a local cycle network, to encourage residents to use it for local trips. As a local cycle network they are intended to link to the London wide strategic network as well as

providing easy and safe access to town centres, stations and schools. By facilitating local trips by cycle they will have an important role in relieving congestion and encouraging more residents to undertake active travel on a daily basis.

Local routes including sections of the LCN that will be given consideration to forming a local cycle network by 2041 include:

- Bromley to Chislehurst via Elmstead Woods
- Kent House to Shortlands via Clock House
- Beckenham to West Wickham
- Orpington to Green Street Green, potential extension to Knockholt and Kent
- West Wickham to Crystal Palace via Elmers End
- Grove Park and Sundridge Park to Bromley town centre
- West Wickham/Hayes to Bromley Town Centre
- Eden Park to Bromley Town Centre
- Upgrades to NCN21
- Hayes to Addington/Selsdon

Whilst no routes are proposed for Biggin Hill due to lower mode shift potential to cycle, consideration will be given to local schemes to unlock short local journeys in Biggin Hill Valley and surrounding villages. Consideration will also be given to how routes can connect to surrounding areas of Kent, which may reduce car trips and “rail heading” into the Borough and London.

Electric Cycles

The topography and size of the Borough can be a barrier for some people to begin cycling in Bromley. Electric bikes which are a standard pedal bike fitted with a battery and electric motor can help overcome some of these barriers to help people to cycle further, negotiate hills, or just make riding a bike easier.

The Borough will investigate opportunities to introduce a commercially viable electric bike hire/lease scheme in the areas of highest potential demand for cycling, focused on Town Centers and other areas with a predominance of flats and stations. Any scheme launched in the Borough will have to comply with TfL’s code of practice on dockless cycles.

Dockless Cycle hire

The market for cycle hire has changed rapidly in the last year with the expansion of dockless bike operators. The Borough will continue to observe developments in the dockless cycle hire market and work with TfL and other Boroughs to develop appropriate and proportionate powers for Local Authorities to control whether and how dockless operators can operate on the Borough’s streets. Any scheme launched in the Borough will have to comply with TfL’s code of practice on dockless cycles.

Fig. 8 **Map of Bromley Cycle Network 2022**

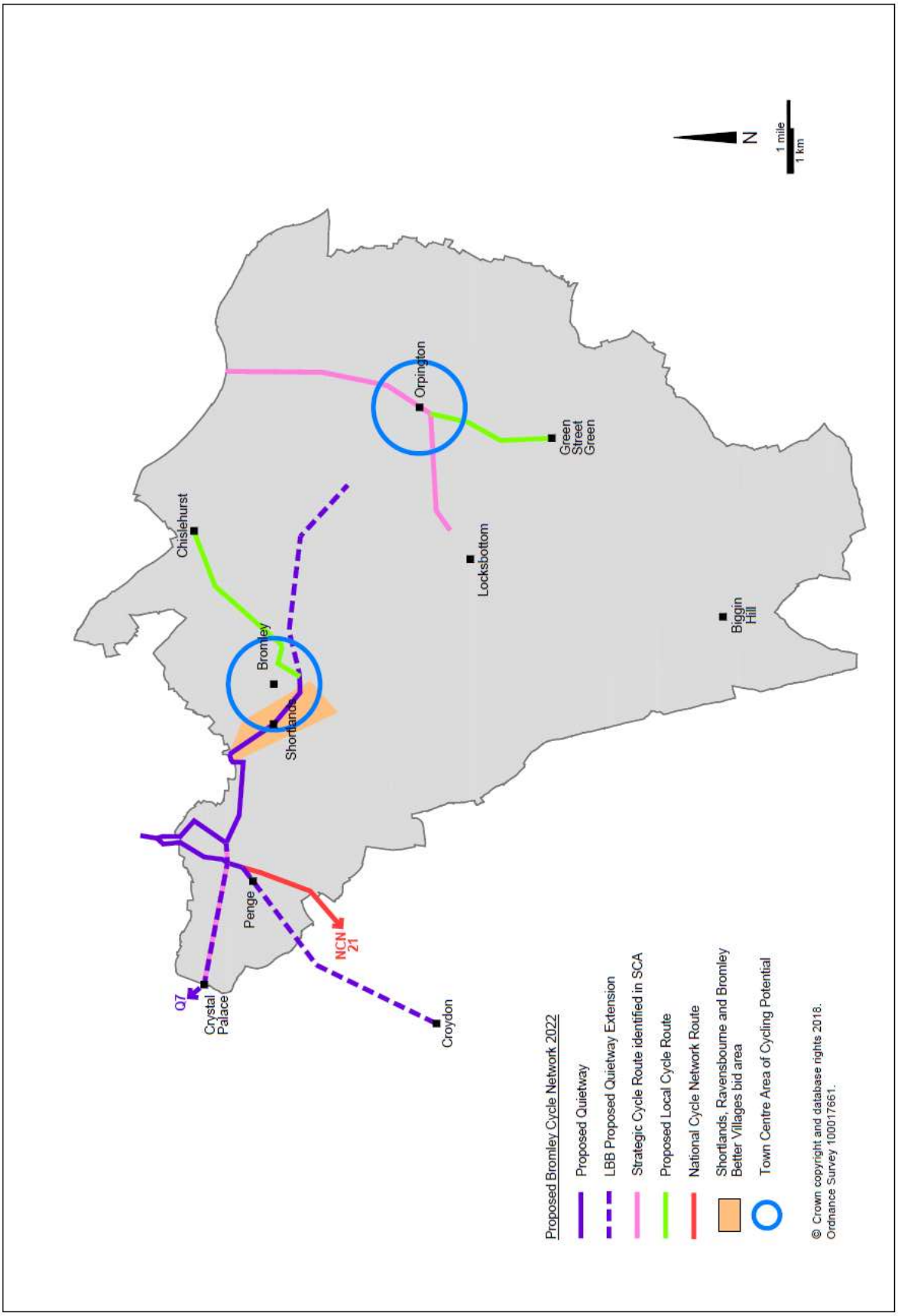
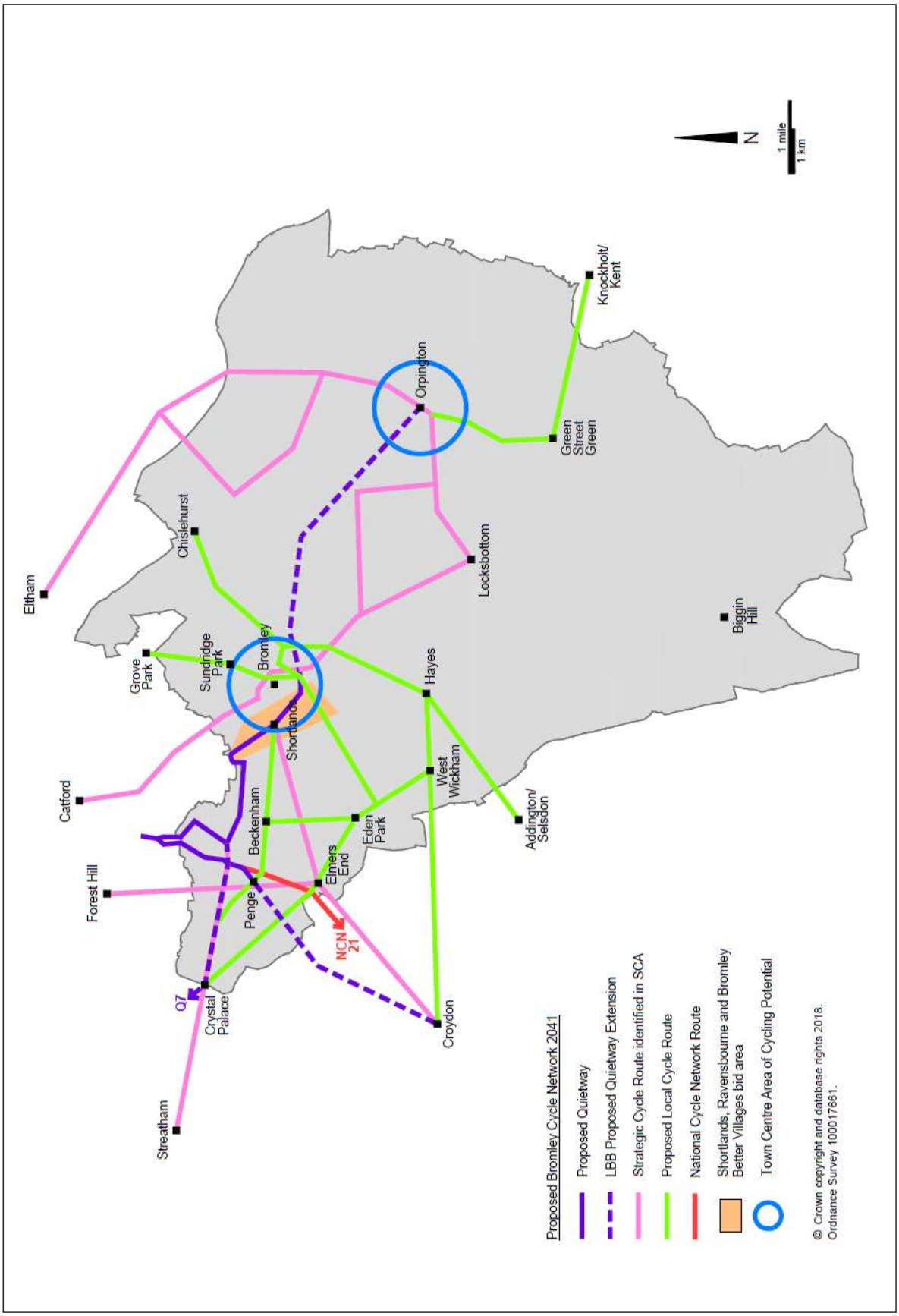


Fig. 9 **Map of Bromley Cycle Network 2041**



Cycle Parking

Research for the Borough's cycle strategy in 2015, identified that, residents felt that there was a lack of secure and attractive bike parking facilities available. The bike parking that existed then was often hidden, which did not give confidence that the bike would be safe and secure. Cycle parking in the home is also a major issue, with those living in flats particularly at a disadvantage, which discourages some residents from owning or using a cycle regularly. This is a particular issue in the north west of the Borough, e.g. Crystal Palace, where there are a number of flats and houses converted to flats that lack the outdoor space so addressing this is particularly important because it is an area where residents are likely to switch mode to cycling.

In recent years the situation has improved with investment in cycle parking from the Borough Cycle programme and the Borough has continued to invest in this important complementary measure from the LIP budget. It is therefore proposed to continue to roll out both public and residential on-street cycle parking (N.B. Station cycle parking is referred to in Outcome 5).

The Borough will continue to introduce on-street Bikehangars, which have been increasingly popular, where there are requests from residents or where there are waiting lists for existing hangers. In addition to this demand led approach, it is proposed to introduce Bikehangars into new areas as complementary measures in new or reviewed CPZs as well as including them in any Liveable Neighbourhood or similar large scale area wide schemes.

Public cycle parking is key to providing people with the confidence that they can securely park their bike close to their destination. The Borough will therefore continue to introduce cycle stands at key destinations such as shopping parades and will include them into the design of schemes where appropriate. Locations will be chosen to take advantage of natural surveillance and CCTV.

Consideration will also be given to how suitable secure cycle parking facilities with charging opportunities for E-Bikes can be provided in town centres and at stations.


GALAXY

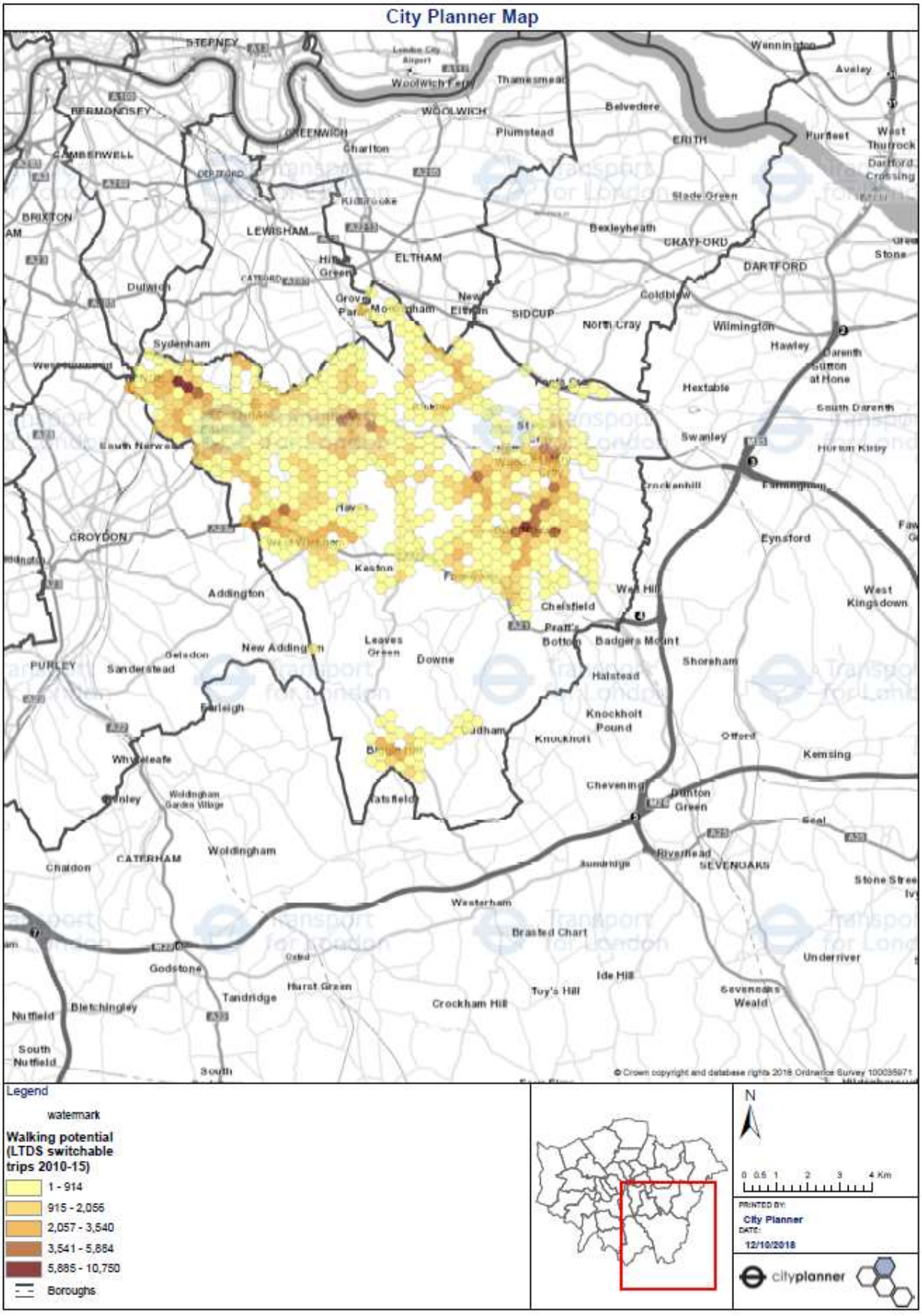
The potential for walking

Walking provides a good alternative to driving for short local trips, especially within town centres. Walking has potential for trips up to between 1.5km and 2km (c. 1 mile), depending on age, and as it does not require any special equipment; it is very cheap and therefore essentially accessible to all. There is also potential to promote more walk trip stages as part of a longer trip that cannot be walked in its entirety.

Walking already has a 25% mode share in the Borough demonstrating how it is already considered to be a popular and convenient mode of transport which often forms the first or last mile of a trip. Although the current street network can sometimes make walking a hostile and intimidating experience that discourages people from walking, including children being allowed to travel independently to school. In the Borough as a whole there are estimated to be over 97,000 trips that could be walked in addition to over 184,000 that are currently walked by Borough residents.

In both Bromley Metropolitian centre and Orpington town centre there are opportunities for over 6,000 walkable trips to/from each centre. Unlocking the potential for walking to Bromley and Orpington centres as well as others throughout the Borough will form an important part of realising the potentially walkable trips in the Borough and reducing car use for short local journeys.

Fig. 10 **Walking potential analysis source TfL**



Walking infrastructure

What is pedestrian severance?

This is where transport infrastructure such as major roads or rail lines creates a barrier to the movement of pedestrians across it. For example a major road running through a town centre is difficult to cross and could be said to divide the town centre or community. This can reduce the propensity to make short journeys by foot and reduce the sense of place of an area.

To unlock the potential for walking it is important to create an environment that encourages people to walk and feeling safe and secure is an important element of that. Walking improvements will be addressed as part of all cycling schemes to ensure that they provide benefits for both modes. Improvements to walking can be very simple, for example, the introduction of dropped kerbs, well maintained surfaces to reduce the risk of trip hazards, fewer obstacles, including sensibly located columns and signs and tree planting to improve shade and shelter, all serving to make streets more accessible and attractive thereby helping to create an environment that encourages people to spend time in. Another small intervention that the Borough has successfully undertaken in the past and will continue to do is to remove unnecessary clutter, and consolidate new highway equipment as it is installed, this will be particularly important with the installation of EV infrastructure creating access impediments on footways. These small measures should be incorporated into all transport schemes where feasible and it will be necessary to consider how schemes can make environments suitable for independent travel for those with visual impairments and other disabilities. .

The Borough will also seek to identify key severance issues that prevent people from walking and seek to address them with the introduction of new crossing facilities. For example West Wickham is an area with a good potential to switch trips to walking but has severance issues which may be currently preventing this. The provision of new crossing facilities near stations will be an important part in shifting trip stages to walking and can be incorporated into wider station access schemes.

The Borough will work with schools who are accredited under the STARS system to understand the key barriers children face walking to school and reasons why parents/guardians do not allow them to do so, in order to inform improvements to key walking routes to schools. Providing high quality routes with crossing facilities on busy roads will permit a greater level of independence for children and reduce issues associated with school pick up and drop off such as congestion and inconsiderate parking near schools. Work with schools to encourage walking as part of an active lifestyle is particularly important and will aim to ensure that when children reach adulthood they continue to choose active transport modes rather than migrate to car journeys.

The Borough already has two walking routes as part of the Walk London Network, The Green Chain and The London LOOP. The Borough will seek to continue to maintain these routes and to make improvements where a good case can be made for investment, for example, improving access to a station or town centre as well as enhancing the Walk London Network.

Local neighbourhood schemes

To promote greater uptake of walking and cycling for local trips such as to school and the shops, area based schemes which deliver a number of interventions over a defined area, such as a series of streets or a town centre will be developed. These will generally be in the areas of highest walking and cycling potential or where they support the development of routes. Whilst each project will of course be specific to the area and, importantly, developed with the local communities, essentially, these projects will aim to;

- make walking to school independently safer and an attractive choice
- provide a local network of streets that links to the strategic cycle network
- reduce severance of major roads for pedestrians and cyclists
- improve access to and interchange between public transport modes
- revitalise local shopping parades and district centres, contributing to place making
- reduce on-street clutter and improve surface condition
- address local parking issues to manage demand and turnover of parking
- improve access to green space

What are STARS (Sustainable Travel: Active, Responsible, Safe)?

