

# London Borough of Redbridge Third Local Implementation Plan

**June 2019**



## **OUR STREETS**

Help us to make our neighbourhoods  
great

**A Strategy for Great Neighbourhoods  
2019 - 2041**

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# Foreword

This is an exciting time for Redbridge as we rise to the challenge of creating new healthy neighbourhoods in our suburbs, linked with green corridors to enable sustainable communities to thrive. We want a better environment for our residents and businesses to operate in now and we also want a better future for our children.

The Local Implementation Plan 3 complements and steers the Our Streets strategy to address deficiencies in our streets to make them clean, safe, vibrant, healthy, attractive and good for business. These streets make up our borough, neighbourhood by neighbourhood and we want to empower the people of Redbridge to be part of the process so their streets work better for them.

As the Borough moves forward to more local decision making at a neighbourhood level the internally and externally funded programmes and aspirations need to be relevant and wanted if they are to succeed. This requires care for local concerns and awareness of the broader strategic aims to design solutions tailored to each area.

The Borough fully endorses the TfL Healthy Streets approach and TfL Vision Zero action plan and we look forward to continuing working with our mayoral partners, neighbouring Boroughs and other stakeholders to deliver the ambitions of the Mayor’s Transport Strategy by 2041.



John Howard

**Cabinet Member for Civic Pride**

## Executive summary

The strategic direction of the Mayor's Transport Plan is closely aligned to Redbridge's own ambitions to create many more new jobs and homes here and to work with partners to deliver prosperity locally. The Redbridge Strategic Delivery Plan sets out our high level priorities for the next 10 years, the Local Plan 2018 sets out the spatial strategy for the delivery of this ambition and the Local Implementation Plan 3 sets out our commitments to make this change a reality.

We are going through transformational change as an organisation and have proven time and again our ability to become leaner and still deliver the essential services to keep Redbridge growing. As the Local Implementation Plan 3 develops we want to work closely with Transport for London to make Redbridge an exemplar sustainable Borough across the transport, public health and regeneration sectors.

The Mayor of London has set some very ambitious targets for future rates of sustainable travel and accident reduction on the back of higher housing targets across London. For its part Redbridge will do all it can to deliver these objectives at a local level, scheme by scheme to make Redbridge better place to live and work in.

We are proud to be part of London and want to be an integral part of its future success, with Ilford being part of a poly-centric economic delivery model that takes pressure off the centre of London.

Redbridge is open for business and we look forward to working with new partners and old friends making Redbridge a great place to live.



Simon Parker

### **Corporate Director Strategy**

# 1. Introduction and preparing a LIP

## Introduction

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

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

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

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

The Council notes that the overarching aim of the strategy is for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041, compared to 63 per cent today London-wide and 48 per cent locally - there are different targets set for central, inner and outer London. The LIP outlines how Redbridge Council will set local priorities and targets in order to assist with achieving this aim.

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

## Local approval process

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

This Final LIP was approved by the Cabinet on 11 June 2019.

## Statutory consultation

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

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

The borough undertook a 6 week public consultation exercise a public consultation from Friday 1 March 2019 to Friday 12 April 2019. The consultation appeared on the borough’s website, and was available for any member of the public to respond.

In addition, a total of 37 bodies were directly consulted, including the statutory consultees mentioned above. All direct consultees were written to, drawing attention to the consultation, where it could be found on the borough’s website, and the closing date.

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

<i>Statutory consultee</i>	<i>Number consulted</i>
TfL	1
Police	1
Disability groups	7
Local authorities	7
 <i>Non-statutory consultee</i>	
National agencies	7
Transport and environment groups operators	6
Business groups	2
Community groups	6

There were 6 responses. Bodies and individuals responding to the consultation were:

- Transport for London
- Environment Agency
- Be First (LB Barking and Dagenham Council)

A more detailed summary of the responses received and the borough's response to individual points raised can be found on the borough's website at <https://www.redbridge.gov.uk/roads-and-pavements/travel-and-transport-policy/>.

### **Statutory duties**

The borough has taken into account all the statutory duties and processes as set out in the requirements in the GLA Act 1999 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, and this process has not identified any necessary changes to the LIP and/or the following changes have been made to the LIP.

The SEA Environmental Report, including a non-technical summary, and a draft of the EQIA were available on the borough's website during the consultation period. The Environmental Report and Environmental Statement, and the final EQIA remain on the website at this link: <https://www.redbridge.gov.uk/roads-and-pavements/travel-and-transport-policy/>

### **LIP approval**

The draft LIP was submitted on 20 May 2019 for approved by the Mayor of London.

## 2. Borough Transport Objectives

### Introduction

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

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

### Local context

#### Introduction

The London Borough of Redbridge is an outer London Borough, situated to the north-east of London. It has a border with Essex to the north, Havering to the east, Barking and Dagenham to the south-east, Newham to the south-west and Waltham Forest to the west (figure 1).

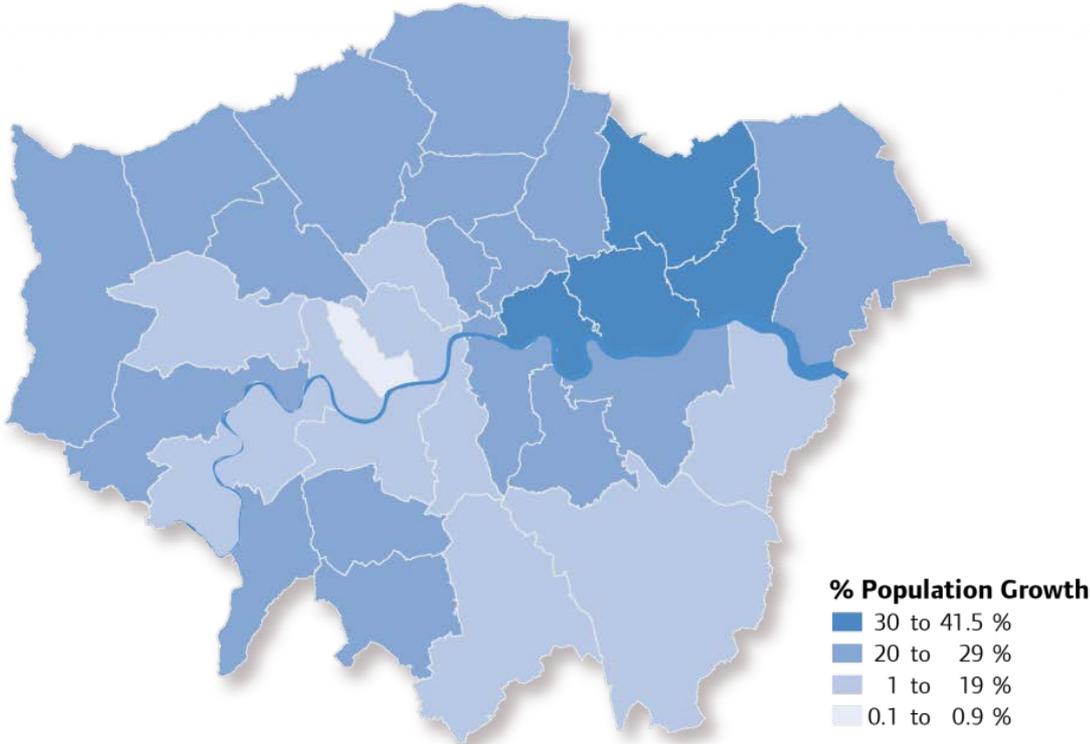


**Figure 1: L.B. Redbridge**

The Borough had a population of 296,800 as of June 2015 (mid-2015 population estimates, Office for National Statistics). The age split of the population is 23% children (0-15), 65% adult (16-64) and 12% retirement age (65+).