STARS' is a school travel plan accreditation scheme run in 69 per cent of Bromley schools. STARS aims to work with schools, pupils, their families, staff and the wider school community to reduce the number of journeys made by car. STARS offers a framework to reward schools for their achievements at three levels (Bronze, Silver, Gold).

A school Travel Plan is a working document that draws upon survey data to identify ways to promote walking, cycling and public transport as a viable, active and sustainable alternative to using the car. Bromley School Travel Plan Advisors offer a platform of measures designed to reduce congestion on the school run whilst promoting road safety, healthy lifestyles, and environmental awareness.

Where required, we also support schools through the school expansion program, consulting with stakeholders and engineers to create solutions tailored to the individual school's needs.

At present the funding vehicle for such schemes is likely to be from Liveable Neighbourhoods. Proposals will be brought forward as they are developed with local communities, however, the Borough intends to submit a bid for the 2019/20 round of Liveable Neighbourhoods funding for Shortlands Ravensbourne and Bromley Better Villages scheme (SRBBV) improvements, including integrating the Quietway into the local cycle network and improving conditions for pedestrians walking to the schools in the area and Shortlands station. The scheme will also seek to improve the transport interchange between bus and rail, taking advantage of DfT investment to make the station fully accessible which complements well a doubling of the Thameslink frequency.

Working with the regeneration team, proposals for further area based schemes will be developed for areas throughout the Borough up to 2041. Currently proposals for Elmers End and Mottingham are under consideration.

At Elmers End there are road safety issues alongside severance and poor quality public realm. Consideration will therefore be given to removing the gyratory, reducing severance to Elmers End Green and the shops to create a new public space and improvement of the cycling and walking routes to the station/tram stop. In Mottingham an area based scheme would focus on improving health outcomes and delivering public realm enhancements to support regeneration. Both projects are subject to a bid to the Good Growth fund for development funding.

Vibrant and attractive town centres

A key Borough priority is to ensure its town centres remain vibrant centres for employment and leisure. In recent years the Borough has successfully delivered schemes to enhance the public realm of Bromley North Village Beckenham and Orpington, to promote regeneration, support increases in footfall and reduce vacant units along with wider transport objectives of increasing walking through transformational schemes. Successful schemes should help create town centre and local parades as destinations, making short active trips to the shops and leisure opportunities possible compared to driving longer distances.

The Borough will continue to seek funding to improve other town centres and local shopping parades. A key priority is a transformational scheme on West Wickham High Street, and the Borough will Lobby TfL for funding to realise this following the announcement that it will be included as a section of the TLRN where measures will be taken to provide increased pedestrian priority due to its High Street function.

Communities

The Borough has previously offered residents the chance to close their streets (where appropriate) to celebrate a major national event, such as Royal Weddings or the Big Lunch. This has been popular with residents, allowing them to host street

parties and bring local communities together. The Borough will therefore continue to offer this facility to celebrate nationally significant events such as Royal Weddings, or Jubilees. Outside of this, at other times the Borough will permit reasonable closures but a charge will be applied to recover legal costs from the event organiser.

The Borough will be open to working with BIDs to develop a programme of weekend road closures to allow town centres and high streets to be used in new and innovative ways, supporting vibrant town centres and communities.

Outcome 1- Borough Objectives

The key target of Outcome 1 will be an increase in the percentage of residents undertaking at least two x10 minutes of active travel every day. At present only 30% of residents are achieving this, however, although the Borough aspires to achieve 38% by 2021 and 70% by 2041. This is against the context of a growing population so in real terms this is a significant increase in the number of residents travelling by foot or cycle. Furthermore this will be challenging with an ageing population and the predicted increase in mobility issues in the Borough over the next two decades.

From a baseline of zero, in 2021, the Borough will aim for 5% of the local population to live within 400m of the strategic cycle network, significantly increasing to 41% by 2041. To achieve the initial target, the Borough will seek to complete the Lower Sydenham to Bromley and Greenwich to Kent House Quietways by 2021/22 but it will take considerable effort and sustained investment. This will be complemented by the Borough's own local cycle network expansion which will seek to deliver at least one local cycle route by 2021/22.

To deliver the overarching mode share objective, by 2021/22, the Borough will aim for 2% of daily trips originating in the borough made by bicycle and 30% daily trips originating in the borough made by foot.

To support short trips to shops, the Borough will aim to have introduced LCDS compliant cycle parking at all locations identified in the Local Plan Town Centre and Shopping Hierarchy by 2021/22.

To improve conditions for walking, a key Borough objective is to successfully bid for Liveable Neighbourhoods funding for Shortlands in the bidding round for 2019/20.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Outcome 2: London's streets will be safe and secure

Challenges and opportunities

Reducing causalities is central to Bromley's transport priorities. The Borough has a good record of improving road safety and has focused its efforts in recent years on reducing the numbers of those killed and seriously injured through a programme of treating a number of collision hot spots and successfully delivering a road safety education programme. This has led to significant decreases in KSIs from 1999 although unfortunately as with much of London, since 2014 KSIs have exhibited some small increases, in the context of a growing population.

As London's largest Borough, with most miles of road, it is important to look at casualty rates in the context of road length and number of journeys, with latest road casualty data confirming that Bromley has one of the lowest casualty rates anywhere in London. Statistics released by Transport for London (TfL) showed that there are now less of the most seriously injured casualties, measured as 'Killed and Seriously Injured' (KSI). At the time of publication, the statistics showed that the KSI casualty rate per billion passenger kilometres had fallen by 40% for the period April 2011 to March 2016 compared to the previous 5 year period, meaning that Bromley had the 4th highest percentage KSI casualty rate reduction for this period when compared with other London boroughs.

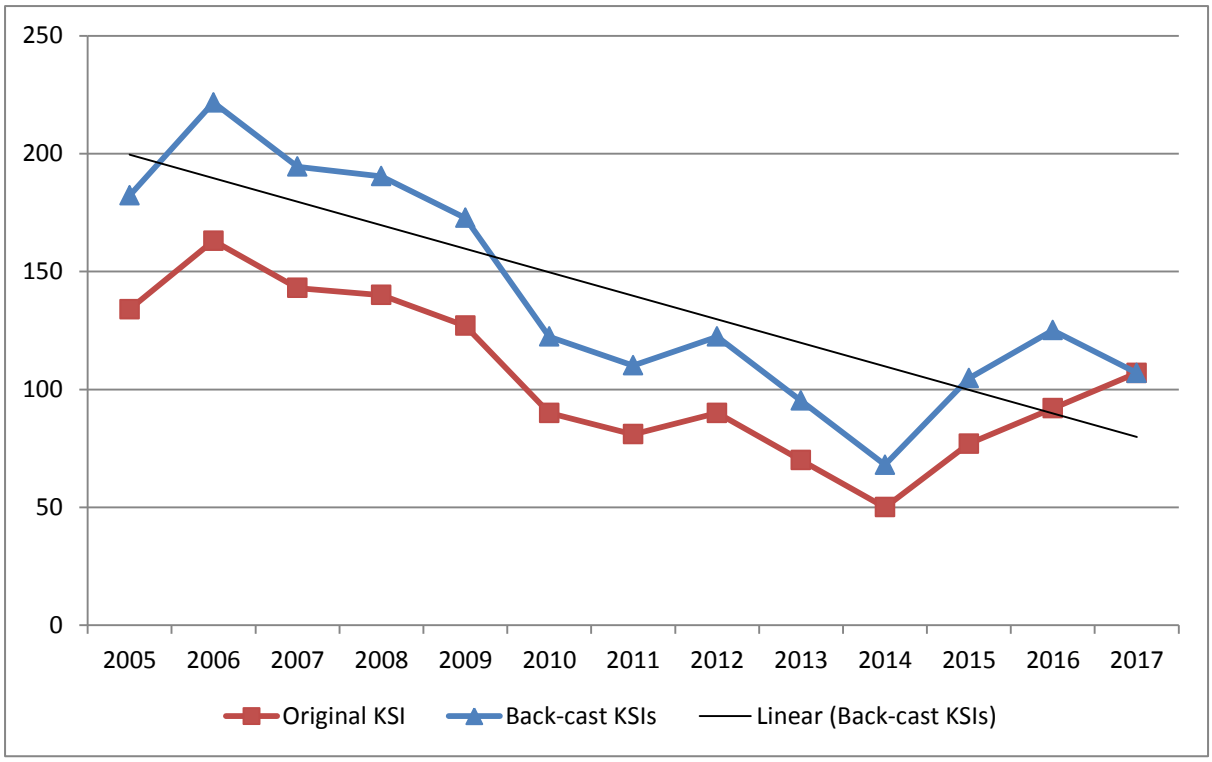
However the picture is complicated by new categorisations of what is a serious collision and new recording methods, including self-reporting for slight injuries from late-2016 onwards. To account for these changes in recording, Transport Research Laboratory on behalf of TfL has undertaken a back-casting exercise to enable casualty data recorded under the new method to be compared with data recorded before 2016. Bromley has extrapolated this back-cast to reflect what might have been the numbers of KSIs recorded, had current criteria been applied, this is shown in Figure 11. Therefore, applying the apparent adjustment to the historic data the downward trend of KSIs is still apparent but it also suggests that KSIs actually reduced in 2017 from the previous year (by 17%) rather than increasing as it originally appeared when previous data wasn't back cast to reflect changes in the recording methodology.

In addition, the introduction of online self-reporting is expected by the Department for Transport to have increased the numbers of those recorded as injured, as "The principle of online reporting is to make it easier for members of the public to report accidents and it is therefore expected that the introduction of online reporting will lead to an increase in the total number of accidents…".

Latest casualty data for 2017 shows that Bromley continues to have one of the lowest casualty rates anywhere in London, with 1.8 casualties per mile of road, the

3rd lowest in London, with a KSI casualty rate of 0.19 casualties per mile of road being the 2nd lowest in London.

Fig. 11 **KSI in LB Bromley 2005-2017**



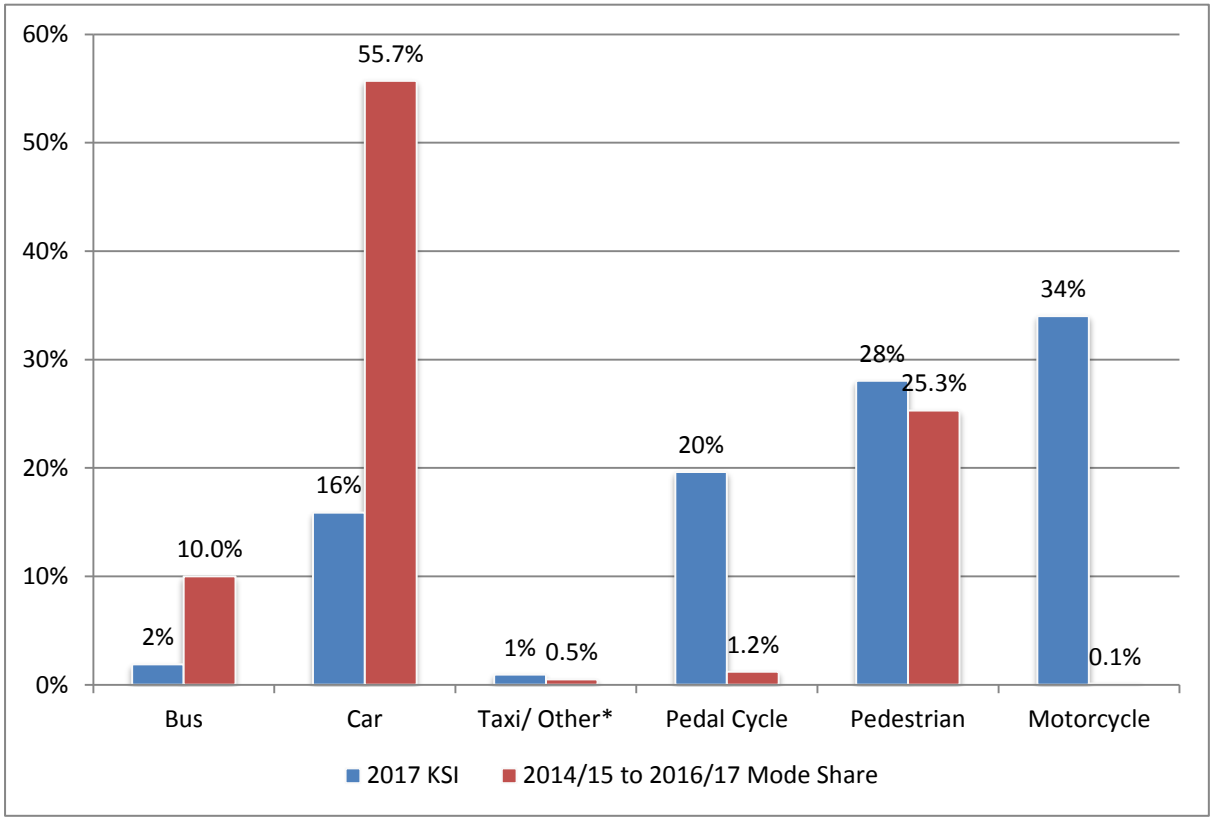
The Borough has continued to innovate, such as the development of the award winning Driven by Consequences training course for sixth form students, which continues to evolve and now includes hard hitting immersive content to promote safe driving amongst young drivers.

The Borough will continue this focus and take it a step further by supporting the aspiration of the Mayor to achieve Vision Zero of no one killed or seriously injured on the Borough's roads by 2041. That said, achieving such an ambitious target is not entirely within the Borough's control; with the development of driver assistance technologies, safer vehicles including buses is key to achieving the target. The Borough will, however, undertake a range of infrastructure and behaviour change education, to play its part in achieving Vision Zero.

Vision Zero will require schemes that create safe road layouts for all modes. However when compared to mode share (2014/15-16/17 v. 2016 KSI), pedal cycles have a disproportionately high level of KSIs with 13% of KSIs for just 1.2% mode share. However the fact that 62% of KSIs have a victim in a car or on a motorcycle demonstrates the need to improve safety at hotspots and continue with driver education programmes to reduce the majority of the borough's KSIs on the road to Vision Zero.

Promoting safe driving also benefits other modes by promoting considerate droad user behaviour that takes into account the appropriate speed for the surroundings and the needs of vulnerable road users. Fear of collision and road danger is a key reason that people do not cycle therefore improving cycle safety will be an important factor in delivering mode shift. Part of this will include cycle training (Bikeability) so that cyclists can increase in confidence and also identify and avoid potentially dangerous situations when on the road.

Fig. 12 **Bromley KSI V. Mode 2016**



The Borough faces challenges with regards to reducing slight casualties, which whilst declining have effectively flat-lined in the past few years.

It is also important to recognise that there are locations where road danger, real or perceived, is supressing demand for active travel, thereby reducing accessibility for those without cars and forcing those who would otherwise walk or cycle into cars, contributing further to congestion and poor air quality. Whilst tackling sites with poor collision records will remain the priority for investment, the severance caused by fears of road danger will be tackled through walking and cycling investment programmes that seek to deliver mode shift.

The priority for the Borough, as for London as a whole, is to focus on preventing collisions leading to death and serious injury. To work towards achieving Vision Zero, the Borough will ensure that it is embedded into the design of all schemes with

particular consideration given to how improvements can be made for pedestrians, cyclists and motor cyclists, improving safety and encouraging mode shift by reducing fears of road danger where these can be done in a manner that is safe and does not lead pedestrians and cyclists into a false sense of safety.

Action on cluster sites

With limited resources even for an absolute priority such as improving road safety and reducing those killed and seriously injured on the Borough's roads, prioritisation of remedial schemes must take place to deliver the greatest benefit and quickest reductions towards Vision Zero. The Council will therefore continue to investigate road accidents, and maintain a rolling programme to identify, prioritise and implement casualty reduction schemes and will continue to prioritise collision hotspots for remedial action as part of its annual LIP programme, especially those where there are a high number of KSIs.

To prioritise investment, annually Bromley examines a list of locations where there have been 5 or more collisions where a personal injury has occurred, within a 50 metre radius, over the last 3 years of available data. The collisions at these locations are analysed to identify if there are any common patterns between the collisions and if so whether there are any measures which could be implemented to prevent similar collisions occurring in the future. Where there are limited funds available to carry out interventions, schemes have to be prioritised using a cost benefit analysis, with a higher weighting given to collisions that led to serious or fatal injuries.

Motorcycles account for a disproportionately high share of KSI compared to their mode share. The Borough will therefore take steps to identify causality in infrastructure and behaviours which can then be addressed using reasonable and proportionate measures. The Council will also continue to implement a programme to provide anti-skid surfacing at sites where skidding is a key factor in accidents.

Safe Speeds

Safe speeds are vital to road safety and the Borough will use targeted measures at identified hot spots to reduce speeds. For example, the removal of centre line markings has been shown to deliver a statistically significant reduction in vehicle speeds and the Borough will therefore undertake area reviews of line markings to establish where they can be removed. This will be undertaken on a rolling basis annually and, in addition to this, when resurfacing is planned, the need for the replacement of markings will be reviewed in advance. There will however be locations where retaining centre markings, is of benefit to the safety of road users.

With regard to 20mph speed limits and zones, the Borough does not believe that a blanket approach is the most effective means of improving road safety. Too often

such schemes do nothing to change the characteristics of the street and lead to only quite insignificant reductions in speed and the cost of a Borough wide approach would also mean that resources would be diverted from schemes that tackle actual hot spots and priority areas that require more significant engineering measures. There is also a concern that borough wide approach could lead to an element of driver fatigue with the result that the key areas for driver attention are no longer prominent.

The Borough will therefore adopt a targeted approach to the introduction of 20mph speed limits or advisory limits, focusing on the areas around schools, key walking routes to schools, areas with high pedestrian footfall, e.g., outside railway stations, and high streets/district centres where a lower speed limit will allow for improved public realm, thereby also supporting Borough strategic ambitions for Vibrant Thriving Town Centres. Additionally, 20mph limits will be considered on cycle routes where cyclists mix with general traffic and where benefits to safety can be derived.

As compliance is essential, wherever they are introduced, this will normally be introduced alongside changes to street design that will result in also making them less traffic dominated and more attractive places to walk and spend time which, e.g., may include new crossing facilities, tree planting and better managed parking. These schemes may form part of the larger area based schemes referred to in Outcome 1.

Local neighbourhood/ corridor based schemes

Residents frequently approach the council with concerns about speeding and rat running. In isolation it is difficult to solve the issue without simply moving the problem to an adjacent street. However concerns about the danger presented by the perception of speeding and rat running traffic through residential areas are important factors in mode choice. Therefore promoting area wide schemes to remove dangerous rat running and promote the use of safe speeds presents an important opportunity to facilitate walking and cycling for local trips especially to schools as well as to improve the public realm. This can be delivered through innovative designs and streetscape improvements as part of local neighbourhood schemes potentially including modal filtering. Such schemes will need to be developed with communities to ensure that they are locally appropriate and serve the residents of the area they are intended to benefit. Promotion of lower appropriate speeds around such areas will also help reduce the severity of any collisions which do occur.

Road Safety Education and smarter choices promotion

Safe behaviours form a key part of Vision Zero and, alongside infrastructure measures, will play a key part in achieving the Borough's targets for reducing KSIs. Statistics show that 11-20 year olds account for 23 % of the Borough's KSIs, therefore the Council carries out a comprehensive programme of curriculum-based activities at Secondary School, for years 7, 9, 11, 12 and 13, with a changing

emphasis for each year group to promote independent travel, and safe road skills given that motorised modes are opened up to these year groups throughout their time in education.

As part of the wider Traffic Education programme, the Borough will continue to deliver the Borough's award winning Driven by Consequences (D by C) events via their schools and colleges to around 2,000 post-16 students per annum. D by C is an award-winning, thought-provoking event presented by the London Borough of Bromley's Road Safety Unit, working in partnership with a number of public service organisations such as the Metropolitan Police, London Ambulance Service and London Fire Brigade. D by C targets students, who may be about to start driving or have recently passed their tests and are already passengers, often with young drivers. The workshops explore how human factors affect driving, helping pupils to make informed decisions about their safety. To encourage modal shift and to highlight other road user groups to students, cycling workshops are also provided as part of the day long course. Moped education will also continue to be provided to over 3,000 students in this age group per year to ensure they are equipped with key safety skills if they choose this mode of transport.

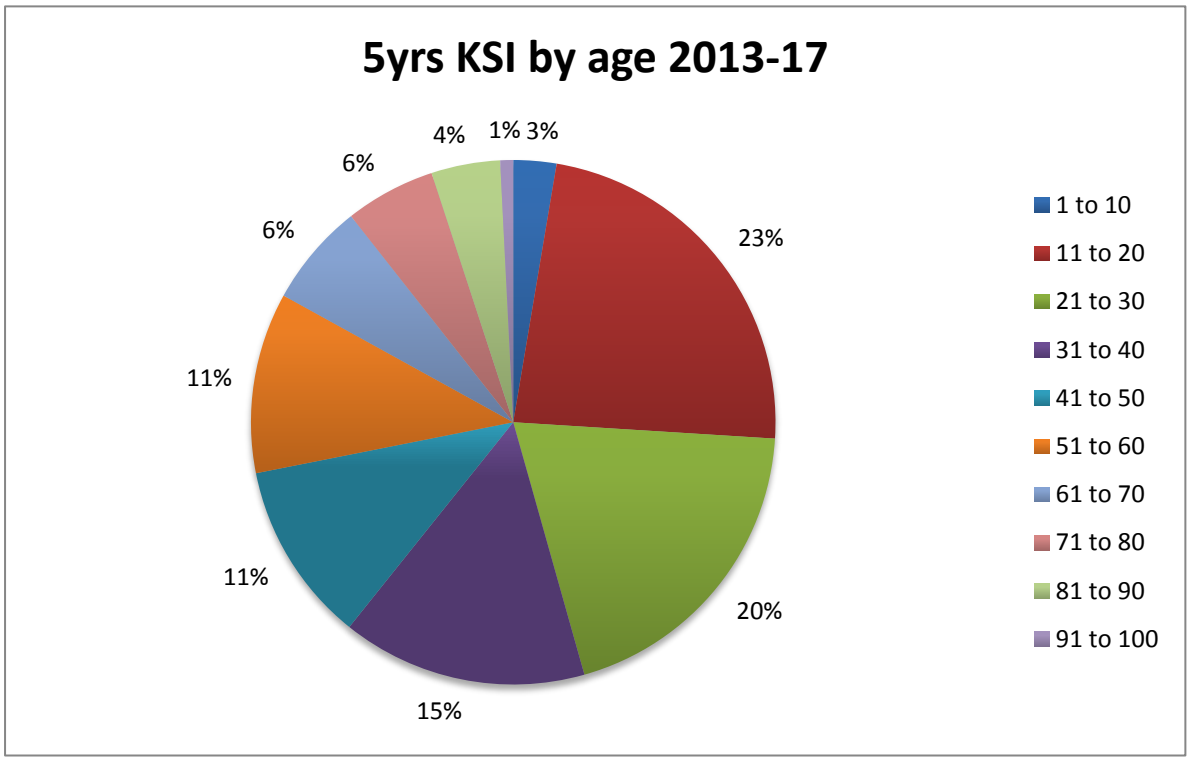
Whilst a significantly smaller proportion of the Borough's KSIs occur to those who are aged 1-10 (3%) the council wants to imbed safe behaviours and smart mode choices from the youngest age. In Year 2 and Year 6 road safety education is offered to provide children with knowledge about how to safely use the street. For the latter year group this is focused on providing them with the skills to travel independently to school and other destinations.

The Council runs a very successful Junior Travel Ambassadors scheme as part of the London wide programme. Year 6 pupils are inducted as JTAs and given the knowledge and resources to be able to reinforce the road safety and smartermode choices message in school by carrying out fun competitions, campaigns and assemblies.

The Borough will continue to work with the Police to deliver driver education sessions such as Close Pass and Exchanging Places, which encourages road users to consider the needs of other road users and act in a considerate and safe manner.

In order to reach a wider audience than can be reached by traditional face to face methods, the Borough will investigate the feasibility of new online and virtual reality technologies to disseminate road safety content. This may include apps and use of social media channels.

Fig. 13 **KSI by age group, LB Bromley**



Security

In addition to road safety, creating streets that are secure by design in order to reduce crime is important for creating streets that residents feel confident and comfortable in using, throughout the day and supporting the Borough's aims to ensure a Safer Bromley. Safe and secure transport interchanges are just as important, helping support travel by public transport throughout the day and is also vital in supporting the night time economy.

Creating secure environments will form an important design consideration for station access and transport interchange schemes and measures may include improvements to lighting on the approach to stations and between modes at interchanges. The Borough will give consideration to the installation of CCTV at areas where risk from crime and terrorism is considered to be greatest. Furthermore, schemes will seek to maximise the availability of natural surveillance, for example overlooking cycle parking and Bikehangars and consideration will also be given to personal security when proposing new car club bay locations.

At key sensitive sites the Borough will work with the police to design in Heavy Vehicle Mitigation as required. When undertaking schemes at railway stations, the Borough will work with the Rail industry to incorporate design elements, as recommended in the latest guidance, into schemes that enhance security.

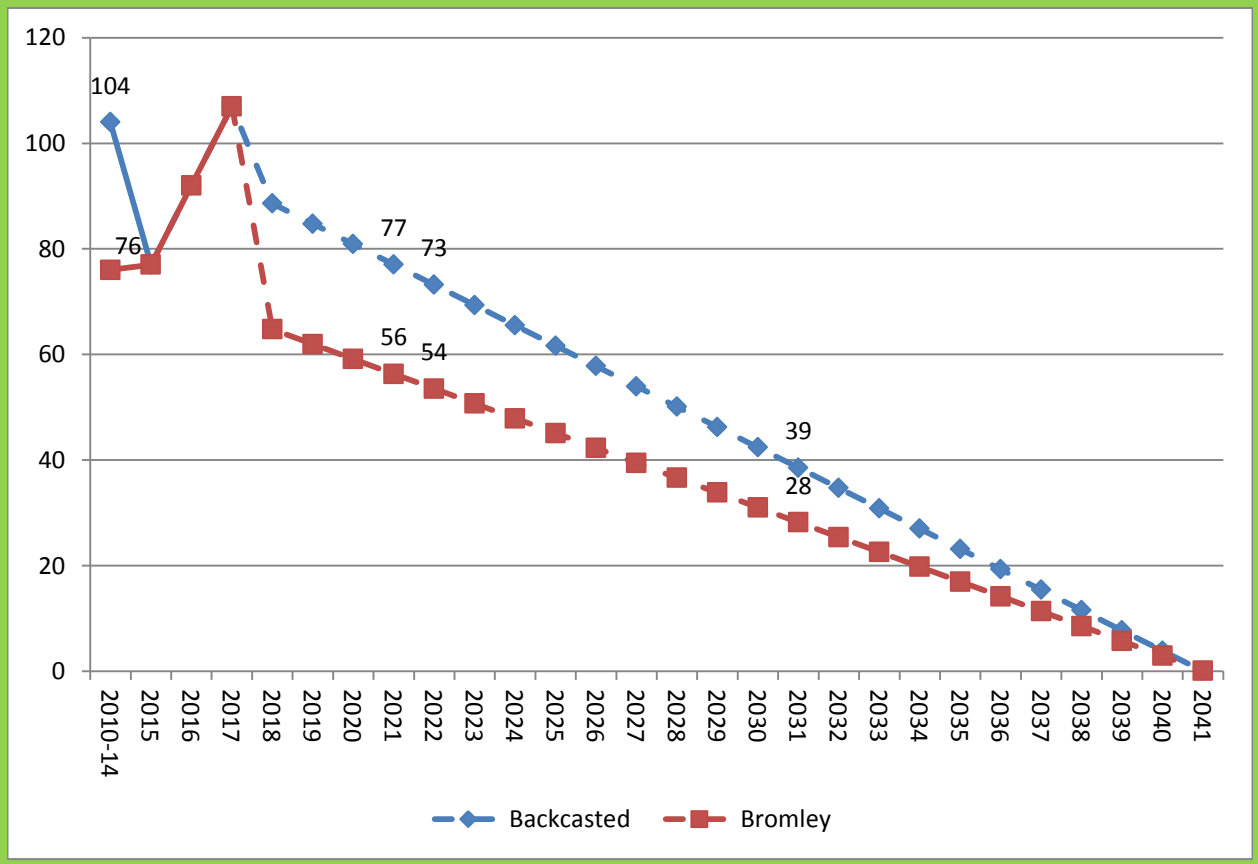
Outcome 2- Borough Objectives

Under Vision Zero, by 2041, the Borough aspires to have no deaths and serious injuries from all road collisions on the Borough's roads. It will be challenging against the backdrop of a growing population and a transport mix that is changing away from car use where, historically the largest reduction by mode of KSIs has occurred. The trajectory the Borough has set for Vision Zero is set out in Figure 14. By 2021 the Borough is aiming to have no more than 56KSI and by the end of LIP3 it intends to have reduced this further to 54.

The Borough has a successful long term record of reducing KSIs, however it is not complacent and recognises the need to reduce KSIs amongst vulnerable road user groups such as pedestrians, motorcyclists and cyclists. As a local objective the Borough will therefore aim to reduce KSIs amongst these vulnerable road user groups by 10% each year compared with the 2010-2014 baseline.

The Borough has traditionally focused on KSI reduction as these are the collisions that cause the most harm and change lives, and indeed will continue to do so with its adoption of Vision Zero targets. It will also seek to target a reduction in all collisions; by 2022 the borough will aim to have reduced all collisions by 10% from the 2010-14 baseline and by 2041 to have reduced them by 50%.

Fig. 14 **KSI trajectory**




BP

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

Challenges and opportunities

Reducing congestion is a key priority for the Borough however this is challenging in the context of an increasing number of trips. Reducing congestion within a context of an increasing number of trips requires a multi-faceted approach. This is partly associated with encouraging more local provision of services so distances are reduced and the mode can change; it is partly associated with mode shift, in particular ensuring that new borough residents and residents reaching adulthood initially consider modes other than the car; it is partly associated with providing attractive and convenient alternatives. Increasing numbers of cyclists and pedestrians will increase congestion if the number or distance of car trips remains constant. It is acknowledged that if this growth in demand for travel were to be entirely car based, then this growth would lead to worsening traffic and increased journey times. To try and address this by adding significant amounts of new capacity for motorised modes would be difficult without significant damage to the Borough's environment and character, and also risks encouraging even more car use. It is therefore necessary to provide infrastructure that makes space efficient modes an attractive and convenient choice and avoids increasing car trips in the context of a growing population by having more trips by space efficient modes and less by inefficient means. Therefore, whilst providing attractive infrastructure to encourage mode shift requires consideration of the whole journey; it includes decisions about appropriate road space reallocation such infrastructure facilitates a greater number of people to travel along a route more efficiently and park their cycle etc. at the destination.

Proposals for improved walking and cycling infrastructure including the proposed network of high quality cycle routes, alongside other complementary measures are set out in Outcome 1. Additionally improvements to bus reliability and bus routes/corridors form an important part of making buses a more attractive mode choice and the Council will seek to steer development to areas of better accessibility and leverage developer funding to improve the transport network, in order to reduce car dependency and traffic. However, development is not always under the control of the Council, e.g. changes of use by virtue of permitted development and development allowed on appeal by the planning inspectorate. In circumstances where it has not been possible to obtain developer funding to improve accessibility, the Council may request TfL provide new routes or revise existing routes to service those developments as residents move into them. Overall this should allow traffic to be reduced, especially by ensuring that new residents to the borough start by travelling by public and active means and avoid making short trips by car that can be easily undertaken by other modes.

There are also opportunities to make more efficient use of road space by offering greater choice to allow residents to reduce their vehicle ownership with the wider adoption of car clubs. Similarly the use of parking controls can be used to ensure that parking is appropriately managed encourage use of active modes to access local amenities and services as an alternative to driving, reducing the number of short trips by car that contribute to traffic. In addition to changing individual travel behaviour, there are opportunities to work with businesses to make their delivery and servicing more efficient, reducing its contribution to traffic whilst ensuring that they can efficiently service customers to maintain the economic vibrancy of the Borough.

Car Clubs

The limited public transport options for orbital and travel to some locations within the Borough means that car travel will remain a necessity for some trips even for residents in high PTAL areas. The Borough will therefore seek to continue to use Car Clubs as a way of enabling such mobility whilst reducing car ownership and car use and promoting the most appropriate mode choice for trips where alternative modes are not viable.

The existing Car Club network in the Borough consists of 14 on-street back to base vehicles, primarily in the northwest of the Borough, although there are two vehicles secured by s106 conditions in Orpington Town centre. These vehicles have enjoyed growing levels of utilisation since network expansion in 2016 and now form an important part of the transport choice offered to residents. Research by CoMo (formerly CarPlus) shows that each back-to-bay (as opposed to floating Car Club schemes) Car Club vehicle takes 10.5 private vehicles off of the streets, as Car Club members choose to sell their car. Therefore, the provision of Car Clubs plays an important role in reducing car ownership and parking pressure on the Borough's streets.

The Borough will therefore work to identify suitable locations for further Car Club expansion and add vehicles to locations that are currently performing above their usage target. These locations are most likely to be in PTAL 2 or above, will be based on knowledge of the local demographics, and areas of parking pressure where vehicles are likely to reduce car ownership. Car Clubs may also be included within the design of new CPZs and parking control schemes to offer transport choice.

As the network continues to expand the current multi-operator approach where car plus accredited operators are welcome to work with the Borough to develop locations in partnership and controlled by a permit may be replaced by a more formal single operator approach, decided through competitive tendering. Operators will be required to meet strict emissions standards with all vehicles (excluding vans until viable technology is available) to be ZECs petrol hybrids with no diesels in the fleet. In the longer term the Borough will work with partners to understand how all Car

Clubs could be moved to become ZEC in a cost effective manner as quickly as possible without limiting their rollout.

Bromley's Local Plan suggests using Car Clubs to mitigate the impact of new development. For developments that do not have sufficient units to support a Car Club and are close to an existing Car Club bay, it may be suitable to require

- Two years free membership of the Car Club operator
- 20 hours free drive time
- Information about the Car Club to be provided to all residents upon first occupation and thereafter each year of the free membership offer

For larger developments that have sufficient units to support a Car Club vehicle, developers may be required by an enforceable planning condition to provide a Car Club service, including, for example, whether it will be located on-street or within the curtilage of the development and the number of vehicles provided, but those details will be agreed with the Council on a case by case basis.

Parking

Parking is a key issue for residents, and effective parking management of both off- and on- street facilities will remain a key priority of the borough. Pay and Display parking controls provide an important demand management tool to ensure turnover of parking and availability of spaces. Similarly around stations the use of parking controls offers an important tool to manage demand, disperse anti-social parking and encourage use of active modes to access the station as an alternative to driving. The implementation of CPZs and P&D parking will be developed on a rolling basis with schemes developed as issues are identified.

To encourage residents to consider alternatives to car ownership and release road space, the Borough will seek to offer residents infrastructure to support other mode choices as part of larger CPZ and parking schemes. For example this could include the provision of Car Clubs and Bikehangars to provide opportunities to choose alternatives to the private car. This could include incentives for residents to trial alternatives to car ownership.

It is intended to undertake a review of the Borough's paring strategy after the publication of this LIP to ensure that it is consistent with current priorities and challenges.

Freight

Freight and servicing plays a vital role in the Borough economy, allowing shops and restaurants to support vibrant town centres and allowing residents to get the goods they need for work and leisure when they need them. Throughout the Borough

freight flows are expected to significantly increase to 2041 especially around Bromley Town Centre, the south of the Borough in rural areas such and the east of the Borough around Orpington and the Cray Valley industrial corridor. Some of this growth will require infrastructure measures to reduce the impact on network reliability however making deliveries more efficient is vitally important to reduce the impact of freight on congestion, air quality and road safety.

The Borough will work with Business Improvement Districts (BIDs) in town centres to understand the freight requirements of local businesses and develop proposals to reduce the impact of deliveries upon congestion and the environment. Interventions will depend on local requirements, which may include:

- delivery retiming where suitable low noise delivery methods can be employed
- promotion of low emission vans and the provision of low emission Car Club vans
- promotion of joint procurement options amongst local businesses co-ordinated by BIDs
- cargo bike rental for local deliveries

The borough has seen a long term trend of reducing demand for its town centre car parks, which presents the opportunity to consider repurposing a limited number of spaces in selected car parks. One possibility is to repurpose small sections of car parks in town centres as micro consolidation centres where deliveries can be dropped off for onward delivery by cargo bike. This would reduce the impact of loading on town centres; reduce localised emissions and present opportunities for new and innovative street uses. The borough will also continue to seek to work with collection locker providers to provide such facilities in some borough car parks to reduce delivery miles.

As set out in Bromley's Draft Local Plan, any development that is likely to create a significant number of trips will, where necessary, be required to enter into an agreement to submit and implement acceptable Construction Logistics Plans, and Delivery/Servicing Plans.

Connected and Autonomous Vehicles

Connected and Autonomous Vehicles (CAVs) offer great potential to improve road safety contributing to Vision Zero as well as opening up new opportunities for transport services where it is currently uneconomic. However, there are challenges if not properly managed with the potential for more congestion and impact on traditional revenue flows for both TfL and the Council. The council is therefore keen to work with TfL and other partners to understand how CAVs can be managed to achieve the benefits of less congestion and improved urban realm.

What are CAVs?

Connected and Autonomous Vehicles refer to a range of technologies that are being developed to improve vehicle safety and efficiency. Connectivity and Automation are two separate concepts although can be complementary to each other.