63% of Borough residents are categorised as Black and Minority Ethnic (BAME). 40% of Borough residents were born abroad with substantive immigration from the Indian subcontinent. However, recent migrants have come from Eastern Europe, notably Romania and Bulgaria. (All population statistics: GLA Intelligence)

The Borough of Redbridge is projected to have one of London's greatest population increases (Figure 2), rising 33.2% from 281,521 in 2011 to a projected 375,020 in 2041 (London datastore).



© GLA 2013 Round Population Projections  
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**Figure 2: Distribution of London's population growth 2011 - 2036 (% growth)**

Redbridge is set to go through a period of rapid change and development in the coming years. Redbridge Council will proactively manage the investment being made in the borough to deliver a significant amount of new housing and supporting community infrastructure, drive economic growth to encourage local businesses to thrive and create a place in which people are proud to live, work and visit. Crossrail's arrival secures Redbridge's future as an attractive, well connected part of London.

**Local Transport Strategy**

The council will develop a comprehensive transport strategy that sets the context for the Our Streets / Our Neighbourhoods approach and sets out the Borough wide priorities that feed into future funding programmes delivered at a local level.

Access improvements between transport hubs and the boroughs local community centres they serve will deliver better connected journeys and accessibility improvements to encourage a safe environment for children and families

There will be renewed focus on the improvements to low emission neighbourhoods that support good links to transport hubs, better connected journeys by new cycle and walking schemes, reduction of air pollution around schools and connecting green spaces.

The strategy will link transport improvements to land use, taking into account the Parking Strategy, Asset Management Strategy, Air Quality Action Plan and the Our Streets priorities. The Parking Strategy includes a borough-wide roll out of controlled parking zones, supporting car free development in regeneration areas.

### **The Local Plan**

The recently adopted Redbridge Local Plan 2015-2030 ([https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan\\_070318\\_web-1.pdf](https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan_070318_web-1.pdf), March 2018) provides the planning framework against which the aspirations of the Council and its partners can be delivered; ensuring the borough grows in a sustainable way up to 2030 through the creation of 17,250 homes, 5,000 jobs and the vital supporting community infrastructure.

This growth will be achieved through Investment and Growth Areas. These are areas where the Council will promote growth to deliver the Council's vision by directing new development including new homes, shops, businesses, leisure facilities and infrastructure.

Directing "investment and growth" to the areas of Ilford, the broader Crossrail Corridor, Gants Hill, South Woodford and Barkingside and to other town centres outside of these locations will deliver successful thriving places, a range of housing, new schools and health facilities, a dynamic economy and improvements to open spaces ensuring that the positive benefits of regeneration and investment reach all residents of the borough. These investment and growth areas are the most accessible locations in the borough with excellent transport links. Ilford's strong growth potential is specifically recognised through its designation as an Opportunity Area and Metropolitan Town Centre in the London Plan together with its Housing Zone status.

Redbridge is growing at a fast pace and the borough needs to proactively manage this change by delivering a significant amount of new housing, driving growth, supporting businesses and creating a place people are proud to live, work and visit. The Local Plan will respond to and deliver these exciting and ambitious opportunities. Greater background detail can be found in pages 6-14 of the Local Plan.

The pertinent transport related detail is set out in the Redbridge Key Diagram reproduced in figure 3 (see also Local Plan - Figure 6, pp17, [https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan\\_070318\\_web-1.pdf](https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan_070318_web-1.pdf)).



### LP19 Climate Change Mitigation:

1 The Council will tackle climate change and promote measures to meet carbon dioxide reduction targets by:

- (c) "Ensuring that the location of development and mix of land uses minimise the need to travel by car...".

### LP22 Promoting Sustainable Transport:

1 The Council will work with partners to support the delivery of the Mayor's Transport Strategy, London Freight Plan and Local Implementation Plan (LIP). To deliver a more sustainable and efficient transport network that supports growth and a prosperous economy, reduces car dependency, encourages sustainable forms of transport, improves air quality and reduces greenhouse gas emissions it will:

- (a) Direct new development which generates high transport demands to highly accessible locations such as the Investment and Growth Areas, town centres and transport corridors;
- (b) Support transport projects that improve the usage, reliability, quality, safety and integration with other transport modes of the public transport network, particularly where it improves the accessibility and connectivity to Investment and Growth Areas;
- (c) Support and facilitate the delivery of Crossrail by resisting development in safeguarded land and delivering station and public realm improvements at Ilford, Seven Kings, Goodmayes, Chadwell Heath;
- (d) Support improvements to Central Line stations including lifts to platforms at Newbury Park and level access improvements at all other stations;
- (e) Actively encourage walking and cycling providing an attractive public realm, safe, convenient and accessible cycle and footpath networks, through Investment and Growth Areas and that connect to the sub-regional networks;
- (f) Work in partnership with TfL and bus service providers to increase the number of routes in the borough, improving the frequency and efficiency of the bus network, and ensure integration of night bus services with all night Underground services;
- (g) Require major development to provide a Transport Impact Assessment to inform the design process, evaluate the impact of the development on the existing transport network, and provide mitigation measures to alleviate any adverse effects;
- (h) Require major development to provide Travel Plans to demonstrate what measures will be introduced to ensure that the future users of developments will be less reliant on private motor vehicles, and promote sustainable forms of transport such as walking and cycling;
- (i) Resist new development that results in an unacceptable adverse impact on traffic congestion within the Local and Strategic Road Network at key junctions and links or

public transport system unless it incorporates effective mitigation measures, as listed in the Transport Assessment Supplementary Technical Note (2017);

(j) Facilitate the safe, reliable and efficient movement of freight and servicing trips to, from, within and through Redbridge to support the borough's economy, in balance with the needs of other transport users, the environment and residents' quality of life;

(k) Require new development to provide a Servicing and Delivery plan to ensure that development can be adequately serviced within the site, to encourage shared servicing arrangements and consolidation of deliveries; and

(l) Require major development to provide a Construction Logistics Plan to demonstrate how it will manage trips generated throughout the demolition and construction programme.

#### LP23 Cycle and Car Parking:

1 The Council will ensure new development provides sufficient cycle and car parking by:

(a) Seeking new development to meet the minimum and maximum parking standards set out in the London Plan. Where a lower provision of parking is proposed than that indicated as a maximum standard and where no minimum standards apply, proposals will be considered based on the following:

i Transport Assessment, which indicates adherence to Travel Plan measures and contribution to local sustainable transport schemes;

ii Levels of public transport accessibility; and

iii Availability of public on-street parking and the outcomes of any parking stress survey.

(b) Providing parking spaces for servicing and delivery vehicles in new development;

(c) Supporting residential development within Investment and Areas Growth that are in close proximity to public transport nodes to be low parking development in line with London Plan standards;

(d) Seeking non-residential development that includes over twenty spaces to provide at least 5% (or 2 car parking spaces - whichever is the greater) of all car parking must be reserved for use exclusively by people with disabilities and in possession of a blue badge;

(e) Seeking new development to provide at least 20% of car parking spaces accessible to electric charge points for the use of electric and hybrid vehicles and the remainder of parking spaces to have passive provision, where it is easy to convert to EV;

(f) Requiring secure accessible and sheltered cycle parking in accordance with the London Plan;

(g) Requiring regular car parking spaces to achieve a minimum size of 4.8 m by 2.4 m. Those intended for use by disabled people should be at least 6 m by 3.6 m; and

(h) Seeking to provide spaces for car clubs and car pools.