Connectivity allows vehicles to communicate with their surroundings. Automation refers to making functions of cars work without the need for driver input through the use of sensors and systems. There are six levels of autonomous driving ranging from Level 0 (no automation) to Level 5 (complete automation with no human involvement in the driving process).

The council has already been working to inform the Innovate UK funded Streetwise project, led by UK artificial intelligence specialist FiveAI. Streetwise is a project which aims to develop autonomous vehicle (AV) technology that is suitable for an urban environment and then apply it to a transport service in London. By working with industry on this project it will be possible to understand how service models for AV transport services might work and shape the development to provide traffic reduction and environmental objectives.

Mode shift marketing and Smarter Travel measures

To complement infrastructure measures, the Borough will undertake a number of activities to raise awareness of new infrastructure and mode choice. Cycle training will be an important part of this, training adults, children and families to Bikeability levels 1, 2 and 3. To give those who want to cycle the confidence to do so, the Borough will continue to offer escorted rides to show residents how they can cycle to work or a regular destination safely including showing them how to use cycling infrastructure. The Borough will also look to deliver Dr Bike sessions to offer basic maintenance to cycles. These measures will be increasingly targeted towards areas of highest potential for cycling and alongside corridors where cycle routes have been delivered or as part of area based schemes.

Managing road works

To reduce the impact of road works on the Borough's road network the Borough operates a permit scheme. The LBB Permit Scheme is a way of working in managing both road and street works. The aim of the scheme is to deliver consistency and parity in coordinating street works, but equally to deliver real changes for all road users. The permit scheme also enables LBB to co-ordinate works to ensure the effective coordination of traffic management to help reduce travel disruption.

The street works team monitor the progress of utility works though the scheme and take enforcement action when works are not completed within the agreed timescale (to reduce traffic congestion). The street works team inspect utilities works to ensure reinstatement is undertaken to the correct standard – taking enforcement action where necessary to protect highway assets.

Outcome 3- Borough Objectives

By 2021/22, the Borough will aim to have increased the coverage of the Car Club network, in order to offer more residents the choice not to own a car. This will be focused in areas of PTAL 2 or above where the Borough will aim to reduce second car ownership. Achieving this objective will support a wider borough objective of reducing the pressure on parking.

The Borough will aim for 50% of travel to school trips to be by active modes and 20% by Public Transport by 2021/22


YOUR
BROMLEY
AT THE HEART OF THE TOWN
YOURBROMLEY.COM
Restricted
Parking
Zone
At any time
No loading
at any time
20

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

Challenges and opportunities

Air Quality

Whilst Bromley does not experience the same level of intensity of Air Quality issues as other inner and central London areas, there are locations in the Borough, especially around key surface transport corridors where emissions are high. In 2007 the Borough declared an air quality management area (AQMA) which covers the North and North West of the Borough in response of predicted exceedances in nitrogen dioxide levels. Subsequent air quality monitoring for nitrogen dioxide, published in the Council's Annual Status Reports, has shown that anticipated reductions in roadside pollution levels have fallen at a slower rate than originally anticipated and, in some areas, have actually increased.

Even in areas that do not experience exceedance there is still a need to maintain and improve the Borough's air quality especially in the context of a growing population. The main cause of air pollution problems in Bromley arise from traffic, domestic heating and cooking (boilers, gas cookers, stoves), restaurants and commercial cooking and heating, industrial emissions and construction.

London wide interventions such as the Euro VI standard for heavy vehicles will play an important role in improving air quality across the Borough. Acknowledging the central role TfL has to play in this area, the Borough would like to see an acceleration of the introduction of electric or hydrogen single deck buses in Outer London. This is particularly important for those routes in areas of high pedestrian footfall such as High Streets. The current proposal for outer London's fleet of single deck buses to be electric or hydrogen by 2035 lags significantly behind the time line for central London, therefore the Borough would welcome an acceleration of this timeline once the most pressing air quality issues have been cleaned up in Central London by 2020. Similarly, whilst the target for all double deck buses to be Euro VI as a minimum by 2020, the borough would welcome an acceleration of the introduction of hybrid double deck buses in inner and outer London to reduce localised emissions especially in town centres.

The Borough will therefore focus initiatives to reduce the impact of air pollution in the areas of highest exceedance, or where vulnerable people may spend significant amounts of time, for example schools. The Borough will also seek to use mode shift, alternative fuels and other mitigation strategies to reduce pollution and carbon emissions across the Borough as a whole. These interventions will be developed in detail in the Borough's Air Quality Action Plan review which will be assessing how various Air Quality issues might be tackled most effectively in future years. Some initial suggestions for transport led interventions and policies are provided in Outcome 4.

Anti-Idling

Idling vehicles are a cause of unnecessary emissions. The Borough will therefore investigate powers to discouraging unnecessary idling by taxis, coaches and other vehicles. Anti-idling campaigns will also be developed to offer advice and education, targeting those areas of greatest risk, for example delivering education via schools. Such activities can be used to promote good air quality practice similar to the Borough's work on Road Safety education, providing education about what families can do to minimise air pollution in the home or on the school run, including mode choice.

Greening the Borough's fleet

The Borough will continue to work towards reducing the emissions from its fleet and those of contractors working for the Council. In the short term the Borough will focus on bringing its fleet up to the 2020 Low Emission Zone (LEZ) heavy vehicle compliant standards with some Zero Emission Capable (ZEC) vehicles introduced where the market has shown them to be reliable and affordable alternatives to compliant Internal Combustion Engine (ICE) vehicles and suitable for their intended duty cycle. The speed and nature of this will be determined by the availability and cost of low emission/alternative fuel vehicles for the council's diverse and often specialist needs. Working with Procurement, commissioners from across the council will therefore be asked to consider how they could ask contractors to innovate towards a greener fleet and the aspirational road map to reducing emissions from the Borough's fleet detailed below.

Fig. 15 **Road map to reducing emissions from the Borough's fleet**

Road map to reducing emissions from the Borough's fleet	
2019	Ongoing programme of training all council staff driving on council business fuel efficient driving.
2019	Work with procurement to imbed requirements for ULEZ/ 2020 LEZ heavy vehicle compliant and ZEC vehicles in procurement processes
2019	Update of Council Contractor waste and street sweeping fleet, allowing integration of lower emission vehicles meeting 2020 LEZ heavy vehicle standards.

2019/20	Pool car fleet will be Hybrid
2019-21	Withdraw from service of non-ULEZ compliant vans
2019-23	Review options to reduce emissions from gritter fleet by new technology and working closely with the Highways contractor
2020s	Work with industry to understand the potential for electric and hydrogen
2025	Electric pool car fleet
2027	Update of Council Contractor waste and street sweeping fleet, allowing integration of lower emission vehicles
2025-30	Increasing use of electric and hydrogen vehicles in council fleet
2035	Update of Council Contractor waste and street sweeping fleet, allowing integration of ZEC (depending upon availability and reliability)
2035	All vehicles working over 50% of their time on Council business will be ZEC (depending upon availability and reliability)
2041	All vehicles working on Council business will be ZEC (depending upon availability and reliability)

The majority of vehicles operating for the Council are provided by private contractors; therefore reviewing procurement policies will be essential in reducing the emissions from those sources. Consideration will be given to the business case for replacing the grey fleet operating on Council business with a hybrid/EV car club alongside measures to promote sustainable travel for work journeys to staff, and to reduce the number of miles driven by staff on Council business.

In order to support the greening of the Borough's fleet, the Council will work with contractors to install charging infrastructure at sites around the borough which supports efficient duty cycles and service delivery. The Council will work with its partners and the wider transport industry to follow developments and to trial alternative fuel technologies and new ways of working to reduce emissions in the

AQMA, targeting the areas of highest emissions. In addition to the road map, the Borough will continue to educate staff driving on Council business about fuel efficient driving to minimise emissions and costs as part through its driver induction process, following the Driver's Code of Practice as well as promoting staff pool bikes and travel by public transport for work business. If resources are available, consideration will be given to how the Council can work with its contractors to promote fuel efficient driving. Savings will however be expected to accrue to the Borough throughout the lifetime of the contract.

To reduce car travel by Council staff at work, the Borough will look to introduce a new and more convenient pool bike service, including electric bike facilities for staff.

The Borough will seek to work with TfL to reduce emissions from their fleet in the Borough, and will lobby to ensure that the introduction of the ULEZ and earlier adoption of lower emission and ZEC bus fleets in Central London do not lead to fleet redistribution to the Borough that would negatively impact on air quality. The Borough will seek to lobby TfL to reduce emissions from its contractor's fleet operating in the Borough at a similar rate to that proposed in the Borough's own greening the fleet road map.

To unlock and bring forward the benefits offered by the London wide requirement for all new taxis and private hire vehicles (PHVs) to be ZEC, the Borough will work with TfL to investigate the feasibility of introducing zones where TfL licenced Taxis, PHVs and AVs in the future must be ZEC and operate in Zero Emission mode. These zones are likely to be focused on town centres or other locations with high pedestrian footfall and within the AQMA, where they will deliver greatest benefit in areas of exceedance. Consideration may also be given to expanding these zones to other vehicle types whose emission requirements are not directly mandated by TfL depending on the economic impact and need for public vehicular access.


SPREADING
Transport & Highways
MAN
GN08 PWZ

Fig. 16 **Borough aspirational road map to reducing emissions from TfL's & TfL's contractor/controlled fleet**

Borough aspirational road map to reducing emissions from TfL's & TfL's contractor/controlled fleet		Source
2018	ALL new TfL's licenced taxis are ZEC	MTS zero emissions transport timeline
2020	All TfL Bus Services in the Borough will meet 2020 LEZ heavy vehicle standards.	MTS Cleaning the Bus Fleet
2020-2030	TfL's & TfL's contractor fleet show a continual reduction in emissions and TfL does not move or allow to move higher emission vehicles to the Borough as a result of tightening emission standards elsewhere in London.	Borough Lobbying
2020/21	Withdraw from service of non-ULEZ compliant vans on TfL Business in LB Bromley	Mirrors Borough road map action
2019-23	Review options to reduce emissions from TfL's gritter and other vehicle fleet by new technology.	Mirrors Borough road map action
2023-2028	Work with TfL to investigate the feasibility of introducing and expanding areas where TfL licenced Taxis must be ZEC and operate in Zero Emission mode. If possible apply to all Taxis, PHVs and AVs.	MTS proposal 35
2025-30	Increasing use of electric and hydrogen vehicles operating in the borough in TfL's fleet, TfL contractor's fleet and TfL licenced Taxis.	Mirrors Borough road map action
2025-30	All TfL Bus Services in the Borough to be as a minimum hybrid and preferably electric or hydrogen.	MTS Cleaning the Bus Fleet

2035	All vehicles working in the Borough over 50% of their time on TfL business will be ZEC (depending upon availability and reliability)	Mirrors Borough road map action
2041	All vehicles working in the Borough on TfL business will be ZEC (depending upon availability and reliability)	Mirrors Borough road map action

EV Charging infrastructure

Whilst mode shift to more efficient modes of transport is central to delivering an efficient, low carbon transport network, private vehicles will remain necessary for many journeys in the Borough that cannot be made by other modes. However, in order to reduce the impact of these, the Borough will support measures to facilitate the adoption of alternative fuels.

The Borough is a member of the Source London network and will work with Bluepoint London to continue to roll out Electric Vehicle charging infrastructure. Whilst the main focus has primarily been focused on High Streets and town centres, access to charging infrastructure at home is recognised as a vital consideration for many purchasing an electric vehicle and to help reach that tipping point in the shift from fossil fuels powering the private car and van to electric. Whilst those with off-street parking are able to purchase a home charger using a Government grant, residents without access to off-street parking currently find charging at home difficult if not impossible. Many of the residencies in the AQMA do not have off-street parking and the streets within the area experience high demand for on-street parking. Consideration is therefore being given to the provision of both standard chargers as part of the Source London network in locations that are convenient to a wide catchment of residents, as well as lamp column charging infrastructure, which can be delivered cheaply with no need to reserve space on-street.

To ensure that charging infrastructure is provided with new homes in the Borough, Policy 30 of the Draft Local Plan requires 1 in 5 car parking spaces to be provided with electric vehicle charge points. This includes active provision, with charge points and passive provision with ducting ready for future demand when units could be easily installed.

The Borough will also continue to work with the London Taxi Drivers Association (LTDA) to develop proposals for the introduction of charging infrastructure exclusively for Taxis and that has already resulted in the provision of a fast charging point at the main taxi rank in Bromley town centre, the second Borough in London to do so. Exclusive charging infrastructure is necessary to give drivers confidence that

they will be able to charge their cab when they need to and contribute to the gradual conversion of London's Taxi fleet to ZEC.

Working with the BIDs throughout the Borough, the Council will seek to provide local businesses with information about how they can reduce their transport emissions. Where there is local support the Council may look to introduce low emission car club vans to allow businesses to switch to low emission vehicles without significant capital expenditure.

In order to support the adoption of EVs by businesses, visitors and taxis, the Borough will work with TfL to identify locations for rapid charge infrastructure to be installed as part of TfL's GULCS funded rapids programme.

The Borough will also require all car clubs (excluding vans) introduced in the Borough after 2020 to be petrol Hybrid as a minimum and consideration will be given to introducing fully electric car clubs within the AQMA if there is market interest and suitable funding is available.

Green infrastructure see London Borough of Bromley tree management strategy 2016 – 2020 for more details about tree management and planting policies

The Borough's arboriculture strategy, 'London Borough of Bromley tree management strategy 2016 – 2020' sets out in detail the Borough's approach to managing its extensive tree stock. Street trees are a vital part of the Borough's streets and provide a diverse range of benefits including carbon and pollution capture and storage, a role in Sustainable Urban Drainage Systems (SUDS), shade/shelter and attractive streetscape. As part of transport infrastructure projects, the Borough will seek to retain and undertake maintenance of existing street trees to improve the quality of the stock, as well as seeking to plant new trees, making a contribution to capturing pollutants and rainwater.

The Borough will also look to undertake a trial of new green infrastructure, such as trees and green walls around schools in the AQMA and alongside corridors with the highest concentrations as a means of natural emissions capture.

SUDS (Sustainable Urban Drainage Systems) see London Borough of Bromley Local Flood Risk Management Strategy, August 2015 for further details about the flood risk and mitigation measures in the Borough

Bromley has experienced severe flooding in the past and whilst work has been undertaken by the Council, our partners and others, the risk of flooding will continue into the future. In fact the probability of flooding will increase in the future and may affect areas not previously directly affected by flooding, as a result of factors such as:

- Urban Creep (infill development and loss of green space), (However the Borough has already taken action to mitigate these consequences through the Borough's Draft Local Plan Policy 116 that requires all developments to seek to incorporate Sustainable Urban Drainage Systems (SUDS) or

demonstrate alternative sustainable approaches to the management of surface water as far as possible

- Ageing Infrastructure (increased pressure on drainage systems and other infrastructure designed for different levels and patterns of use and in deteriorating condition).
- Population Growth (denser populations mean the impact of a flood for a given area will impact upon more people).
- Climate Change causing increased storm frequency and intensity

Due to the clay based nature of the sub-strata in the north of the Borough, infiltration based SUDS is unlikely to be feasible in these areas. However, any reduction in the amount of rainwater reaching the surface water drainage system is helpful and the inclusion of SUDS within the Borough's transport schemes has the potential to raise public awareness of flood risk management as a current and vital issue.

The Borough will commit to a SUDS feasibility assessment as part of all new traffic schemes where civil engineering takes place. The type of SUDS will depend upon the location and soakage tests to determine the viability of infiltration to subsoil which will be undertaken where possible–and scheme designers will remain open to innovative urban surface water management strategies' (i.e. water gardens, linear swales etc.) These measures will also enhance the public realm and improve air quality through enhancements to urban greening

The maintenance requirements of any SUDS measures introduced will be factored into the design and costing of every new traffic scheme. Consideration will therefore be given to involving communities in the care of green infrastructure, giving them a stake in their areas thereby ensuring a high standard of care. This may utilise the highly successful 'Friends of' groups active elsewhere in the Borough.

To reduce the impact of extreme heat the Borough will seek to implement green infrastructure that reduces the urban heat island effect as part of its transport projects.

Outcome 4- Borough Objectives

The Borough will aim to develop an anti-idling education programme during 2019/20 to be delivered during the three years of the LIP.

In order to support the adoption of electric taxis an, Bromley will aim to have delivered a number of fast/rapid charge points for taxis in or near all major town centres or at/near all major stations in the Borough by 2022.

By 2022 the Borough will aim for no car club vehicles operating from on-street bays to be diesel.

By 2022, the Borough will aim for half of car club vehicles operating from on-street bays to be either plug in hybrid or fully electric.

To improve the local environment, the Borough will aim to introduce a minimum of 50 new street trees, each year, throughout the three years of LIP 3 as part of Traffic projects, including the strategic cycle network and Liveable Neighbourhood projects.


LT18 VYH

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

Challenges and opportunities

Bromley is served by a range of public transport modes, although the level of service and modal mix is not consistent throughout the Borough. More densely populated areas enjoy better access to public transport which is more limited in the rural areas. As an Outer London Borough, a number of destinations are rural in nature with low PTAL scores, areas which have higher levels of car ownership and usage. The north west of the Borough, lying closest to Central London, and the Borough's main town centres, have good transport links to/from outside the Borough via the rail network, and westwards to/from Croydon via the Tram network.

As the current system primarily provides radial travel opportunities, to deliver mode shift, investment is required in new connectivity to facilitate orbital travel and improve links to outer London and some areas of inner London with significant trip patterns to/from Bromley. Without this investment the potential to achieve mode shift will be limited with many residents still reliant on private vehicles to make trips that are currently inconvenient and significantly longer by public transport. Whilst the Borough's role in developing these modes is as a key stakeholder and partner of TfL, plus a general facilitator, the Borough recognises its key responsibility in delivering streets that provide a good whole journey experience, contributing to mode shift and healthy active travel.

Delivering new connectivity

The majority of the Borough's rail services are provided by the rail operator, Southeastern, which is currently subject to the refranchising process. The Borough has been actively engaged in lobbying and working with bidders to develop proposals to benefit the Borough and promote public transport use as part of that process.

Fast services to central London are very important in providing good connectivity with the Borough, however, the key challenge on these routes is capacity and overcrowding at peak times. The Kent Route Study has identified ways to accommodate growth in demand to 2024 however beyond that more radical approaches to ensure the network is efficiently utilised will be required.

Whilst the fast radial links provided by the rail network to the Central London Central Activity Zone (CAZ) are good but overcrowded for example Bromley and Orpington to Victoria and Charing Cross, orbital journeys to other destinations in outer London are often difficult and inconvenient. In some cases it is quicker to travel into Central London and then travel out again, putting increased pressure on radial networks. A

further key connectivity gap is between Bromley town centre and Canary Wharf /Docklands.