2 Where development proposals involve a reduction of existing off-street car parking, the developer will be required to:

(a) Demonstrate that sufficient parking will remain in the area to serve local needs;

(b) Seek to provide spaces for car clubs and car pools;

(c) Provide an appropriate temporary facility and to ensure that development ultimately provides for existing local need, together with the increase in demand arising from the development.

### **Our Streets**

The Borough has existing policy support in its "Our Streets - A Strategy for Great Neighbourhoods 2017 -2022". 'Our Streets' focused on delivering streets and communities that are healthy , clean and accessible for our residents. This aligns with the MTS objectives and will form the basis of the LIP3 investment priorities. This document is available at <https://www.redbridge.gov.uk/media/3879/our-streets-strategy.pdf>.

The Our Streets Strategy has been produced in recognition of the role that the street scene plays in ensuring a good quality of life for people living and working in Redbridge. It was considered and agreed at Cabinet on 17 July 2017.

It aims to improve the look and feel of the street scene in Redbridge so that people are more likely to use streets in ways that will contribute to their health and well-being through the low emission neighbourhood programme. It is recognised that whilst the Council has a big role to play in this, it cannot do it alone but needs to work with partner organisations, community groups and local residents to ensure that streets are clean, safe and attractive.

It identifies 6 priorities for Redbridge which are the Borough's locally specific LIP Objectives that contribute towards the MTS Outcomes, policies and proposals. The six priorities are:

1. Clean Streets
2. Safe Streets
3. Vibrant Streets
4. Healthy Streets
5. Attractive Streets
6. Streets for Business

"Our Streets" acknowledges that Redbridge has great transport links, but that they could be better to improve life for residents and to attract further businesses to the Borough. It notes that well-designed and maintained streets can help reduce dependence on cars. This will in turn encourage people to use active transport such as walking and cycling and help to improve air quality and help improve the health of Redbridge People. If these actions

can be supplemented with initiatives that provide more greenery then there will be an even bigger impact.

The “Our Streets” transport specific actions align with the wider MTS / TfL Healthy Streets approach which are specifically set out as:

- Promote public transport and other sustainable travel options to reduce traffic on our streets.
- Work with TfL to move to greener public transport: buses make a substantial contribution to poor air quality along busy roads. We will lobby TfL to introduce less polluting vehicles into the Borough.

### **Strategic Delivery Plan 2019 - 2029**

The Council has a new Strategic Delivery Plan that aligns with the Our Streets strategy and wider MTS objectives, see <https://www.redbridge.gov.uk/media/6040/strat-del-plan-v12.pdf>

The plan has 5 long term priorities: -

1. Regenerate the borough to benefit our residents and integrate new communities.
2. Keep the borough clean and safe
3. Be a great place to live as a family.
4. Tackle the root causes of social challenges
5. Build a brilliant council

These priorities link with the LIP delivery plan to: -

Improve Safety;

Reduce Congestion and encourage Sustainable Transport and Modal Transport Shift;

Create Healthy Streets through the low emission neighbourhood programme;

Deliver High Quality Services with our Partners;

Regenerate the Town Centre and improve the Transport Infrastructure to support new development opportunities;

Encourage a Safe Environment for Children and Families;

Deliver the Civic Pride Our Street Strategy – and the actions associated with the 6 Our Street Priorities

## Changing the transport mix

### Challenges and opportunities

The overarching MTS target is for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041. This translates into a significant target for Redbridge from the current 48 per cent to 65 per cent. Redbridge LIP3 sets the foundation for long-term sustainable modal shift to achieve this target through its corridor and neighbourhood programmes. The Borough is committed to help achieve the MTS goal of 80% sustainable share by achieving 65% sustainable mode share, accordingly objectives have been set under Outcome 1 and Outcome 3 on pages 23 and 28 respectively.

### Challenges

#### Strategic Transport Geography

Redbridge's strategic road transport geography is that of a crossroads with the east - west A12 intersecting with the north - south M11/A406 at Redbridge roundabout. To the south of the Borough the A13 provides a southern east - west link between Essex/M25 and London. The A12/A13/A406/A1400 form part of the Government's proposed Major Road Network (MRN). Any disruption on one of these roads impacts on the other strategic roads as well as local roads.

For rail travellers the Central line loop provides north - south and east - west links in the north of the Borough whilst the soon to be Elizabeth Line and the Great Eastern Mainline provides the east -west link between Essex and London.

The above described links are managed at a sub-regional (TfL) or national (Highways England) level so the Borough does not have direct control over them. The LIP3 interventions will seek to reduce and redirect through traffic to the strategic routes (A12 / A13) rather than the borough's local and high streets (A118 / A123) which are required to serve local traffic. The shear load of through traffic has had a strongly negative impact on the vitality and growth of the towns centres it passes through with passing trade being typically overstated as a benefit.

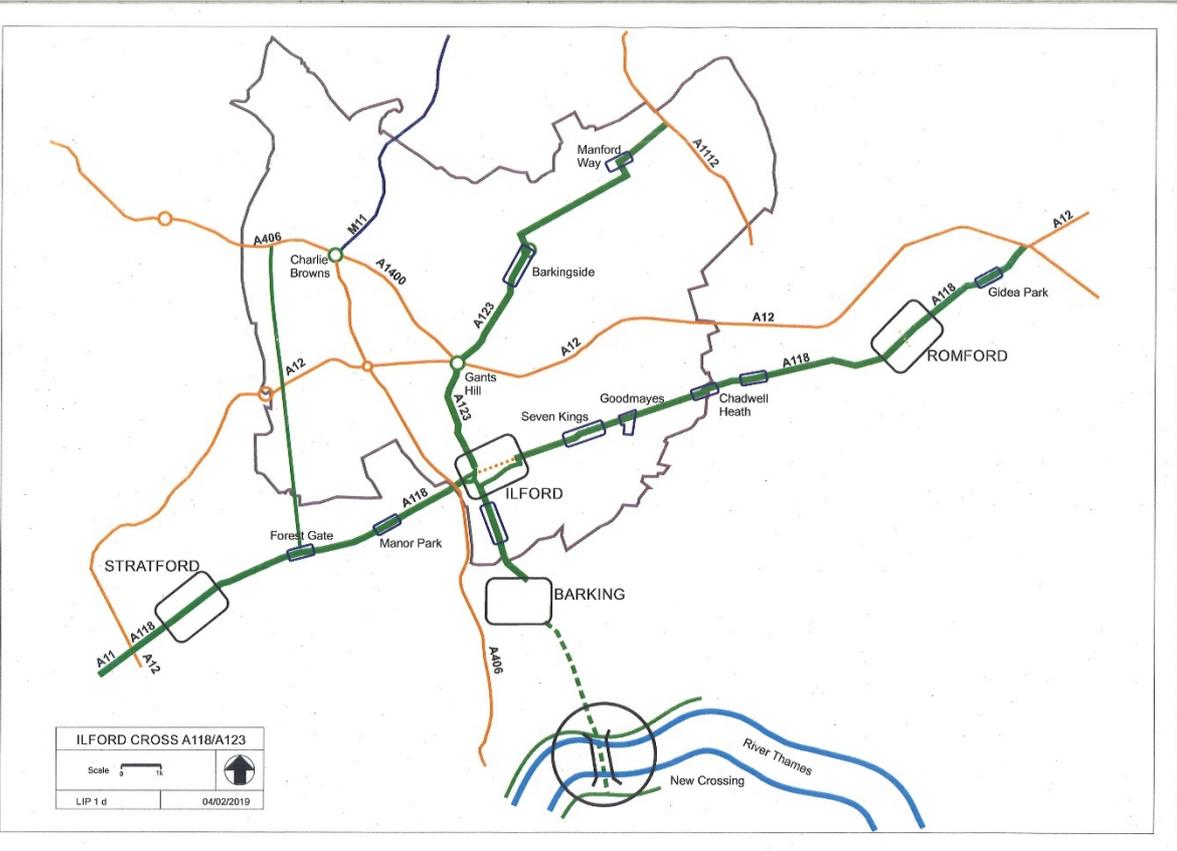
#### Local Transport Geography

The local east - west highway (A118) between Stratford and Romford is aligned with the Elizabeth Line and the Great Eastern Main Line railway and serves seven town centres. This includes i) Borough's principal town of Ilford which has been designated an Opportunity Area, Housing Zone and an Investment and Growth Area; and ii) Seven Kings, Goodmayes and Chadwell Heath which are in the Crossrail Corridor Investment and Growth Area. This route is now the A118 Romford Road / High Road but was originally the A12. The A12, now part of the strategic Transport for London Road Network (TLRN), was realigned to the north in the 1920's and is intended to accommodate sub-regional, national and international through traffic and heavy goods vehicles.

A similar arrangement has developed on the A123 Chigwell to Barking north - south alignment (Fencepiece Road - Barkingside High Street - Cranbrook Road - Ilford Lane)

which is mirrored in part by the Central Line Hainault loop. This route contains the two Investment and Growth Areas of Barkingside and Gants Hill.

These two routes cross at Ilford and the 'Ilford Cross' see figure 4, which sets out the Borough's ambition for a new functionality of these high streets that supports local activity and growth whilst removing through commuter traffic. These two corridors are the kernel of the Borough's wider road network. Improving these will enable more efficient travel on these key development corridors.



**Figure 4: Ilford Cross**

Car ownership

Redbridge has the 9<sup>th</sup> highest "Household car Access" in London, being 13% over the London average (Table 1, Source: LTDS 2011/12).

	<b>Population</b>	<b>Car Drivers</b>	<b>Car Ownership</b>
Redbridge	296,800	198,856	67%
London	8,173,941	4,413,928	54%

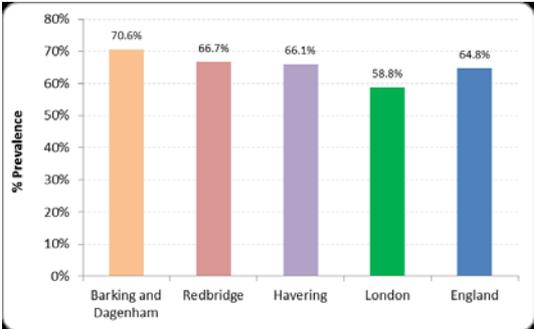
**Table 1: Household Car Access**

The LTDS data demonstrates that there is a strong relationship between household car access and access to public transport, with household car access rising as public transport accessibility falls. There is also an additional relationship between inner and outer London, with household car access higher in outer than inner London at all public transport accessibility levels.

The number of cars per household (1.1) is marginally above the outer London average (1.0) and substantively over the London average (0.8).

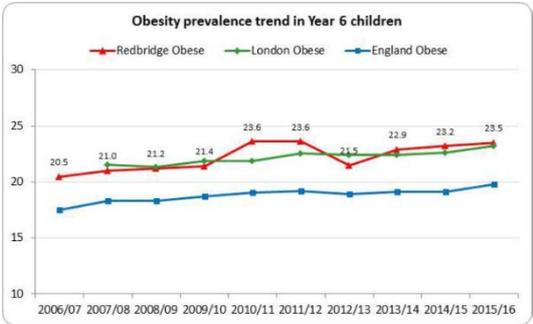
Public Health

The Redbridge Obesity Strategy (<https://www.redbridge.gov.uk/media/3705/obesity-strategy.pdf>) shows prevailing rates of adult and child obesity greater than that for London and England (figures 5 and 6).



**Figure 5: Percentage of Adults Aged 16 Year and Over Classified as Overweight or Obese**

Source: Active People Survey 2013-2015



**Figure 6: Obesity Prevalence trend in Year 6 Children**

Source National Child Measurement Programme, 2015/16

Opportunities

These statistics highlight the challenge, but also demonstrate the opportunity that is available in Redbridge. Chapter 3 details the hard and soft measures that will be implemented in the Borough during the LIP3 period

There are a number of actions, schemes and technologies that have been identified that will develop and maybe come to maturity during the LIP3 period. These are

- DfT Proposals for the creation of a Major Road Network (timescale unknown)
- Crossrail 2, eastern extension (timescale unknown)
- Central Line Improvement Programme (2022)
- Central Line modernisation (Deep tube upgrade (2033)
- Transfer of buses from central to outer London (ongoing)
- Demand Responsive Bus Services (London trial 2019)
- Ilford Bus Infrastructure (timescale unknown)
- Dockless Cycles (Current)
- LBR Workplace Travel Project (2019)

- Autonomous Vehicles (timescale unknown)
- Connected Vehicles (timescale unknown)

Redbridge will work with TfL and other partners to maximise the benefits of these changing transport concerns for its residents.

## **Borough Objectives**

Redbridge is a borough that is a good place to bring up families and has excellent transport links to places of work. The authorities aim is to continue to deliver this focus whilst supporting our housing growth areas and our existing population.

To improve this experience and ensure it is on a more sustainable footing we will aim to improve the streets and neighbourhoods that our residents live in through the Redbridge low emission neighbourhood programme. The aim of this programme would be to achieve the goals set out in the Mayor's Transport Strategy and will include measures to reduce car movements, rat running, create 20 mph zones, institute school streets as well as to install more infrastructure for cycling, walking and electric vehicles. We will aim to improve walking and cycling access to schools, commuter hubs and local places of interest by taking the aims and goals of the Mayor's Low Emission Neighbourhood's project and begin applying that across Redbridge.

The Redbridge low emission neighbourhood programme will be the principal means of delivering the Highways capital programme, creating better public realm that is safe, attractive and well connected to empower residents and businesses.

The Our Streets Strategy seeks to create great neighbourhoods and the Redbridge low emission neighbourhood programme delivers this under the Our Neighbourhoods banner, see Table 5.

The adopted Redbridge Local Plan 2018 has identified 5 growth areas for new homes with Ilford being the primary beneficiary due to its high PTAL and good links to the strategic road network. To address the intensification in transport demand this housing growth will bring we need to create a much more balanced network to provide a realistic alternative to the private car that includes more sustainable Redbridge Low Emission Neighbourhoods, School Clean Air Zones and improvements to the bus offer.

The improved bus network must connect all parts of the Borough to local destinations including town centres, the rail and Underground networks, schools and amenities at substantially improved frequencies to the current arrangements. This aligns with Local Plan policy LP22 Promoting Sustainable Transport by providing good local amenities in communities and more transport choice.

The overarching objective is for this "good growth" development to be sustainable in transport terms which, added to the significant challenge of car dependence by the existing resident population requires a substantive uplift in bus services throughout the Borough. A new level of bus service provision that enables improved interchange between bus services is proposed to offer an attractive alternative to the private car for local trips.