Providing frequent, fast and reliable public transport on key orbital routes will play an important role in delivering mode shift from cars and with it reducing traffic. An important aspect of these proposals will be developing excellent links from other town centres to Bromley to support ongoing economic regeneration of Bromley's office Quarter and to provide access to town centres to ensure that they remain vibrant and thriving mixed use locations, with high quality retail, employment and residential uses. The Borough is looking to work with TfL and other industry partners to develop deliverable and cost effective solutions that offer fast, frequent and convenient public transport services at an affordable cost for funders. These may include greater and more effective use of the existing rail network to facilitate new journey opportunities to interchange hubs or Bus Rapid Transit (BRT).

The Borough will seek to work with TfL to understand the scope and potential of 'metroisation', mini radial networks, and BRT to assess which transport projects could offer the most cost effective public transport improvements on the following corridors:

- Bromley town centre to Lewisham and Canary Wharf/ Docklands to support improved connectivity with the expanding employment opportunities in Canary Wharf
- Higher frequency services from Orpington to Lewisham for onward connection to Canary Wharf
- Intra Borough travel by rail i.e. a local radial network of high frequency and fast rail/trams/BRT between Bromley's key town centres bringing people to work and leisure opportunities in the Borough e.g. an extension of the tram from Beckenham to Crystal Palace or new BRT services along the A21 corridor
- Orbital Travel around outer London on key corridors to the Borough's town centres to support the economic regeneration of Bromley in a sustainable way and provide alternatives to the car.
- Improved links to North West Kent, potentially via access to the Elizabeth line e.g. to Ebbsfleet International and the other facilities proposed around Ebbsfleet.

Lewisham, is identified in the MTS as having an important role as a strategic interchange which will be enhanced by the Bakerloo line extension. Lewisham provides Bromley residents with an interchange to the DLR for onward travel to Canary Wharf. The extension of the Bakerloo line to Lewisham presents an important opportunity for the Borough, in that it will allow for interchange at Lewisham for onward travel to destinations notably south east and west London. However, the current service pattern does not make for convenient turn-up-and-go

journeys with seamless interchange opportunities. Therefore, in order to unlock the potential of Lewisham as an interchange for Bromley residents, it is necessary evaluate options for higher frequency services from the Borough's stations to Lewisham.

The Borough therefore supports the efforts of LB Lewisham to extend the Bakerloo line to Lewisham and would consider options for a further extension into the Borough where this provides genuinely new connectivity and capacity. For example, a phase 2 Bakerloo Line extension to Bromley North could be acceptable to the Borough if it contributed to improving connectivity on one or more of the identified corridors.

Given its location as an outer London Borough, connections with the wider South East region are important in order to reduce car trips into the Borough including a reduction in the negative effects of rail heading. As journeys from Bromley to North West Kent are often slow and circuitous, the Borough therefore supports proposals from the Kent Route Study for a direct service between Bromley and Ebbsfleet International. Improving connectivity on this corridor by rail will importantly act to reduce car dependency in this part of Kent and open up employment and leisure opportunities, including the proposed Paramount Leisure Resort on the Swanscombe peninsula.

Trams

The north west of the Borough is served by London Trams to Wimbledon and the tram network provides an important orbital link from Croydon and Wimbledon town centres as well as employment opportunities in Outer London. The Borough will continue to work with TfL to support higher frequency services that deliver the 'Trams for Growth' strategy.

TfL is proposing to invest in the double tracking of the Elmers End Branch and adding a second platform at Elmers End, to improve reliability, journey times and, eventually, increased frequencies. This significant investment in the tram network is welcomed by the Borough, although only forms part of the investment needed to increase capacity on the Tram network identified in the Trams for Growth strategy. The Borough will therefore continue to work with TfL to understand where it can help to deliver the full Trams for Growth strategy to achieve higher frequency services from both Elmers End and Beckenham Junction and provide improved interchange with metro rail services at both of these stations. Integration of key Tram stations with Bus Rapid Transit to destinations in the borough will enable visitors from out of the borough to avoid car use and support the vibrancy of the Borough's Town Centres.

Improving links to Crystal Palace remains a priority and would support the proposed regeneration to Crystal Palace Park detail. An extension of the tram network is one option for achieving this. Although further appraisal of options including London

Overground Metroisation are required to determine whether tram remains the optimal option for this corridor.

Buses and Express Buses

Buses form an important part of the Borough's public transport network and could be further developed, incrementally, based on changes in demand. The Borough, however, wishes to work closely with TfL to develop the network and new and innovative bus services.

The MTS identifies a potential bus corridor between Beckenham and Bexleyheath, which connects with the London Tram network at Beckenham Junction. Development of this corridor as a limited stop, high frequency and high quality bus service, therefore potentially makes a valuable contribution to improved orbital travel in south east London if integrated with the tram network, in terms of both timetables and infrastructure. As this corridor proposal is developed, the Borough will seek to work with TfL to understand whether there is a case to extend the corridor to provide interchange opportunities with the Elizabeth Line at Abbey Wood. The Borough will therefore work with TfL to develop the infrastructure required to provide a high quality, reliable service on this corridor.

To support the development of the Biggin Hill SOLDC and reduce car dependency the Borough will work with TfL to reduce congestion at the Keston Mark junction to improve bus reliability. In addition to this, the Borough would like to see whether express or limited stop services to the SOLDC could act as rail feeders to reduce car borne trips that the employment growth in this area will create.

What is Biggin Hill Strategic Outer London Development Centre (SOLDC)?

Biggin Hill Airport has been designated a SOLDC. The SOLDC concept seeks to support the growth of business and employment opportunities beyond central London. This involves realising the potential of such locations to develop their specialist economic growth. The exact nature of the Biggin Hill SOLDC is still under development but minimising vehicle trips is a priority in its planning.

In the south of the Borough around Biggin Hill and Downe for example, buses are the only form of public transport and are often infrequent and therefore do not offer an attractive alternative to car use. Furthermore, some of these routes have longstanding bus reliability issues and do not run on Sundays or Bank Holidays, contributing to higher levels of car trips because no alternatives are available. Enhanced weekend and bank holiday services and frequencies for routes that do run should be considered to both deliver mode shift and open up Biggin Hill and Downe as leisure destinations, supporting accessibility to, for example, the new Biggin Hill

Memorial Museum. Too often the low number of users in rural locations results in stops in these locations being missed to recover time due to delays in the more congested urban areas. The Borough will work with TfL to ensure that TfL's reliability procedures do not act to discourage bus usage in areas where there are limited alternatives to the car.

In areas of the Borough where densities do not make traditional bus services economically viable, the Borough is keen to see the development of new types of bus service to serve these markets, for example demand responsive transport. This may be suitable for enhancing connectivity from the South of the Borough to/from neighbouring villages in Kent.

A recent piece of TfL research into bus services to London's hospitals identified a connectivity gap in the bus network between the Princess Royal University Hospital, Orpington and West Wickham. Closing this connectivity gap has been a long term aim of local stakeholders and the Borough will work with TfL to identify ways to improve this situation, cost effectively.

A further area the Borough wishes to explore is the provision of additional new school bus routes to support independent travel and reduce 'school run' trips and support the target set out in outcome 3 for travel to school modeshare. Furthermore by embedding the use of public transport from a young age, children are more likely to make smarter travel choices as they go through life. A recent notable success has been the partnership working with TfL to introduce the new 684 route from Orpington to Charles Darwin School.


Junction
HOVED
465156

Station Access

The Borough has a key role in facilitating sustainable transport access to stations to reduce car based trip stages and parking pressures around stations. Cycling and walking will play an important part in reducing car based trips to stations and provide active trip stages where residents are able to achieve their 2x10 minute sessions per day of physical activity. A number of the Borough's stations are on the Quietways network or routes proposed in Outcome 1 of this document.

The Quietways network will serve a number of stations, importantly providing links between different lines, thereby contributing to improved destination accessibility for residents. The Borough will seek to maximise the investment in the strategic cycle network by working with the Rail industry on supporting measures at stations on the Quietway network, such as:

- Improved public realm around stations, ensuring that stations act as gateways to the areas they serve. These will be exemplar projects for the Borough and include tree planting, shade and shelter, integration between modes, use of high quality materials and be designed to offer a safe and secure experience for all users.
- High quality covered cycle parking, covered by CCTV with repair facilities or in cases of sufficient demand lockable hubs
- Improved signage to ensure stations are locally integrated
- Improved connections between stations and tram stops to facilitate orbital travel via out of station interchange

Stations will be prioritised on the basis of strategic fit alongside other projects such as Quietways and DfT funded Access for All, station usage and potential for mode shift to sustainable modes. Likely priorities for the three years of LIP3 are

- Lower Sydenham- linked to Quietway
- New Beckenham- linked to Quietway
- Shortlands- as part of a Liveable Neighbourhood
- Elmers End- supporting TfL investment in the tram branch/stop

A key intervention for promoting cycling to stations and increasing cycling trip stages are high quality cycle hubs to safely and securely park cycles. Twenty five of the twenty six stations in the Borough have some form of cycle parking facility. These vary in quality but in the majority of cases whilst these facilities are functional, a number no longer meet passenger expectations and would benefit from renewal/replacement. Most recently Bromley Council has invested in improving the facilities and capacity available at Bromley South and are working to deliver a high quality facility at Elmstead Woods and a secure hub at Orpington. Going forward the Borough will seek to deliver upgrades to cycle parking at key stations where there is good potential for cycling or are on a cycle route. Where demand is sufficient the

Borough will look to deliver lockable secure hubs alongside free facilities, providing residents with choice. At lower footfall stations provision will still be high quality and whilst not having lockable compounds, it will still be monitored by CCTV and be designed to reduce thefts from the start.

Delivering projects at stations is complicated by the ownership structure of land adjacent to rail facilities, which generally belongs to Network Rail and is leased to the respective train operating company (TOC). However, via successful partnership working, the Borough has already demonstrated how these improvements can be delivered and through partnership working with the Rail industry, it has been possible to leverage third party funding, which the Borough expects to continue, going forward.

As detailed in Outcome 1, the Borough intends to develop a network of cycle routes on quiet streets or with segregation to continue the development of the strategic cycle network in the Borough once the Quietways are completed. Of particular importance is the Borough's busiest station Bromley South, with over 8.5m entries/exits in 2016/17. The location of this station in Bromley Town centre means that it is close to some of the most congested roads and junctions in the Borough. It is also located within the Bromley Town Area Action Plan area, designated for the delivery of significant housing growth and within the Bromley Opportunity Area as designated in the London Plan. These pressures mean that facilitating efficient use of highway space to access the station is essential to delivering a public transport network to meet the needs of a growing London and Bromley.

The Borough therefore sees a major opportunity for cycle to rail trips to Bromley South station by providing a segregated cycle facility alongside the A21 with safe and easy to use junctions for cyclists. This facility would need to be delivered in partnership with TfL because the A21 is a TLRN road. Within TfL's strategic cycling analysis the A21 is identified as a medium priority connection and as a key project within the Borough's cycle strategy. The opportunity should be taken to use land value capture mechanisms from development in the town centre to contribute to the project alongside TfL and Borough funding. This link could also be designed to serve Bromley College, promoting active travel trips to this key education centre for the Borough and wider south east London.

Station upgrades

As gateways to the rail network, stations are vital facilities for residents but often the Borough's stations are in need of refurbishment and cannot cope with the demands now placed on them. If sufficient capacity is not provided, then not only will safety be compromised, but journey times will be increased due to increased dwell time. The Borough is therefore keen to leverage investment into its stations from TOCs and the DfT as well as TfL for TfL managed London Overground stations.

Providing sufficient space at stations is a key to running a high capacity metro network with effective interchanges. The Draft Kent Route Study identified Bromley South and Beckenham Junction as requiring capacity enhancement work. Bromley South has been identified as requiring intervention during Network Control Period 6 (CP6) 2019 to 2024 and Beckenham Junction by 2044. The Borough is keen to see these works take place and will lobby for work at both stations during CP6. The Borough will also look to identify sources of third party and developer funding for station upgrades and will work to deliver complementary public realm and station access improvements where major station upgrades take place.

As well as these transport hubs, the Borough has 12 small stations (defined as those with less than 1m passenger entries/exits per year). The role of small stations as important to the communities they serve was identified in the 2017 London Travel Watch report 'Small stations – too big to forget'. However too often small stations fail to live up to passengers' expectations and fulfil their potential for serving the local community.

Recognising the importance of these stations, the Borough will lobby operators to make improvements to basic facilities such as seating, shelter and lighting. In some cases it may be desirable for operators to repurpose space at the station to provide useful community and retail facilities to improve the offering to passengers and local residents. To achieve this, consideration will be given to how the Borough can leverage developer contributions to make station improvements where these will contribute to Outcome 8 of the LIP, Active, efficient and sustainable travel as the best option for travel from new developments.

The Borough is also keen to work with operators to promote community involvement in stations, to help improve the appearance of stations and to act as champions of the service locally.

Outcome 5- Borough Objectives

Enhancing the capacity and connectivity are key objectives for the Borough's public transport network. Investment needs to provide a reliable and convenient service that allows residents to undertake a range of trips without having to rely on a car, and contribute to a reduction in car trips and car mode share. The objectives are split into two main categories, high level network improvement objectives over which the Borough does not have overall control, but works with industry partners to deliver, and secondly, station access objectives which the Borough has control over and are therefore more specific.

High level Connectivity objectives by 2041

- Reduced Journey time between Bromley town centre and Canary Wharf
- Higher frequency rail service on Southeastern Metro services to Lewisham
- Reduced Journey times between other Boroughs and Bromley Borough to support regeneration and economic growth in the borough, including emerging plans for regeneration of Bromley South and Orpington town centre.

These are long term objectives and it is recognised that they will take until 2041 to be fully realised. In the period of the LIP3 delivery plan, the Borough will aim to have worked with TfL, Network Rail and other partners to undertake or contribute studies that provide costed options for delivering the above connectivity objectives.

Station access objectives

By 2022, the Borough will aim to have improved walking and cycling access to stations in the borough to reduce short car trips and specifically, the borough will aim to:

- Have 25% of the Borough's stations served by new or upgraded cycle infrastructure (e.g. routes, crossings and area based schemes)
- Have worked with the rail industry to deliver cycle parking upgrades at 25% of Borough stations
- Deliver at least 1 secure cycle hub


HORTLANS
BUCKINGHAM PALACE

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

Challenges and opportunities

The number of residents with mobility impairments is expected to increase by 9% from a 2010 baseline. Providing an accessible transport network is essential to enable these residents to maintain independent lives, a key priority of the 'Building a Better Bromley' vision.

Rail Accessibility

The Borough has benefited from significant funding from the 'Access for All Programme' to make Bromley South, Orpington and Crystal Palace stations accessible. Further investment is proposed by the DfT which should see Shortlands station made fully accessible following the installation of lifts in 2019. Both Petts Wood and St Mary Cray have also been proposed as Access for All projects, however, their delivery and funding is now less certain as they are likely to be delivered by Network Rail in CP6. The Borough will therefore lobby the DfT to ensure that all proposed Access for All projects are completed during the first half of CP6.

To enhance the range of destinations that residents can reach on the step free Network, the Borough will continue to lobby for further Access for All (or similar) funding to make Borough stations fully accessible. At present investment has focused on the line from Orpington to Victoria with four stations having benefited from funding.

There is a strong local campaign for improving access to Penge West Station because, at present, there is only an entrance to the station from Anerley Park and no step free access to the southbound platform. The proposed accessibility scheme would see the old bricked up entrance onto Penge High Street reopened and a new entrance from the southbound platform opened onto Meaford Way. In addition to creating step free access to all platforms reopening the entrance onto Penge High Street would support the ongoing regeneration of the area. It would also reduce the distance between the entrances of Penge East and West stations, thereby improving the out of station interchange objective, and opportunities for orbital rail trips, if supported by a complementary walking route and public realm improvements between the stations.

The Hayes line benefits from a number of stations having level access between the street and platforms, however, the lack of accessible platform interchanges and out of station accessible routes are often long and inconvenient. A priority for improved accessibility on the Hayes line is therefore at Elmers End, because of the interchange opportunities it offers with London Trams and the bus station. The

Borough will therefore look to work with TfL and Network Rail to seek to realise a scheme that can be delivered to complement TfL's investment in tram capacity on the branch.

The Borough will also lobby for accessibility improvements at stations on the line from Orpington serving London Bridge, Charing Cross and Cannon Street, in particular Chislehurst but also others such as Elmstead Woods.

To add value to Access for All schemes, the Borough will undertake audits of the area surrounding a station with the involvement of key access group and stakeholders to deliver small low cost accessibility improvements such as the provision of dropped kerbs and the removal of unnecessary footway clutter that could impede movement, particularly for wheelchair users.

When undertaking schemes nearby, and where reasonably practicable, the Borough will also seek to upgrade Taxi ranks to make them accessible.

Bus Accessibility

Buses form a key part of the transport network and serve destinations throughout the Borough. Providing an accessible bus network is therefore important for enabling the Borough's residents with mobility impairments to travel independently and spontaneously.

Central to achieving this is providing accessible bus stops that guarantee buses access to the kerb, thereby avoiding passengers having to step into the road to board and alight. This minimises the step between the kerb and bus also enabling ramp deployment for wheelchair users. The borough's view is that bus stop accessibility starts from each resident's home and thus is wider than the final step.

Whilst the rural nature of many stops means that they are not suitable to be made fully accessible, the Borough will seek to include accessibility improvements of stops and journeys to/from them into other traffic schemes to increase the accessibility of the bus network. The Borough will also improve accessibility at stops where a demand is required e.g. where issues have been identified by operators through the Borough's ongoing liaison with them. Other stops which will be a high priority to make fully accessible are those serving Railway stations and Hospitals, again considering the full route. The borough will seek TfL support when approaching operators etc. to make their infrastructure accessible.

This will also require improved levels of enforcement by both the Borough and Police to ensure that stops are not blocked by other vehicles waiting and loading or parked.

Outcome 6- Borough Objectives

- Ensure that 100% of Bus stops at station interchanges and serving hospitals are fully accessible by 2021/22
- Work with Network Rail to deliver Petts Wood and St Mary Cray Access for All by the end of CP6 (2024)
- Secure funding from the DfT for further Access for All (or similar) at Chislehurst or Elmstead Woods and Penge West


Bromley North
61
19139
Stagecoach
LX56 EAY

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

Challenges and opportunities

An efficient and reliable bus network is essential in providing a good public transport experience in the Borough and in many areas of the Borough that aren't served by rail or tram, buses are the only form of public transport available. In such cases they play a vital role in reducing car dependency and isolation for those without access to a car. Furthermore an efficient highway network where unnecessary trips by car are minimised is important for reducing traffic which causes un reliable journeys and delays to the bus network.

Bus reliability

As with many areas in London, mean observed bus speeds have declined in the Borough in recent years, with an average decline of 4.7% from 2013 to 2017. Reductions in speed mean that bus journey times are less competitive with cars and increases their operational costs through the additional resources required to maintain timetables. Improving bus speeds is therefore a Borough priority, without which the further deterioration in bus speeds will impact upon the viability of the network and quality of service.

What is Excess Wait Time (EWT)?

This metric applies to high frequency routes and is the additional wait experienced by passengers due to the irregular spacing of buses or those that failed to run compared with the scheduled wait time between buses.

Of the Borough's top 20 busiest bus routes in terms of ridership (three year average) over 25% are failing to reach their Excess Wait Time (EWT) targets, These are all high frequency routes carrying significant volumes of passengers, so any delay has a significant financial cost in terms of lost time, reduced revenue and resource increase for TfL.

Low frequency routes in the Borough also suffer from poor reliability, with over half of routes failing to reach their target for on-time arrival. Many of these services offer the only available public transport in some areas and, therefore, poor reliability has an adverse effect on residents' ability to plan journeys which, ultimately, discourages bus use.

In a number of cases improvements to key junctions and corridors will benefit a number of routes, however, during the lifetime of the LIP it will be necessary to continue to work with bus operators to understand where there are localised issues that impact on service reliability. A number of bus hotspots where bus speeds are

low have been identified, primarily at junctions. This high level analysis of bus speeds in the Borough has focused on the two lowest speed categories of 0-5mph and 5-10 mph. Analysis of higher speeds would include too many roads to be meaningful. It is also important to appreciate that locations with higher speeds may deteriorate over time and could be identified at some time in the future for bus reliability improvements. More localised issues will be identified in consultation with bus operators.

Fig. 17 **Bus speed hotspot analysis**

Hotspot	Routes Affected	Notes
Keston Mark and A232 between Cony Hall and Locksbottom	353, 320, R2, 664, 654, 684	Continue to work with TfL to develop proposals to improve capacity and reduce congestion a Keston Mark junction to improve Bus Reliability and support the development of the Biggin Hill SOLDC. Consideration should also be given to new types of bus service to serve the SOLDC and connect it with rapid public transport services to the nearest railheads.
Elmers End	289, 367, 356, 54, 194, 358	Investigate interventions measures for the junction of Croydon Road and Elmers End Road. Proposals could be expanded to become an area wide scheme to improve the public realm and improve pedestrian access to buses, trams and trains. Consider the removal of the Gyratory around Elmers End Green to create a new public space and improve pedestrian access to the shops, this could include making the arm of the Gyratory nearest the shops access for

		deliveries, buses and cycles only to provide buses with greater priority and improve journey time.
Crystal Palace Parade/ Anerley Hill	157, 249, 322, 358, 410, 417, 432, 450, N2, N3, N137	Needs further investigation
Newlands Park	194, 75	Needs further investigation
Chislehurst Common	61, 160, 161, 162, 273, 269, 625, 638, 661, N136	Schemes have previously been proposed in this location however have been unable to be implemented due to issues with the Common,
Leesons Hill/St Paul's Wood Hill	61, 273, 661, R1	Needs further investigation
Crofton road from War memorial roundabout to Station Approach	51, 61, 208, 353, 358, 654, 684, B14, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, N199	Needs further investigation
The Swan Junction West Wickham High Street	119, 194	The Borough has an aspiration for a transformative public realm scheme on West Wickham High Street that could support delivery of improvements at this location
Shortlands	227, 354, 358, 367	Proposals for a liveable Neighbourhood are currently under consideration.
Westmoreland Road/ Masons Hill	61, 119, 138, 146, 162, 208, 246, 261, 314, 320, 336, 352, 358, 367, 638, N3, N199	A major town centre access scheme is required for this location that should also improve cycling and walking access to Bromley town centre.
Bromley Town Centre Widmore Road/Kentish Way	61, 119, 126, 138, 146, 162, 208, 227, 246, 261, 269, 314, 320, 336, 352, 358, 367, 638, N3, N199	TLRN

Bromley Town Centre High Street/ Elmfield Road	126, 162, 208, 261, 314, 320, 336, 358, 638, N199	A major town centre access scheme is required for this location that should also improve cycling and walking access to Bromley town centre.
A224 Corridor from High Street/Court Road- priory Gardens to Crittall's Corner	51, 273, B14, R1, R11	Whilst a number of schemes have taken place on to reduce congestion on the A224 in recent years, bus speeds remain low for a 40mph corridor. Given the width of the corridor, consideration should be given to allocation for space efficient modes.

In order to improve bus speeds and reliability, the Borough intends to develop proposals to tackle these hotspots and other localised issues through a range of measures and will where appropriate submit bids for funding from TfL's Buses Priority Programme. Consideration will also be given to the use of technology at key signalised junctions to enhance bus reliability on a case by case basis as schemes are developed, including as part of schemes that are not intended primarily as buses priority schemes to ensure that all opportunities are taken to improve bus reliability.

The Borough intends to work with TfL to review duplications of parts of bus routes now that the introduction of the 'hopper' fare now makes bus changes more viable. The removal of route duplications can improve bus reliability, allow route extensions, reduce bus congestion through and improve air quality in Town Centres.

Reliability of routes serving Biggin Hill are a particular issue for residents given the isolated nature of the area with buses providing the only public transport in the area. Reducing congestion at Keston Mark junction and other pinch points in the area will be necessary to improve the reliability and attractiveness of the bus service for residents and visitors to Biggin Hill.

As part of the preparation of this LIP, the Borough has reviewed the hours of bus lane operation and effectiveness of existing bus lanes in relation to Bus Speed maps provided by TfL. In a number of cases it is recommended that extended hours of operation, including weekends, are considered to provide more reliable bus journey times throughout the week and reduce traffic volumes at these bus speed hot spots through mode shift.

Perry Hall Road due
Beckenham Jn 1min
West Croydon 1min
Purley Way 2min

Rail reliability and timetabling

A key borough priority is rail reliability, as it is vital to give residents the confidence in the public transport network, and to encourage mode shift to public transport. Reliability is especially important for journeys where passengers are required to make interchanges between services.

Whilst the Borough has no direct influence over the operation of the railways, it will continue to work closely with the rail industry to seek enhancements to capacity and improvements to reliability. The Borough will continue to lobby the rail industry to improve reliability by representing the views of the Borough at stakeholder forums and continuing to make the case for metro style operations where timings and operating practices are optimised to ensure right time departure.

Additionally the Borough will work with TfL and Network Rail to maintain the structural integrity of the bridges over the railway. Bromley will also examine the possibility of road/rail incursion on our road network (where a vehicle leaves the road and intrudes upon or obstructs the operational railway) and identify any preventive or remedial actions which may be necessary. Consideration will also be given to how the Borough can work with Network rail to reduce instances of bridge strikes, which cause delays for both rail and road networks.

Effective movement of passengers around stations is a key part of efficient train dispatch, contributing to performance. As identified in Outcome 5, the Borough will lobby the rail industry and work with partners to deliver upgrades at Bromley South and Beckenham Junction to improve passenger flow, improve safety, contributing to reduced dwell time and improved reliability.

The Borough will lobby for the delivery of a modern metro style railway alongside the important fast mainline services that provide vital links to central London. Improvements to both types of service are important and improvements on one must not impact negatively upon the other. The Borough is keen to better understand what a simplified service pattern could deliver in terms of increased frequency and enhanced reliability. Similarly, the Borough will lobby the rail industry to produce timetables which reduce ‘slack’ and free up additional capacity through better asset utilisation. Taking this approach will also allow journey times to be reduced by eliminating unnecessary and wasteful recovery time which has crept into schedules.

Whilst demand is lower for services at weekends than during weekday peaks, the reduction in frequency to some stations in the Borough at weekends means that public transport is not an attractive or convenient option for leisure travel or those employed at weekends. The Borough will therefore lobby for increased weekend frequencies throughout the Borough, ideally with a minimum 4tph service throughout the week. Similarly, as the Night Tube network has shown, late night services are popular where they are provided, allowing people to access employment, cultural

and leisure opportunities throughout the city without having to drive or use PHVs/Taxis. Given the importance of links to the CAZ, the Borough will lobby operators to provide later last trains from central London. However later services will impact on time available for maintenance, which must not be compromised if it risks affecting key peak hours services.

Outcome 7- Borough Objectives

The Borough will aim to Maintain Excess Wait Time (EWT) annually at less than or equal to 1.0 minutes.

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

Challenges and Opportunities

Bromley's Draft Local Plan sets out planning policies to deliver the Borough's transport objectives. Public transport, cars, cycling, and walking are often used in combination to make journeys. Despite this, peak time traffic congestion and high levels of car ownership remain predominant transport issues. In order to mitigate these pressure, development proposals that are likely to have significant transport implications will be assessed for their impact on all modes of travel. Such proposals shall be accompanied by a Transport Assessment which should reflect the scale and likely impact of the development for example creating a significant volume of trips, setting out the impacts of their development on the local transport network (and strategic road network where applicable) and propose appropriate mitigation measures to deal with the impacts and to improve access by public transport, walking, and cycling in order to reduce the need for car based trips and parking.

Developments that generate a significant movement should be located where the need to travel will be minimised and the use of sustainable transport modes maximised, with developments located in positions accessible or capable of being made accessible by a range of transport modes. Where necessary, developers will be required to enter into an agreement to submit and implement acceptable Travel Plans and Delivery and Servicing Plans.

To promote sustainable modes, developments will need to incorporate or contribute to improvements to the highway network including traffic management measures that limit the significant impacts of the development and are designed to be sensitive to the surroundings as well as encourage walking and cycling through the provision of suitable facilities such as high quality cycle parking provided in accordance with the London Plan and London Cycling Design Standards (LCDS). Developments may also be required to contribute to improvements to link the new developments to the borough's walking and cycling routes.

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

Challenges and Opportunities

The Council will work with and lobby partner agencies including Transport for London (TfL), Network Rail, and Department for Transport (DfT) to secure investment in transport infrastructure for the benefits of the Borough, such as increasing capacity and making improvements to public transport. This is critical to the development of the Borough. In particular, improvements in public transport connectivity to Canary Wharf and East London to Bromley Town Centre and commitments to a dedicated off-road cycle route along the A21 will support improved connectivity and unlock development outlined in Bromley's Town Centre Area Action Plan in a sustainable way.

The Borough, working with other boroughs and TfL, also intends to explore options for new public transport connectivity on corridors where growth either in Bromley or neighbouring Boroughs could be unlocked by cross borough transport investment. The Borough is particularly keen to understand the potential for high end Bus Rapid Transit to improve connectivity and support the delivery housing delivery.

Where appropriate, developments may be expected to contribute towards the cost of implementation of the strategic transport schemes either through a local Community Infrastructure Levy (CIL) (currently being developed) or S106 Agreements for site specific matters. Developers in Bromley already contribute to the Mayoral Community Infrastructure Levy for Crossrail.

It is also important to recognise that to ensure residents have a true choice of transport modes, that the transport investment encompasses both employment and leisure requirements of residents.

As previously noted transport and transport investment is also important in sustaining local facilities as shorter journeys from the new developments are inherently more sustainable.

Outcome 8 & 9- Borough Objectives

The Borough's objectives for growth relating to Outcome 8 & 9 are set out in the Borough's Draft Local Plan

https://www.bromley.gov.uk/info/1004/planning_policy/153/developing_bromley_s_local_plan

Whilst working towards its growth targets set out in the Draft Local Pan, the Borough will seek to reduce and mitigate the impact of new development on transport networks, including the location of development where the need to travel will be minimised and the use of sustainable transport modes maximised seek

A key objective is for new development to promote sustainable modes, and to incorporate or contribute to improvements to the transport network including measures to encourage walking and cycling.

The Borough will aim to secure high quality cycle parking in accordance with the Draft Local Plan and delivered to London Cycling Design Standards (LCDS) in new developments.

The Borough will seek to mitigate the impact of development by obtaining contributions towards the cost of implementation of the strategic transport schemes either through a local Community Infrastructure Levy (CIL) (currently being developed) or S106 Agreements for site specific matters. Developers in Bromley already contribute to the Mayoral Community Infrastructure Levy for Crossrail.


Beckenham Jcn 2
2531

Other Mayoral Strategies[12]

The Mayor of London has published a number of strategies which the Borough has taken account of when developing this LIP strategy.

Housing Strategy and Draft London Plan

The Borough acknowledges the important link between transport and achieving sustainable growth that minimises the impact of development. The Borough's approach is set out in detail in its draft local plan and is covered briefly in outcomes 8 and 9 of this LIP. The Housing Strategy and London Plan draft will be considered in full by future updates of the Borough's Local Plan and town centre Area Action Plans, developed jointly by Transport and Regeneration and Planning Policy teams within the council.

Economic Development

The LIP supports the Economic Development strategy's aim to improve employment and education outcomes by delivering new connectivity to increase opportunities for work and education in the Borough and allow for travel to the Borough's key employment and educational destinations to residents from other Boroughs.

Environment

The Borough has considered the Mayor's Environment strategy which had informed the approach to Outcome 4, London's streets will be clean and green. The Borough's proposals have responded to the Mayor's concerns about flood risk with the proposed approach to SUDS within transport schemes, set out in outcome 4. The Borough's approach to electric vehicle charging is intended to respond to concerns about Air Quality, as are the proposals for tree planting, which also contribute to maintaining and enhancing biodiversity.

Health Inequalities

The Borough's LIP aims to provide transport choice for residents around the Borough, offering the opportunity to choose to walk or cycle, if they wish to. This includes promoting active travel to schools, promoting healthy lifestyles from an early age and reducing childhood obesity.

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

Cultural Strategy

There are no specific policies within the draft cultural strategy that the Borough is required to consider as part of its transport policies. However the Borough will use transport schemes to enhance the offer of town centres in line with the Building a Better Bromley objective of ‘Vibrant Town Centres’. Where appropriate larger schemes may seek to enhance and promote the Borough’s heritage, for example the Heritage Trail included in the recently completed Bromley North Village scheme.

The Delivery Plan

The Delivery Plan

Introduction

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

Linkages to the Mayor's Transport Strategy priorities[13]

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.

Each of the programmes is intended to overcome barriers to travelling actively or using public transport, for example whilst Casualty Reduction is primarily to work towards vision zero, schemes will also contribute to feelings of safety and encourage more people to walk or cycle. Projects will also be designed to offer a matrix based approach to benefits realisation, considering how a scheme could be enhanced with small details or consideration of best practice to improve conditions for as many modes as possible, contributing the MTS outcomes.

The programme is set out in Table ST01 which shows overall programme headings underneath which key projects/interventions are identified. In many cases these projects are currently board headings that will be spatially defined during Investment for period 2019/20 to 2021/22.

[13] 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											
Project / Programme		MTS mode share	MTS outcomes								
		Improving active, efficient and sustainable mode share	No 1:-Active	No 2:- Safe	No 3:-Efficient	No 4:- Clean & Green	No 5:- Connected	No 6:- Accessible	No 7:- Quality	Nos 8 & 9 Sustainable Growth /Unlocking
	Network Reliability	✓								
	A224 Spur Road to Carlton Parade	✓	✓		✓				✓	✓
	Keston Mark development/ match funding	✓			✓		✓		✓	✓
	Minor pinch point removal	✓			✓			✓	✓	✓
	SSRBV (LN) Support	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Casualty and Road danger reduction	✓								
	Cluster sites	✓		✓						

	Speed management and road danger reduction	✓	✓	✓						
	Carriageway marking reviews	✓		✓						
	Local Cycle infrastructure	✓								
	Local Cycle network development	✓	✓	✓	✓	✓				✓
	A21 Corridor feasibility study	✓	✓	✓	✓					✓
	Cycle Parking and Cycle Hubs	✓	✓	✓	✓					
	Cycle contraflows and small interventions	✓	✓		✓					
	Walking infrastructure development	✓								
	Severance reduction	✓	✓	✓	✓			✓		
	Healthy routes to schools	✓	✓	✓	✓	✓				
	Walk London network enhancements	✓	✓							
	Public Transport interchange and access	✓								

	Quietway complementary measures	✓	✓				✓			
	Elmers End access improvements (to support potential National Cycle Network demonstrator project and complementary to TfL's investment in Elmers End Tram stop)	✓	✓				✓			
	Bus stop waiting facilities	✓		✓				✓		
	AfA supporting measures	✓						✓		
	Parking controls and Kerb space management	✓								
	CPZs (New/Reviews) and parking at stations	✓	✓		✓					
	IPAs and bus reliability improvements i.e. Junction Protection	✓	✓		✓				✓	
	Car club/EVs initiatives	✓			✓	✓				
	Scheme development	✓								
	Advanced planning for future schemes	✓								✓
	Review effectiveness of implemented projects	✓								✓

	RS education and Behaviour Change initiatives	✓								
	Cycle Training & Promotion	✓	✓	✓	✓					
	Mode Shift Marketing	✓	✓	✓	✓	✓				
	Travel Planning Activities (inc. School expansion programme support)	✓	✓	✓	✓	✓				
	Road Safety Education	✓	✓	✓	✓					


Bromley North
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Stagecoach
HILL

TfL Business Plan[14]

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.

Notably, the Borough will continue to work with TfL to deliver the two Quietways proposed in Bromley during LIP3 and will commit funding to deliver complementary measures and launch packages to derive additional benefits from this funding stream.

Sources of funding[15]

Table ST02 below identifies potential funding sources for implementation of Bromley's LIP3, including the anticipated level of LIP funding allocation from TfL, contributions from the borough's own funds, and funding from other sources Mayoral and third party sources.

The key source of funding is the borough's LIP allocation. Figures provide by TfL indicate that the borough will receive £2.076.1m in each of the three years of the LIP3 delivery plan. The Borough will look to submit bids to the Bus Priority Programme as schemes to address hotspots identified I Outcome 7 are developed.

In addition to the above, the borough will is expecting to receive in excess of £700k for the Lower Sydenham to Bromley Quietway, however due to an ongoing review of the route the exact amount has not been confirmed due to the more ambitious scope of the project. The Borough is also expecting to submit a bid to TfL for at least one liveable Neighbourhood during for approximately £5m. The borough will continue to appraise the viability of other GLA funding streams such as the Good Growth fund

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[14] 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.

[15] 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).

where these can support the delivery of the LIP and Building Better Bromley objectives.

The borough will also look to use its own resources to provide some match funding contribution to the Liveable Neighbourhood bid.

Through a combination of CIL funding and S106 the borough will seek contributions from developers to pursue local objectives and mitigate the impact of new development in a sustainable way. Due to the nature of the housing market, and a large number of units anticipated to be delivered on 'windfall' sites the sums available from developers via section 106 agreements is uncertain. The Borough is currently working towards its second stage of CIL consultation namely the Draft Charging Schedule. As part of the evidence base to establish the funding gap requirement of developing a local CIL the Council is also updating the Infrastructure Delivery Plan from which a Reg. 123 list is devised and is the basis for charging and allocating CIL funding to projects once the CIL is adopted later in 2019. However it must be realised that Borough CIL is required to fund a number of local infrastructure requirements including health and education as well as transport. In due course, the borough will investigate how the Neighbourhood element of a local CIL (15% of CIL contributions) could be used to contribute to support smaller local projects that provide benefits to communities where development is located.