The 'Ilford Cross' sketch (figure 4 above) indicates two new [green] bus corridors that are aligned to both the historical town centre development along the A123 and A118 high roads as well as the Crossrail, Gants Hill and Barkingside growth areas. This amenity is in support of the Local Plan's strategic objective 2: promoting a green environment - by enhancement of sustainable transport networks serving these areas.

The Healthy Streets / Redbridge low emission neighbourhood programme approach promotes all sustainable modes and interchange between modes at the expense of network capacity. However, a calmer road network will create safer and more successful town centres and the uplift in bus services will more than compensate for any loss of transport choice on these key corridors, in support of business and new homes.

It is very important that high street design enables pedestrians and cyclists to cross these roads easily so high streets are dynamic and connected to the residential areas they serve.

## Mayor's Transport Strategy outcomes

Redbridge is a typical outer London Borough with high car ownership, high car dependency for primary and secondary trips, a limited public transport offer and low levels of cycle mode share. The major obstacle to the 80% sustainable mode share target is in changing established travel patterns and expectation of car ownership that have arisen out of the suburban lifestyle enjoyed locally.

The nine MTS outcomes below frame the challenge that is required to make our residents and businesses aware of the local mobility issues including challenges and opportunities to improve the transport options to enable good, sustainable growth.

The section below sets out the inter-connectivity of Redbridge and London transportation policy and action plans against each of the MTS Outcomes to demonstrate Redbridge's commitment to a more focused and sustainable future.

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

#### Challenges and opportunities

Most of London's population live in the outer suburbs. Trips in this area tend to be longer and have many different start and end points, which makes it harder to provide efficient public transport services. Walking is the first choice for short trips, and buses are important in providing access to town centres, but the car is used for most other travel. Cycling, however, has huge untapped potential to replace many of the shorter car trips made in outer London.

To realise this potential mode shift the significant barriers of real and perceived road danger need to be overcome by interventions on the highway and supporting programmes. The Ilford Garden Junction Liveable Neighbourhood scheme is an example of this sort of intervention, see Figure 17.

This is the basis for Redbridge's Low Emission Neighbourhoods, by rolling out the principles of the TfL scheme across the mainly residential areas of Redbridge we can create environments that encourage walking, ensure cyclists are protected and safe, and reduce rat running and unnecessary car movements.

Significant improvements to public transport services will be required to achieve this reduction in car dependency. At present, many people have no choice but to drive, particularly for trips around outer London, rather than into the city centre.

A more joined-up approach to planning transport services and housing will encourage active, efficient and sustainable travel patterns in outer London investment and growth areas. Commercial and residential development should be planned around good public transport access and well-connected town centres, so fewer people need to rely on cars.

Redbridge fully endorses the Healthy Streets approach to encourage street environments that promote healthier, more efficient and more sustainable transport options, notably integrating freight and servicing arrangements to reduce their impact on residents.

Whatever mode of transport Londoners use, the quality of the experience of using London's streets helps to define the quality of their journey. A good street experience is therefore key to providing attractive public transport options of whatever mode. We will audit all 14 rail stations to standardise the street approaches to stations making access to the station and onward transport mode interchange as straightforward as possible.

The Healthy Streets Approach provides the framework for putting human health and experience at the heart of planning the city. It uses ten evidence based indicators, shown below, to assess the experience of being on our streets. Good performance against each indicator means that individual streets are appealing places to walk, cycle and spend time. Improvements against all the indicators across the city's streets will radically transform the day-to-day experience of living in London, helping to fulfil this strategy's overall aim of creating a better city for more people to live and work in.



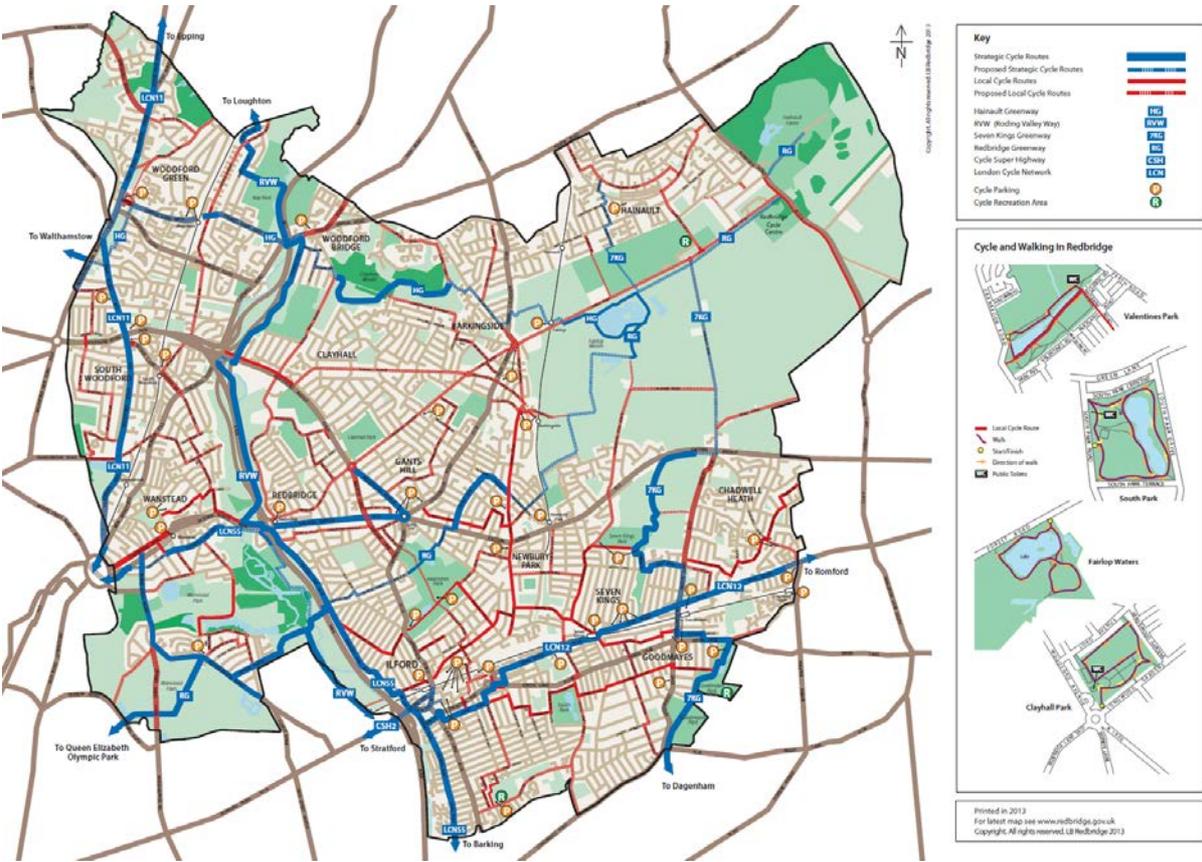
**Figure 8: The TfL Healthy Streets Wheel**

The councils Our Street Strategy is fully aligned to the Healthy Streets wheel with each of the 6 priorities represented by at least one indicator and the principle of good growth being managed and linked to public transport (notably Crossrail) is established in the Vision for Redbridge, see Local Plan pp16 - 18 [https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan\\_070318\\_web-1.pdf](https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan_070318_web-1.pdf).