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	2,076.1	2,076.1	2,076.1	6,228.3
Discretionary funding (See 3 Year Programme)	885	2,473	1,000	4,358
Strategic funding	700*	0	0	700*
GLA funding	0	0	0	0

Sub-total	3,661.1k	4,549.1k	3,076.1k	11,286.3
Borough funding				
Capital funding	0	0	0	0
Revenue funding	10	10	10	30
Parking revenue	40	40	40	120
Sub-total	50	50	50	150
Other sources of funding				
S106	189	50	?	239
CIL	?**	?**	?**	?**
Sub-total	189	50	0	239
Total	3,900.1	4,649.1	3,126.1	11,675.3

*Expected Quietways funding for Lower Sydenham, however the route is under review with the funding requirement expected to increase to improve the level of service

** The Borough is currently working towards its second stage of CIL consultation namely the Draft Charging Schedule. As part of the evidence base to establish the funding gap requirement of developing a local CIL the Council is also updating the Infrastructure Delivery Plan from which a Reg 123 list is devised and is the basis for charging and allocating CIL funding to projects once the CIL is adopted later in 2019.The Borough is currently finalising its Infrastructure Delivery Plan which will be the basis for charging and allocating CIL funding

Long-Term interventions to 2041[16]

In the medium to long-term the Borough believes that a number of significant, but currently unfunded projects will be required to deliver the Borough's mode share targets to 2041. The projects are outlined in Outcome 1 and Outcome 5 and detailed below. These are shown in Sample Table ST03 below with indicative funding and indicative but uncommitted timescales.

These projects represent the larger interventions that will be essential to providing high quality alternatives to car use. A number of these projects are major public transport investments, however, in many cases they are not modally specific and, instead, the Borough will take a flexible approach to understand the needs and develop proposals that deliver real benefits and offer good value for money. Many of these projects, for example, improvements to connectivity between Bromley town centre and Canary Wharf/ Docklands, are long standing ambitions, which the Borough believes need to be reconsidered in order to deliver the capacity the Borough's rail system needs to cater for population growth and provide new connectivity to contribute to achieving the Borough's 2041 mode share target.

Larger projects on the Borough's streets and TLRN are also included. These are projects that the Borough believes will play a key role in delivering mode shift, for example the strategic cycle network but are outside the scope of the LIP. The continuing development and provision of funding for the strategic cycle network are vital in providing good quality routes around the Borough that will be supported by local routes and neighbourhood schemes.

[16] 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.

TABLE ST03 - Long-term interventions up to 2041				
Project	**Approx. date**	**Indicative cost**	**Likely funding source**	**Comments**
Streets inc. Walking, Cycling, Bus reliability and Road Safety				
Shortlands, Ravensbourne and Bromley Better Villages Liveable Neighbourhood	2019-2022	c. £5m	Liveable Neighbourhoods and Borough match funding. Potential for a bid to RDG for funding for a station cycle hub. Also compliments TfL investment in the Lower Sydenham to Bromley Quietway.	A bid will be submitted to TfL for the 2018/19 round of Liveable Neighbourhoods funding. This project builds upon the Lower Sydenham to Bromley Quietway
Keston Mark junction improvements	2019-2022	£1m+	TfL TLRN funding, TfL Bus Priority Programme Borough LIP contribution, Developer s106 Planning obligations/CIL	This junction is highlighted as a congestion relief and bus reliability hot spot, therefore improving bus reliability is necessary to provide fast efficient links to Biggin Hill Valley and unlock development of Biggin Hill SOLDC in a sustainable way.
Infrastructure enhancements to improve bus reliability and support high quality bus services to the Biggin Hill SOLDC	2019-2022	c. £1m	TfL Bus Priority Programme	Identification of a package of improvements to improve bus journey time reliability to Biggin Hill alongside the development of new services to serve the SOLDC.

Strategic cycle network excluding A21 Corridor	2019-2041	£12m+	TfL Quietways or similar	Ongoing delivery of routes identified as priorities in the Borough by TfL's strategic cycling analysis.
Segregated cycle route on the A21 Catford to Bromley Common SCA corridor	2020-2030	£20M+	TfL and Developer s106 Planning obligations/CIL	A segregated cycle route along the A21 from Bromley Common to Lewisham via Bromley Town centre, delivering one of the connectors identified in TfL's Strategic Cycling Analysis.
Cycle hub at Beckenham Junction Station	2019-2022	£120k	DfT & TOC /LIP/ Developer s106 Planning obligations/CIL	Supports Borough's cycle to rail ambitions
Cycle hub at Crystal Palace Station	2019-2022	£120k	DfT & TOC /LIP/ Developer s106 Planning obligations/CIL	Supports Borough's cycle to rail ambitions
Cycle hub at Shortlands Station	2019-2022	£120k	DfT & TOC /LIP/ Developer s106 Planning obligations/ CIL	Supports Borough's cycle to rail ambitions
Cycle hub at Bromley South Station	2019-2022	£120k	DfT & TOC /LIP/ Developer s106 Planning obligations/CIL	Supports Borough's cycle to rail ambitions and associated with other town centre enhancements identified.
Realignment and signalisation of Oakley Road/Bromley Common junction	2020-2030	£1m	TBC	Improve safety and bus reliability
Bromley Town Centre junction enhancements	2020-2030	£3m	TfL and Developer s106 Planning obligations/CIL	Needed to improve bus reliability/ pedestrian and cycle

				access to the town centre to encourage mode shift and reduce KSI.
Junction improvements at A21/A232 Crofton Road and A21 Farnborough Common	2020-2030	£1m	TfL investment in TLRN and TfL Bus Priority Programme	
Chislehurst Bus Reliability Scheme	2020-2030	TBC	Yes	Improve the performance of buses through the Chislehurst Area and reduce negative traffic impacts on the area
Elmers End casualty reduction and regeneration scheme	2020-2030	£5m+	Liveable Neighbourhoods, Mayor's Air Quality funding, LIP	An area wide scheme to improve the public realm in Elmers End, to create a new public space and improving cycling and walking routes to the station and reducing collisions in line with Vision Zero aspirations.
Rail/ Light Rail capacity and station enhancements				
Provision of step free access at Petts Wood Station	2019-2024	£4m	Access For All (DfT)	Ensure NR deliver on previously promised but deferred accessibility improvements in CP6
Provision of step free access at St Mary Cray Station	2019-2024	£4m	Access For All (DfT)	Ensure NR deliver on previously promised but deferred accessibility improvements in CP6
Chislehurst or	2019-2024	£4m	DfT Access for All	Accessibility

Elmstead Woods station accessibility enhancements				improvements are required at either or both of these stations to improve accessibility on services to/from Charing Cross and Cannon Street which currently have limited step free access compared to other routes in the Borough e.g. the line to London Victoria
Penge West accessible entrance and 'out of station interchange' improvements with Penge East	2019-2024	£3m+	Access For All (DfT), Developer s106 Planning obligations/ CIL	New step free access and entrances would provide step free access to all platforms of the station and by providing new entrances would improve access to the station from Penge High Street and improve out of station interchange with Penge East.
Passenger capacity enhancements including an additional entrance at Bromley South Station	2019-2027	£5m	DfT, Developer s106 Planning obligations/CIL, Franchisee	Identified in the Kent Route Study
Increased capacity on South Eastern services serving London Victoria, Charing Cross and Cannon Street	2019-2027	?	New South Eastern Franchisee	New rolling stock to increase capacity as recommended in the Kent Route study is expected as part of the new Southeastern franchise although higher frequencies as part of metroisation are sought in the

				longer term
Additional capacity on Elmers End Tramlink branch	2019-2022	£9,000,000	Now fully funded by TfL/GLA	
Additional capacity on Beckenham Junction Tramlink branch	2020-2030	?	TfL/ Developer s106 Planning obligations/CIL	Scope of interventions is yet to be determined
Passenger capacity enhancements and upgrades to Beckenham Junction station	2030-2041	£3m+	DfT, Developer s106 Planning obligations/CIL, Franchisee	Capacity issues identified in the draft Kent Route Study
Public transport connectivity				
Improvements to connectivity between Bromley town centre and Canary Wharf/ Docklands	2022-2030	£250m+	DFT via Rail Network Enhancement Pipeline (RNEP), TfL, Developer s106 Planning obligations/CIL, Bespoke LVC	A feasibility study needs to be undertaken to establish value for money deliverable options for improving connectivity on this corridor including DLR, London Overground or other suitable rail/light rail.
Beckenham to Bexley express bus	2022-2030	?	TfL	Identified in the MTS and requires further information from TfL to understand costs and delivery timeline
Higher frequency services from across LB Bromley to LB Lewisham strategic interchange	2022-2030	?	Developer s106 Planning obligations/ CIL, Growth Fund	Work with LB Lewisham and TfL to appraise options for all types of transit to improve orbital connectivity. Potential for integration with

				proposals to improve services on the Bromley North branch.
South London Metro/ Metroisation to support improved orbital travel	2022-2041	Feasibility study needed to determine scope		Work with TfL to understand what projects could be delivered under 'metroisation' to improve orbital transport in outer London and how these support Borough priorities from Outcome 5.
Development of BRT corridors to improve intra-borough connectivity between key Borough destinations, stations and town centres	2022-2041	?	TfL, Developer s106 Planning obligations/CIL	The Borough is keen to explore the potential for BRT to deliver new connectivity at a lower cost than Light Rail. This could support connectivity along new corridors in outer London, supporting Outcomes 8 and 9 of this LIP3.
Improvements to public transport on the Crystal Palace to Beckenham corridor e.g. Tram extension to Crystal Palace	2022-2041	£200m+ if tram	TfL, Developer s106 Planning obligations/CIL, Bespoke LVC	Feasibility study of proposals for a tram extension from Delta Junction to Crystal palace or metroisation of services from Beckenham Junction and West Croydon via Crystal Palace
Improved connectivity with North West Kent inc. proposed Bromley South to Ebbsfleet International service	2024-2041	?	DfT	Draft Kent Route study proposed a Bromley South to Ebbsfleet International service which would act to open up new employment

				opportunities, support the Borough's economic regeneration and reduce car trips into London
Bakerloo Line southern extension phase 2	Beyond 2030	£1,000,000,000	?	The Borough would need to understand how a further extension of the Bakerloo line beyond Lewisham could offer genuinely new connectivity against the priority connectivity corridors outlined in outcome 5 of the Borough's LIP3

Three-year indicative Programme of Investment[17]

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 Bromley TfL BOROUGH FUNDING 2019/20 TO 2021/22	Programme budget		
	Allocated 2019/20	Indicative 2020/21	Indicative 2021/22
Local transport initiatives	£100k	£100k	£100k
CORRIDOR, NEIGHBOURHOODS & SUPPORTING MEASURES	**£2,076.1k**	**£2,076.1k**	**£2,076.1k**
Network Reliability	210,000	615,000	58,5000
Casualty and Road danger reduction	295,000	295,000	295,000
Local Cycle infrastructure	600,000	180,000	190,000
Walking infrastructure development	194,000	239,000	264,000
Public Transport interchange and access	187,000	150,000	145,000
Parking controls and kerb space management	143,000	138,000	138,000
Scheme development	66,100	78,100	78,100

[17] 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.

RS education and Behaviour Change initiatives	381,000	381,000	381,000
Sub-total	£2,076.1k	£2,076.1k	£2,076.1k
DISCRETIONARY FUNDING	**£885k**	**£2,473k**	**£1,000k**
Liveable Neighbourhoods	TBC	TBC	TBC
Principal road renewal	0	1,000,000	1,000,000
Bridge strengthening	885,000	1,473,000	TBC
Traffic signal modernisation	TBC	TBC	TBC
Sub-total	£885k	£2,473k	£1,000k
STRATEGIC FUNDING	**£700k**	**£k**	**£k**
Bus Priority	TBC	TBC	TBC
Borough cycling programme	700,000	0	0
Mayor's Air Quality Fund	0	0	0
Low Emission Neighbourhoods	0	0	0
Sub-total	£700k	£0k	£0k
All TfL borough funding	£3,661.1k	£4,549.1k	£3,076.1k
Programme	2019/20	2020/21	2021/22

Supporting commentary for the three-year programme[18]

The Borough is expecting an allocation of £2.076.1K per year for the three year life time of the LIP3 to implement the projects proposed within it. This funding allocation is confirmed by TfL on an annual basis. At a high level the three year programme indicates where the Borough intends to allocate these resources. The programme is split into eight sub-programmes, outlined below which relate to particular improvement the Borough will make.

For larger schemes the Borough will aim to take a co-development approach working with key stakeholders and communities to identify issues that affect them. By doing so it is hoped this will give them the opportunity to share their local knowledge and expertise and ensure that schemes are solving real local issues that are barriers to the outcomes of the LIP. This approach will see earlier engagement as part of schemes prior to design work and formal consultation with stakeholders, to keep them informed of progress at key points. It is hoped that by taking such an approach communities can be taken along with a scheme to understand the reasons for the scheme and the benefits for them and their area.

Network reliability focuses on smoothing traffic flow at key pinch points to improve reliability of bus routes, contributing to an improved public transport experience. The Borough will focus on key strategic projects that will improve network reliability; therefore it is intended to make a contribution of the LIP allocation to the Shortlands Ravensbourne and Bromley Better Villages Liveable Neighbourhood bid each year (2019/20 £50k, 2020/21 £340k, 2021/22 £360k), given the potential this has to make improvements through Shortlands both to improving the junction and reducing traffic by shifting short local trips from car to other modes such as walking. This match funding will be crucial in potentially unlocking several million pounds of Liveable Neighbourhood funding via the bid process.

During the LIP3 delivery plan it is envisaged that further reliability improvements will be made to the A224 and the Borough is lobbying TfL to include improvements to reduce congestion and unlock opportunities for new bus services at the Keston Mark. The programme therefore includes an allocation to make a contribution to any

[18] 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 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.

major project that comes forward at the latter which is envisaged as a joint TfL and Borough project linked to development at Biggin Hill SOLDC.

Casualty and road danger reduction is a programme intended to identify casualty hot spots and undertake interventions that provide safer road layouts to reduce collisions. It also seeks to reduce resident's fears of road danger where these negatively impact upon their transport choice and where intervention may lead to greater uptake of walking and cycling, reducing congestion on the wider network.

Local cycle infrastructure provides infrastructure that can unlock the potential for cycling at a local level. Whilst strategic cycle routes such a Quietways are funded by TfL separately from the LIP settlement these local cycle schemes will deliver smaller scale cycling infrastructure.

Local infrastructure might include complementary schemes to the Quietways to increase their catchment area and enhance the benefits they offer, such as cycle parking at stations served by the routes, or short local feeder routes. It also includes work to develop a local cycle network and other small interventions such as cycle parking and contraflows intended to reduce the barriers to cycling. A key intervention will be the completion of the Crofton Road cycling and walking corridor scheme in 2019/20, which whilst a major route that has been part of a multiyear project, will act as a key local cycle route supporting cycle to rail and access to Orpington town centre.

Walking infrastructure development relates to improvements for pedestrians such as new crossings, improved paths and other localised improvements to make walking a safer and more attractive option for travel. This programme will also work with schools to deliver interventions that create attractive and safe walking routes to school, reducing traffic and parking issues associated with the school run by promoting walking to school.

Public transport interchange and access focuses on improving the interchange between modes, for example bus and rail, walking and rail and cycle to rail. These improvements may include enhanced routes to stations, cycle parking hubs, bus stop upgrades and new station forecourts.

Parking controls and kerb space management is a programme to deliver schemes that effectively manage parking in the borough. It is intended to deliver strategic parking projects such as controls around stations and town centres as well as more reactive projects in response to local resident and ward member concerns about inappropriate and unsafe parking.

Scheme development and review is a small allocation to allow the borough to develop larger projects for future years and assess the impact of projects it has undertaken to inform future schemes.

Road Safety education and behaviour change initiatives are a package of 'soft' measures aimed at changing behaviour rather than new infrastructure. They are important in encouraging mode shift and safer road behaviour, supporting the infrastructure the Borough is delivering to promote walking and cycling and reduce casualties. This includes Bikeability cycle training and road safety education in schools.

Risks to the delivery of the three-year programme[19]

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.

[19] 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					
TfL business plan reduces LBB LIP formula funding		✓		Programme needs to be designed to priorities core investments so that it can be revised whilst still delivering local priorities.	Programme will exceed the allocation, impacting on efficient delivery
The Borough's Liveable Neighbourhood bid will not receive funding		✓		Identify elements of the bid that can be delivered from LIP funding	May leave funding under spent if alternatives are not considered
Increases in programme or individual project costs.	✓			Use effective project management techniques to keep effective control of project costs. Where costs are unavoidable, reduce project scope or reprioritise funding from other projects or programmes	Project or programme may not fully meet objectives. Some aspects of LIP programmes may well not proceed if re-prioritisation is necessary.
Statutory / Legal					
Council is required to "implement" its LIP under s151 of the GLA Act without sufficient external funding support.		✓		Explore possibility for legal challenge, if possible jointly with other affected bodies.	Unknown, as this provision has never been challenged. In the worst case there could be a severe impact on other Council services and reduced maintenance of

					highway infrastructure. Reduced maintenance might reduce the attractiveness of active transport options.
Third Party					
Partners or stakeholders do not implement projects for which they hold the lead responsibility.		✓		Engage in lobbying activity, jointly with other local authorities and others. Consider re-prioritisation of borough funding to support lower cost projects.	LIP and Mayoral objectives may not be achieved, with potential adverse impact on economic vitality, road congestion, public transport overcrowding etc.
Public / Political					
Political opposition to projects mean that they do not gain necessary approvals.		✓		Ensure adequate engagement at the earliest possible stage. Consider scheme redesign to overcome objections.	Scheme may not proceed. Impact will depend on original objectives of scheme.
Public opposition to projects at public consultation stage, particularly due to perceived investment in the 'wrong' travel mode infrastructure.	✓			Ensure adequate engagement at the earliest possible stage to understand local priorities and concerns. Consider scheme redesign to overcome objections. Work with all groups to address issues relating to behaviour/judgement of different modes of transport.	Scheme may not proceed. Impact will depend on original objectives of scheme.
Political opposition will impact upon the quality of infrastructure delivered.		✓		Ensure adequate engagement at the earliest possible stage to understand political concerns and explain options available to develop high quality infrastructure.	Infrastructure delivered could be to a poor standard that reduces its effectiveness and means that it is poorly utilised or creates further issues.
Programme & Delivery					

Reduction in staff resources to plan and deliver the LIP programme		✓		Possibly use agency staff or consultants for individual projects.	Delivery period for the LIP programme may be extended, or projects may not proceed
Projects and programmes do not deliver expected outputs			✓	Scheme benefits need to be reviewed and confirmed at each stage of project or programme. Consider scheme or programme modifications if there is “early warning” of failure to deliver outputs.	LIP or Mayoral objectives may not be achieved.
Delays to individual projects or programmes for reasons other than those listed separately above.		✓		Reprogramme expenditure to bring forward other LIP projects to fill the “gap”.	Depending on length of delay, programmes may still be achieved within the LIP period. Otherwise LIP delivery period will be extended.

Annual programme of schemes and initiatives[20]

The annual programme of schemes for 2019/20 has been scrutinised by committee and approved by the Portfolio Holder. Borough officers have completed the necessary Proforma A and submitted to TfL via the Borough Portal. The programme of schemes will be updated annually, in line with the proposals of the LIP.

Supporting commentary for the annual programme[21]

The annual programme of investment for 2019/20 has been derived through consideration of the approach to the MTS outcomes set out in this LIP3. The programme of investment is designed to deliver benefit to buses, walking, cycling, road safety and interchange between public transport modes e.g. bus and rail, delivering the objectives of the MTS and local objectives. It has eight programme headings intended to contribute to objectives 1-7 of the LIP.

The programme has been devised by assessing how the direction set out in the LIP can be translated into projects that will deliver against the outcomes of the MTS and contribute to local objectives. Funding has been prioritised by reviewing future challenges, LIP priorities and the cost of previous schemes. A brief description of the schemes and initiatives to be delivered in 2019/20 along with further details of prioritisation are provided below. Risks are identified in table ST06.

Network Reliability

If the Liveable Neighbourhood bid is successful, this will be the first year of match funding for the project.

The programme will also see development of proposals for further improvements to the A224 between Spur Road and Kent Road with consideration given to how additional Bus Priority Programme can be leveraged from TfL for implementation of improvements. This will support improved bus reliability and enhance conditions for

[20] 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.

[21] 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

walking and cycling as part of a corridor package previous phases of which have delivered new cycling facilities serving the Cray Valley Industrial Corridor.

Further local schemes to reduce pinch points for buses will be identified in year working with bus operators, local stakeholders and TfL with a view to submitting bids for some buses priority programme funding.

Casualty and Road danger reduction

In 2019/20 the Borough will work to identify collision hot spots in order to reduce causalities on the Borough's roads. The way these are prioritised has been set out in Outcome 2 of this document, including a simple cost benefit analysis using the first year rate of return calculation.

It will also seek to work with communities to deliver local projects to reduce the fear of road danger that inconsiderate road use can create. These schemes could take many forms and the Borough is planning to work with communities to develop appropriate schemes that address danger concerns that act as barriers to walking and cycling. This is a new area of investment that focuses on the ode shift aspects of vision zero, giving people the confidence to use streets actively.

An allocation has also been made to begin the process of area wide reviews of carriageway markings with a view to their safe reduction in order to reduce clutter and act as a low cost speed management measure. The impact of this will be kept under review to inform future investment in this measure.

Local Cycle infrastructure

In 2019/20 an allocation has been made to fund a joint study with Lewisham and TfL to assess options for improved cycle provision either on or parallel to the A21. This supports the Borough's long term aspiration for a segregated cycle route on this corridor, reaffirmed in the LIP3 strategy. Delivery of this study is dependent on funding being available from other parties and their willingness to engage. In order to begin the development of the local network that complements the strategic cycle network or serves important local destinations.

A key cycling investment in 2019/20 is the completion of the Crofton Road segregated cycle corridor which will begin in 2018/19 although due to the size and cost of the scheme is being delivered over two years. This scheme will deliver 1.3km (c. 1 mile) of segregated cycle route on off road tracks and stepped tracks and will be a key feeder route to Orpington Station, this is complemented by the station forecourt and cycle hub scheme that the Borough and Southeastern Railways are delivering in 2018/19. This route forms part of the Orpington Station to Locksbottom connector identified in TfL's SCA and supported in the LIP3 strategy.

An allocation is also made to continue the introduction of Bikehangers and cycle parking at key destinations; additionally it is proposed to deliver a new cycle hub at a station in 2019/20, fulfilling one of the Borough's LIP3 local objectives. Other small interventions such as contraflows or allowing cycles to filter through streets that have been stopped up but do not currently allow cycle permeability will also be developed.

Local schemes such as these and cycle parking are key to addressing barriers to cycling for short local trips.

Walking infrastructure development

In 2019/20 it is planned to deliver new pedestrian crossings, with consideration to be given to one on Crystal Palace Park Road and other locations where severance is identified by communities and members. Investment will be prioritised in areas of the highest potential to switch mode to walking and where there is strong local support for new walking infrastructure.

During 2019/20 an audit of the Green Chain Walk and London Loop will be undertaken with a view to making small scale improvements to crossings and surfacing to enhance the utility and accessibility of this part of the Walk London network in the Borough.

It is also proposed to work with the School Travel Planning team who engage with schools to identify improvements on the approaches to schools that would encourage more pupils to walk or scoot to school. To prioritise requests analysis will be undertaken of school catchment areas, propensity to change mode and levels of support from schools for other behaviour change initiatives such as STARS.

Public Transport Interchange and Access

In order to enhance the benefits of the Greenwich to Kent House Quietway to be delivered by 2019/20 it is proposed to deliver new secure cycle parking monitored by high quality CCTV at station(s) along the route, supporting the Borough's cycle to rail ambitions.

The programme also makes an allocation for the development of access improvements to Elmers End station, which is intended to complement TfL's investment in the Elmers End tram branch, by improving walking and cycling routes to the station/tram stop. It is also intended that this funding may support Sustrans proposed NCN upgrade demonstrator project that is seeking to upgrade the NCN between Kent House and Elmers End as part of a wider review of the NCN to improve its quality. Work is at an early stage; however there is the possibility that the review may unlock some central Government funding. In 2019/20 the focus will be on small scale pedestrian upgrades and feasibility works for the demonstrator project cycle if approved as part of the NCN review. This is with a view to supporting Sustrans unlock further funding for the demonstrator project.

Parking Controls and Kerb space management

In 2019/20 it is proposed to continue to address member concerns about local parking issues. An allocation has also been made to continue to review the effectiveness on CPZs in the borough with a view to implementing changes where necessary in 2019/20. A small allocation has been made for the trial of alternative fuel technologies to evaluate their effectiveness. It is also intended to develop the car

club network with additional bays focused on filling gaps in the current network and providing low emission vans in town centres and industrial areas to offer businesses cost effective ways to green their fleet and reduce parking pressures associated with grey fleet parking on street.

Scheme development

In 2019/20 consideration will be given to which schemes the borough wishes to develop for the remaining years of the LIP3, this allocation will be used for initial surveys and feasibility/concept design work. A small allocation has also been made to review the effectiveness of recently implemented schemes; including undertaking 'after' road safety audits to ensure schemes are contributing to Vision Zero targets.

Road Safety education and behaviour change initiatives

In 2019/20, the Borough will continue to deliver targeted cycle training to areas where there is likely to be the most mode shift. This allocation will also allow the Cycle training team to deliver launch packages for new cycle infrastructure to encourage use and promote safe cycling. This programme will also continue to deliver the Borough's award road safety education in schools to promote safer road user behaviour from an early age alongside an increasing focus on mode shift. Finally the School Travel Planning advisors will continue to work with schools to promote travel to school by non-car modes to reduce peak hours traffic and work with other teams within the council to reduce the impact of the school, expansion programme on travel.

Despite the expected reduction in funding, the Borough has chosen to continue supporting these softer measures because of the important role they have in supporting and promoting new cycling and walking infrastructure delivery of which is anticipated to accelerate during the course of the LIP3 with the introduction of Quietways and local cycle routes. Work in schools is also vital for promoting the safe behaviours aspect of Vision Zero and targets the age group amongst whom the danger of causalities is highest.

Risk assessment for the annual programme[22]

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. For individual projects within the programme, risks and mitigations will be identified to support effective delivery of the LIP programme to achieve the MTS outcomes.

[22] 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.

TABLE ST06 - LIP Risk Assessment for annual programme - 2019/20					
Risk	**Likelihood**			**Potential mitigation measures**	**Impact if not mitigated**
	H	**M**	**L**		
Financial					
TfL business plan reduces LBB LIP formula funding		✓		Programme needs to be designed to priorities core investments so that it can be revised whilst still delivering local priorities.	Programme will exceed the allocation, impacting on efficient delivery
The Borough's Liveable Neighbourhood bid will not receive funding	✓			Identify elements of the bid that can be delivered from LIP funding	May leave funding under spent if alternatives are not considered
Increases in programme or individual project costs.	✓			Use effective project management techniques to keep effective control of project costs. Where costs are unavoidable, reduce project scope or reprioritise funding from other projects or programmes	Project or programme may not fully meet objectives. Some aspects of LIP programmes may well not proceed if re-prioritisation is necessary.
Statutory / Legal					
Council is required to "implement" its LIP under s151 of the GLA Act without		✓		Explore possibility for legal challenge, if	Unknown, as this provision has never been challenged. In the worst case there

sufficient external funding support.				possible jointly with other affected bodies.	could be a severe impact on other Council services and reduced maintenance of highway infrastructure. Reduced maintenance might reduce the attractiveness of active transport options.
Third Party					
Partners or stakeholders do not implement projects for which they hold the lead responsibility.		✓		Engage in lobbying activity, jointly with other local authorities and others. Consider re-prioritisation of borough funding to support lower cost projects.	LIP and Mayoral objectives may not be achieved, with potential adverse impact on economic vitality, road congestion, public transport overcrowding etc.
Public / Political					
Political opposition to projects mean that they do not gain necessary approvals.		✓		Ensure adequate engagement at the earliest possible stage. Consider scheme redesign to overcome objections.	Scheme may not proceed. Impact will depend on original objectives of scheme.
Public opposition to projects at public consultation stage, particularly due to perceived investment in the 'wrong' travel mode infrastructure.	✓			Ensure adequate engagement at the earliest possible stage to understand local priorities and concerns. Consider scheme redesign to overcome objections. Work with all groups to address issues relating to behaviour/judgement of different modes of transport.	Scheme may not proceed. Impact will depend on original objectives of scheme.
Political opposition will impact upon the quality of infrastructure delivered.		✓		Ensure adequate engagement at the earliest possible stage to understand political concerns and explain options available to develop high quality infrastructure.	Infrastructure delivered could be to a poor standard that reduces its effectiveness and means that it is poorly utilised or creates further issues.

Programme & Delivery					
Reduction in staff resources to plan and deliver the LIP programme		✓		Possibly use agency staff or consultants for individual projects.	Delivery period for the LIP programme may be extended, or projects may not proceed
Projects and programmes do not deliver expected outputs			✓	Scheme benefits need to be reviewed and confirmed at each stage of project or programme. Consider scheme or programme modifications if there is “early warning” of failure to deliver outputs.	LIP or Mayoral objectives may not be achieved.
Delays to individual projects or programmes for reasons other than those listed separately above.		✓		Reprogramme expenditure to bring forward other LIP projects to fill the “gap”.	Depending on length of delay, programmes may still be achieved within the LIP period. Otherwise LIP delivery period will be extended.


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

Overarching mode-share aim and outcome Indicators[23]

The overarching mode-share aim and outcome Indicators for the Borough ae set out in table ST08. There are two targets for each indicator, one for the lifetime of the LIP to 2021 and a longer term target for 2041 which covers the panning horizon of the MTS. Where the Borough has deviated from the targets suggested in the Borough data pack, an explanatory note is provided alongside the target.

Delivery indicators [24]

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

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

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

Local targets[25]

In addition to the Borough outcome indicator targets, the Borough is working towards a number of local targets and objectives that are set out in Table ST07. Measurable targets are referred to in the table below as LTs and more general objectives are referred to as LOs. More generalised outcomes relating to Outcomes 8 and 9 are not included in table ST07.

TABLE ST07 – Local Borough targets and objectives

Number	MTS Outcome	Type	Description	Metric/Assessment	Target year
L3LT 1.1	**1**	LT	2% of daily trips originating in the borough made by bicycle	TfL mode share data	2021/22
L3LT 1.2	**1**	LT	30% Daily trips originating in the borough made by foot	TfL mode share data	2021/22
L3LT 1.3	**1**	LT	Complete delivery of the Lower Sydenham to Bromley and Greenwich to Kent House Quietways	Completed routes	2021/22
L3LT 1.4	**1**	LT	Deliver at least one local cycle route by 2021	Completed route	2021/22
L3LT 1.5	**1**	LT	Introduced LCDS compliant cycle parking at all locations identified in the Local Plan Town Centre and Shopping Hierarchy	Cycle Parking Audit	2021/22
L3LO 1.1	**1**	LO	Successfully bid for Liveable Neighbourhoods funding for Shortlands for	Award of Gate 2 funding	March 2019

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

			2019/20		
L3LT 2.1	**2**	LT	Reduce KSIs amongst these vulnerable road user groups by 10% each year compared with the 2010-2014 baseline	Police collision data from STATS 19	Each year of LIP3 to 2021/22
L3LT 2.2	**2**	LT	Reduce all collisions (Slight and KSI) by 10% from the 2010-14 baseline	Police collision data from STATS 19	2021
L3LT 2.3	**2**	LT	Reduce all collisions (Slight and KSI) by 50% from the 2010-14 baseline	Police collision data from STATS 19	2041
L3LT 3.1	**3**	LT	50% of travel to school trips to be by active modes and 20% by Public Transport	Hands up surveys	2021/22
L3LT 3.2	**3**	LT	the Borough will aim to have increased the coverage of the car club network, compared to the 14 vehicles as of 2018	Number of car club bays on Borough highway and in car parks	2021/22
L3LT 3.3	**3**	LT	Average vehicle delay (mins/km) for Principal Roads below 0.7	TfL data on Average vehicle delay (mins/km)	Ongoing
L3LO 4.1	**4**	LO	Develop an anti-idling education programme	Approved intervention	March 2020
L3LT 4.1	**4**	LT	Delivered a fast or rapid charge point provision for taxis in or near all major town centres or at/near all major stations in the Borough	Installed charge points v. Taxi Ranks	March 2022

L3LT 4.2	**4**	LT	No diesels car club vehicles operating from on-street bays	Monitoring vehicles with car club permit	March 2022
L3LT 4.3	**4**	LT	Half of car club vehicles in on-street bays to be either plug in hybrid or fully electric	Monitoring vehicles with car club permit	March 2022
L3LT 4.4	**4**	LT	Introduce a minimum of 50 new street trees each year as part of LIP, strategic cycle network and Liveable Neighbourhood projects	Monitor schemes as built	Each year of LIP3 to 2021/22
L3LO 5.1	**5**	LO	Contribute to the delivery of studies that provide costed options for delivering the connectivity objectives.	Updates on new connectivity to PDS	2021/22
L3LO 5.2	**5**	LO	Reduced Journey time between Bromley town centre and Canary Wharf	N/A	2041
L3LO 5.3	**5**	LO	Higher frequency rail service on Southeastern Metro services to Lewisham	N/A	2041
L3LO 5.4	**5**	LO	Reduced Journey times between other Boroughs and Bromley to support regeneration and economic growth	N/A	2041
L3LT 5.1	**5**	LT	25% of the Borough's stations served by a new or upgraded cycle infrastructure (e.g.	Report to PDS on benefits of cycle schemes	2021/22

			routes, crossings and area based schemes)		
L3LT 5.2	**5**	LT	Cycle parking upgrades at 25% of Borough stations	Report to PDS on benefits of cycle schemes	2021/22
L3LT 5.3	**5**	LT	Deliver at least 1 secure cycle hub	Scheme delivery	2021/22
L3LT 6.1	**6**	LT	100% of Bus stops at station interchanges are fully accessible	BSA assessment	2021/22
L3LT 6.2	**6**	LT	Petts Wood and St Mary Cray Access for All schemes delivered	Scheme delivery	2024 (end of CP6)
L3LT 6.3	**6**	LT	Secure funding from the DfT for further Access for All (or similar) at Chislehurst or Elmstead Woods and Penge West	DfT funding announcements	March 2019
L3LT 7.1	**7**	LT	Maintain Excess Wait Time (EWT) annually at less than or equal to 1.0 minutes	TfL bus performance data	Ongoing

TABLE ST08 - Borough outcome indicator targets

Objective	Metric	Borough target	Target year	Additional commentary
Overarching mode share aim – changing the transport mix				
Londoners' trips to be on foot, by cycle or by public transport	Active, efficient and sustainable (walking, cycling and public transport) mode share (by borough resident) based on average daily trips. Base period 2013/14 - 2015/16.	47% 60%	2021 2041	This will be dependent on TfL and other partner investment in the Borough, notably in new public transport connectivity, to fill connectivity gaps and make public transport an attractive alternative to the car.
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).	38% 70%	2021 2041	

Objective	Metric	Borough target	Target year	Additional commentary
Londoners have access to a safe and pleasant cycle network	Proportion of Londoners living within 400m of the London-wide strategic cycle network.	5% 41%	2021 2041	This is dependent on TfL funding the delivery of the Strategic cycle connectors identified in the SCA, connectors in Bromley were identified as medium priority.
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 2010/14 (for 2022 target).	77 73 39	2021 2022 2030	The Borough has chosen to set all LIP3 targets from a back-cast version of the 2010/14 baseline, which has been derived by extrapolating the TRL back-cast difference between casualties recorded under the old system compared with the new COPA system. This is intended to ensure that the target is as clear and transparent as possible given the change in recording methodology. This is a variation from the TfL Borough Data Pack target. Please see Outcome 2 Objectives for a full trajectory.
Outcome 3: London's streets will be used more efficiently and have less traffic on them				

Objective	Metric	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.	1217 1156	2021 2041	
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.	152,900 159,200	2021 2041	
Outcome 4: London's streets will be clean and green				
Reduced CO_2 emissions.	CO_2 emissions (in tonnes) from road transport within the borough. Base year 2015/16.	230,200 67,200	2021 2041	

Objective	Metric	Borough target	Target year	Additional commentary
Reduced NO_x emissions.	NO_X emissions (in tonnes) from road transport within the borough. Base year 2013.	380 50	2021 2041	
Reduced particulate emissions.	PM_{10} and $PM_{2.5}$ emissions (in tonnes) from road transport within borough. Base year 2013.	83 PM_{10} 40 $PM_{2.5}$ 51 PM_{10} 25 $PM_{2.5}$	2021 2021 2041 2041	
A good public transport experience				
Outcome 5: The public transport network will meet the needs of a growing London				
More trips by public transport - 14-15 million trips made by public transport every day by 2041.	Trips per day by trip origin. Reported as 3yr moving average. Base year 2013/14 - 2015/16.	178 249	2021 2041	

Objective	Metric	Borough target	Target year	Additional commentary
Outcome 6: Public transport will be safe, affordable and accessible to all				
Everyone will be able to travel spontaneously and independently.	Reduce the difference between total public transport network journey time and total step-free public transport network	5	2041	Trajectory 2041 Time difference (minutes) between using full network with average journey time using step-free network
Outcome 7: Journeys by public transport will be pleasant, fast and reliable				
Bus journeys will be quick and reliable, an attractive alternative to the car	Annualised average bus speeds, base year 2015/16	13.1 14.5	2021 2041	