The Council has a Sustainable Modes of Travel Strategy (SMoTS) (<https://www.redbridge.gov.uk/media/1352/sustainable-modes-of-travel-strategy.pdf>) which sets out the boroughs approach to encouraging sustainable modes of travel to and

from the approx.100 schools in Redbridge. It encompasses tackling the school car run, encouraging healthier ways of travel and addressing the obstacles that stop people choosing to travel through sustainable means.

The Council is committed to updating and completing the local cycle network within the life of the LIP3 as identified by the new borough transport strategy in the Borough to enable more sustainable trips, the Borough Cycle map will be updated to reflect new strategic routes in the TfL business plan, improvements in neighbouring boroughs and supporting journeys to transport hubs and local town centres. The the previous cycle network is in Figure 9 below.



**Figure 9: Redbridge Cycle Map**

In Redbridge, one in ten (9.8%) 4-5 year olds and one in five (23.5%) 10-11 year olds are obese (NCMP 2016/17). This problem is not unique to children, with an estimated 66.7% of adults living in the Borough being overweight or obese. Contributing towards this picture is the fact that residents consume less fruit and vegetables than the average Londoner (an indicator of healthy eating and have historically had low levels of physical activity, although this has improved significantly in the last year [2015]. There is a proliferation of fast food outlets and travel by car is the preferred method of transport for many residents. As obesity levels increase, it is crucial that we continue to take action to ensure more residents have a healthy weight.

The Redbridge Obesity Strategy (<https://www.redbridge.gov.uk/media/3705/obesity-strategy.pdf>) recognises the importance of Active Travel (Section 4.3). The benefits of walking cycling and using public transport are acknowledged. There is a growing body of research which suggests that active travel may be the most effective means of increasing population-level physical activity (Public Health England, 2013).

### Borough Objectives

Redbridge has set the following objectives funded under the Our Neighbourhoods programme in relation to this MTS Outcome.

- MTS1a To adopt the Healthy Streets Approach and consider the Healthy Streets indicators in the planning and delivery of policy, strategy and infrastructure changes
- MTS1b To implement the Redbridge Walking and Cycling Strategies, and review them regularly in line with the Healthy Streets approach
- MTS1c To implement bus priority measures within the Borough, thereby enhancing bus reliability to improve air quality and increase the uptake of public transport.
- MTS1d To limit the speed (20mph) and volume of traffic on residential streets, to make them more pleasant for walking and cycling
- MTS1e To develop healthy and accessible routes to key destinations – Crossrail and Underground stations, town centres, business parks, schools, health facilities – to enable people to walk or cycle more often
- MTS1f To develop and promote traffic-free routes including through open spaces as part of the transport network

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

### Challenges and opportunities

Redbridge Council has joined forces with all of London's boroughs to support the Mayor of London's first Vision Zero Action Plan <http://content.tfl.gov.uk/vision-zero-action-plan.pdf>. The plan sets out the key measures that Transport for London (TfL) and the Metropolitan Police Service (MPS) will take to eliminate deaths and serious injuries from London's transport network by 2041.

The Vision Zero Safe System approach employs a framework of interventions around five pillars of action:

- Safe speeds
- Safe streets
- Safe vehicles
- Safe behaviours
- Post-collision response

These five pillars cover themes of activity that closely match the key road danger reduction targets. The purpose of categorising activity in these themes is to support a more holistic approach to delivery which recognises that all parts of the 'system' need to work in combination. The Safe System themes are in order of the potential for long-term reductions in road danger and the greater responsibility of the 'system designer' over the 'system user'

The Vision Zero Action Plan has identified Gants Hill for a TLRN speed limit reduction scheme and the Borough will work with TfL to deliver lower speeds through this major junction.

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

Under the new systems officers use an 'injury-based assessment' in line with DfT STATS 20 guidance and online self reporting is available. Both of these changes are expected to provide a better assessment of injury occurrence and severity but have made data collected from November 2016 onwards difficult to compare with earlier data.

TfL commissioned the Transport Research Laboratory (TRL) to undertake a back-casting exercise to enable pre November 2016 data to be compared with post November 2016 data. These initial back cast estimates include the number of people killed or seriously injured (KSI) for each borough between 2005 and 2017 and this data has been used to update borough targets to align with those contained in the Mayor's Transport Strategy, namely a 65 percent reduction in KSIs by 2022 against the 2005-09 baseline, a 70 percent

reduction in KSIs by 2030 against the 2010-14 baseline and zero KSIs by 2041. The targets contained in this final version of our LIP have been set against Outcome 2 for Vision Zero to reflect the reporting changes. The level of ambition remains unchanged, despite these revised figures.

The latest Redbridge road safety statistics (2017) (<http://content.tfl.gov.uk/casualties-in-greater-london-2017.pdf>) shows 1030 casualties, a 3% increase over 2016. (NB there have been two changes in the casualty statistic collection methodology – 1) improvements in the reporting of injury severity by the police, and 2) the introduction of online self-reporting which has made it easier for members of the public to report collisions to the police. This second change has resulted in an increase in self-reported casualties of 35%, which comprised 21% of all casualties).

Delving beneath the casualty totals, highlights a couple of significant changes between 2016 and 2017. Firstly, the number of fatalities rose to 9, a rise of 29% which caps a run of increases in fatalities within the Borough commencing with 4 fatalities in 2014 (100% increase), 5 fatalities in 2015 (25% increase), 7 fatalities in 2016 (40% increase). The last decrease in annual fatalities was in 2013. Secondly, pedal cyclist casualties (64) were 27% higher in 2017 than 2016. Fortunately this doesn't appear to be a trend as numbers fluctuate year on year.

Through 2017 a total of 81 people were needlessly killed or seriously injured (KSI) on Redbridge's streets, a number that would not be tolerated in any other setting. The borough endorses the TfL Vision Zero ambition of no KSI on London's roads by 2041. This target date is very ambitious and deals with factors that are beyond one agency to address so we will continue to lobby TfL and other authorities to ensure future resources are made available to address the complex issues that lead to road accidents including changes to legislation, trialling radical initiatives and working together.

Redbridge will introduce a 20mph Borough-wide speed limit on its road network to transform dangerous junctions and raise awareness of road danger. Safety is at the heart of all our decision making and we're committed to making sure everyone gets home safely every day. Reducing vehicle speeds is the most effective measure to reduce the incidence and severity of road traffic accidents. Redbridge currently has a number of 20mph zones around schools accounting for around a third of the Borough roads.

Redbridge also supports the actions outlined in the TfL Vision Zero plan and will utilise progressive initiatives such as making the healthy high streets more forgiving by removing filter lanes and simplifying junctions to eliminate death and serious injuries on the transport network by 2041.

The borough allocates funding to accident remedial works on an annual basis to address accident sites that have been identified for attention through the Redbridge accident matrix. This analysis will be adapted to encompass the Vision Zero objectives including post collision analysis to understand and design out the causes of accidents. A number of these measures will also be tackled in the Redbridge Low Emission Neighbourhoods.

The borough allocates funding to cycle training and works with schools to offer every child bikeability training which is a very popular programme. Other schemes offer cycle training

to adults and community groups up to level 3 competency level (advanced road cycle skills). Cycle training is a key step in Redbridge's safe streets priority by raising awareness of road danger.

TfL and local authorities are statutorily required to take all reasonably practicable steps to prevent crime and disorder, and must consider the impact of all their decisions and actions on opportunities for crime.

Section 17 of the Crime and Disorder Act (1998), states that: "Without prejudice to any other obligation imposed upon it, it shall be the duty of each authority...to exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent crime and disorder in this area." The Police and Justice Act 2006 added specific references to antisocial behaviour, drug and substance misuse to the definition.

### Borough Objectives

Redbridge has set the following objectives funded under the Our Streets programme in relation to this MTS Outcome:

- MTS2a (Safe Speeds) Work in partnership with the Police, TfL and other agencies to support the boroughwide 20mph limit delivered through the Redbridge low emission neighbourhood programme, review its effectiveness and potentially expand to more roads including parts of the TLRN.
- MTS2b (Safe Streets) Focus on reducing vulnerable road user casualties, through street design
- MTS2c (Safe Streets) Regularly assess and address collision hotspots through infrastructure improvements, taking a road danger reduction approach to design
- MTS2d (Safe Streets) Reduce crime by inclusion of Crime Prevention Through Environmental Design (CPTED) principles when designing public space
- MTS2e (Safe Streets) Reduce fear of crime by adopting the Healthy Streets approach to design of public spaces
- MTS2f (Safe Vehicles) Focus on reducing vulnerable road user casualties, through reduction of danger from vehicles, especially HGVs
- MTS2g (Safe Vehicles) Include Vision Zero Safe Vehicles input into the LBR Fleet Replacement Programme
- MTS2h (Safe behaviours) Empower staff, residents, students and local employees with the skills they need so they can make safe decisions while travelling, by offering and promoting suitable driving, cycle, pedestrian and motorcycle training

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

### Challenges and opportunities

Redbridge's Low Emission Neighbourhood programme will help to design out rat running and decrease the number of cars and the speeds they travel on residential roads.

The borough has a long-standing ambition to eliminate rat-running on all residential streets and to reduce and redirect through traffic on the TLRN. Residential streets need to become places residents and their children feel confident to walk, cycle, dwell and enjoy through the Redbridge low emission neighbourhood programme. The healthy streets approach and good practice from completed liveable neighbourhood schemes will inform investment to improve these local spaces.

The council will produce a borough-wide traffic reduction strategy to cover the period of the MTS to facilitate mode shift through improved walking and cycling networks and better interchange between these modes and the bus and rail networks. Road space will be reallocated from the motorcar to other modes, particularly pedestrian amenity at junctions.

The Redbridge parking strategy 2019 – 2023 supports developing Controlled Parking Zones (CPZs) across the Borough to facilitate better control of parking.

Redbridge is implementing a Workplace Travel Project to enable staff to travel in a more sustainable manner and reduce costs. The project is expected to reduce the overall number of site visits by staff, reduce the emissions arising from this travel and to contribute towards more efficient use of our streets. The four strands to this project are: -

1. Electric or low carbon car club for use by staff and residents;
2. Electric Vehicle Charge Points to support the above;
3. Provision of an electric cycle scheme, initially for use by staff and in the future for residential use also;
4. Use of telematics to minimise staff mileage and assist with accurate reporting of staff travel.

The lessons learned from the Redbridge Staff Workplace Travel Project would be shared with Redbridge businesses to encourage them to reduce staff travel.

The focus for investment will be on local centre growth, notably Ilford, so new housing developments are delivered the transport options available encourage sustainable travel choice, and businesses are similarly encouraged to adopt best practice workplace travel across the town centres.

Consideration will be given to developing a workplace parking levy scheme in Redbridge.

The Borough supports enforcement of moving traffic offences by new technology (ANPR CCTV and in-car Bluetooth devices) to support the proposed tiered bus network, elimination of rat running on local roads and changes to London-wide road charging

regimes (ULEZ etc.). The council will continue to work closely with the metropolitan police on changes to the road network to ensure it remains safe and efficient for all modes.

Freight consolidation is a medium-term ambition for several of our larger town centres. Ideally the East London area would develop a sub-regional redistribution centre as part of a London wide freight plan which would reduce freight through traffic at a local level.

Freight for a particular town centre would be delivered to a nearby facility and re-packaged into smaller electric vehicles to deliver into the town centre. The local public-sector employers will be invited to join this scheme at inception and thereafter it will be rolled out to other users. This approach will reduce adverse last mile impacts that include road safety, pollution and congestion making our town centres more liveable.

### Borough Objectives

Redbridge has set the following objectives funded under the Our Streets programme in relation to this MTS Outcome:

- |       |   |
|-------|---|
| MTS3a | Improve access to High Streets and other major trip attractors by non-car modes   |
| MTS3b | Reduce rat-running on residential streets, thereby improving conditions for walking and cycling   |
| MTS3c | Produce a borough-wide traffic reduction strategy to cover the period of the MTS to facilitate mode shift   |
| MTS3d | Introduce 20mph boroughwide incrementally through the Redbridge low emission neighbourhood programme  |
| MTS3e | Implement and expand CPZs in the borough where they are proposed and supported by local residents   |
| MTS3f | Implement the Redbridge Staff Workplace Travel Project  |
| MTS3g | Work with schools and employers to reduce travel by car, including through travel plans and the provision of facilities to support non-car travel |
| MTS3h | Promote and enable car-free or car-lite living through planning policies and the provision of car clubs   |
| MTS3i | Investigate a Redbridge Workplace Parking Levy  |
| MTS3j | Contribute towards investigating road pricing on a sub-regional or London-wide basis  |
| MTS3k | Investigate use of technology to increase efficiency and reduce traffic and its impact  |

- MTS3I Work with freight and delivery firms to develop measures and practice that reduce the impact of freight activity along major roads and in town centres
- MTS3m Promote and enable best practice for deliveries e.g. through local consolidation centres and last-mile bicycle/low emission delivery

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

#### Challenges and opportunities

The whole of Redbridge was designated an Air Quality Management Area (AQMA) in 2004 for PM10 and NO2.

Redbridge's Corporate Strategy sets out what the Borough's corporate priorities which are to:

- increase fairness and respond to the aspirations of the Borough
- empower our communities to help shape our Borough and the services we deliver
- improve the quality of life and civic pride amongst our communities
- transform our Council in tough times to be dynamic and responsive to the challenges of the future

Key actions include enabling residents to improve their neighbourhoods themselves and to take responsibility for improving their own health by being independent and achieving their full potential. By creating better places in the Redbridge low emission neighbourhood programme we will support businesses and residents in all the commercial and leisure activity that occurs on and through it.

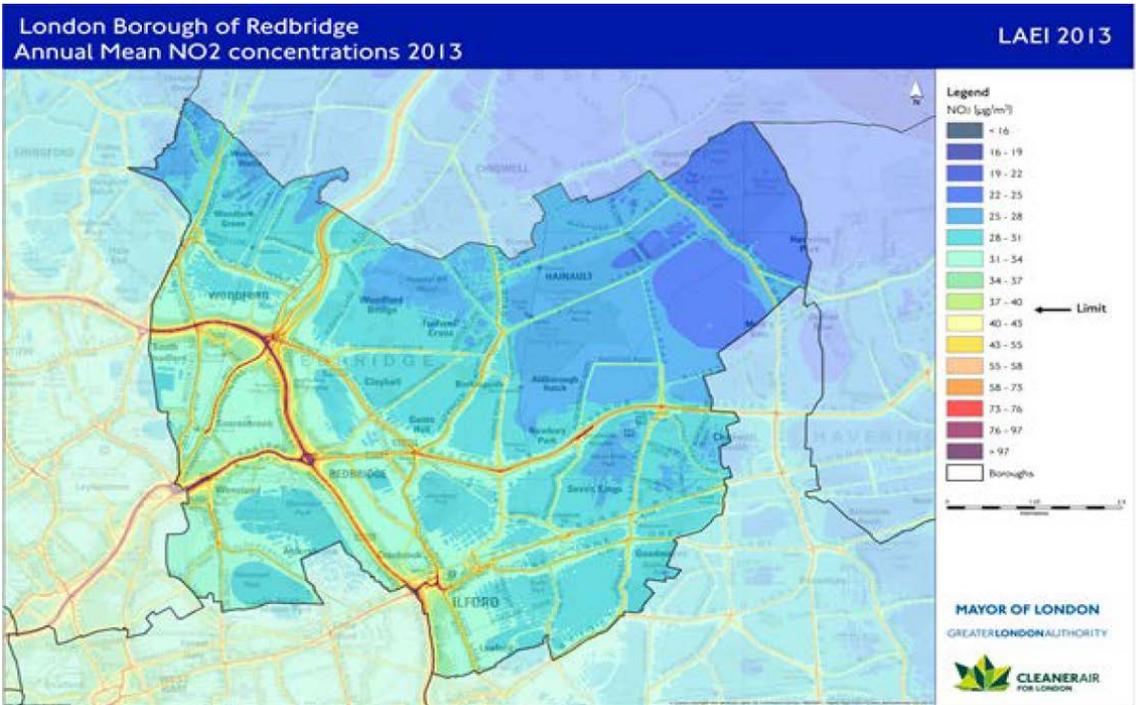
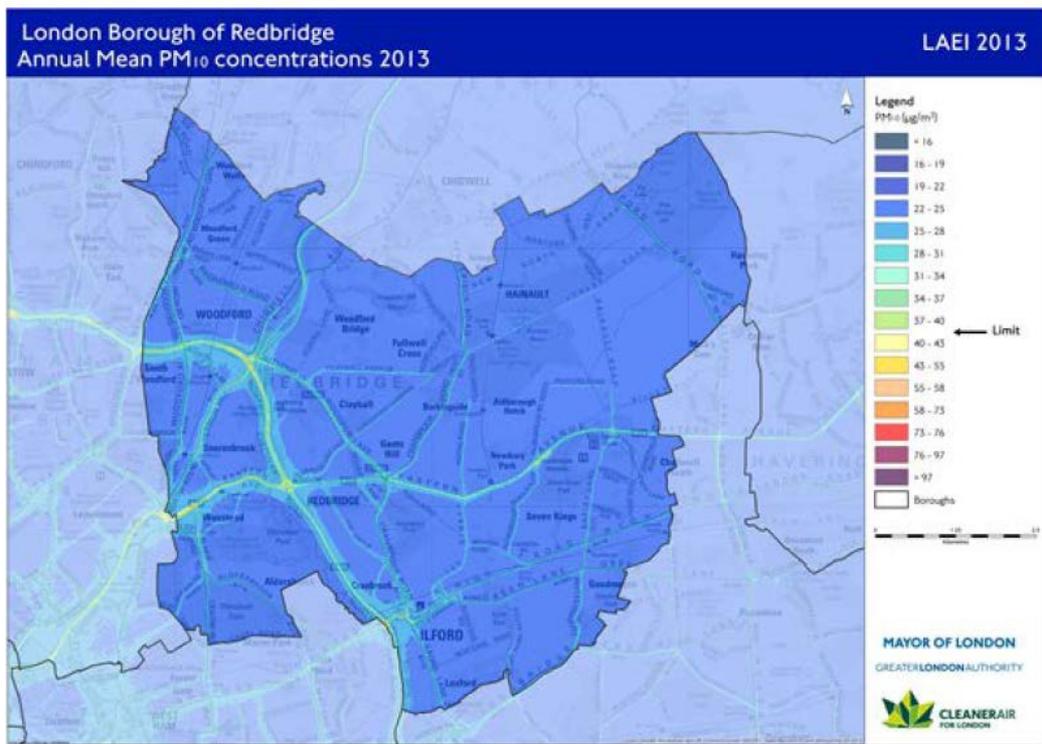


Fig 10: Modelled map of annual mean NO<sub>2</sub> concentration 2013 (LAEI 2013)



**Fig 11: Annual Mean PM10 (LAEI 2013)**

The Redbridge “Our Streets Strategy (<https://www.redbridge.gov.uk/media/3879/our-streets-strategy.pdf>)” translates the Borough’s Corporate priorities into the following three overarching outcomes:

1. **Putting residents at the heart of their streets:** we will encourage and support social action to keep streets clean and tidy and work with business to improve our high streets.
2. **Investment in better services:** we will use our resources wisely to adopt the best new technology and behavioural change techniques to allow us to design safe and attractive streets, stop littering and fly tipping before it happens, and respond rapidly when it does.
3. **Enforcement that is tough but fair:** we will work with businesses and landlords to agree clear streets standards for Redbridge that everyone can sign up to. When people don’t live up to those standards, we won’t hesitate to use our powers to fine them.

The Borough is currently updating its Air Quality Action Plan (AQAP) to demonstrate its approach to achieving the Governments air quality objectives. The AQAP will go out for public consultation in the coming months. Within the draft AQAP there are several transport themed projects, including:

- Redbridge in-house fleet emissions
- On-street Electric Vehicle Charge Points (EVCPs)
- Securing powers for enforcement of anti-idling
- Clean air zones around schools, parks and leisure facilities

The council supports the principle of the Ultra Low Emission Zone being introduced in central London from 2019, though some concerns remain about the impact of its expansion to the A406 North Circular Road from 2021 as this will split the Borough into two. The council will work to minimise any adverse boundary effects via measures that complement the ULEZ.

The Borough has targeted the Wanstead / South Woodford area for Go Ultra Low City Scheme funded electric vehicle charging points as this part of the Borough falls within the ULEZ area from 2021 and this amenity encourages take up of less polluting vehicles.

The Ilford Garden Junction phase 1 is a "Mayor's Air Quality Fund" scheme on the A118 Romford Road, at its junction with the A406 North Circular Road. It is located just west of Ilford on the Borough boundary with LB Newham. There are three major issues at this location;

1. The site suffers from traffic congestion associated with the A406 North Circular junction and air quality is very poor.
2. The site suffers from severance caused initially by the river Roding and subsequently by the A406 North Circular road acting as a barrier running north south.
3. The Elizabeth Line / Great Eastern main line four-track railway creates an east to west barrier to the north of the junction.

The junction is one of the few places to cross the river and A406 North Circular road. Despite being a hostile environment some 2,000 people a day walk through this junction. Cycling is very challenging with no dedicated cycle infrastructure in the junction itself. There is also a poor public realm and retail offer that gives TfL's "Tunnelling and Underground Construction Academy" (TUCA) a poor setting.

The Ilford Garden Junction phase 2 scheme Liveable Neighbourhoods bid is an ambitious gateway project that Redbridge is jointly preparing with LB Newham which addresses this geographically challenged site. The scheme creates two new safe and segregated walking and cycling routes across these obstacles providing a direct connection between the growing Ilford town centre and the high quality open space along the river, accessed via the Roding Valley Way cycleway. The scheme will also bring the Aldersbrook back into use, cleaning up the watercourse in support of wider environmental objectives and in support of wider London Plan Policy SI17 Protecting London's waterways, <https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/draft-new-london-plan/chapter-9-sustainable-infrastructure/policy-si17-protecting-londons-waterways>.

Redbridge is a very green Borough with an abundance of parks and green spaces which make the Borough a great place to live. Our high streets are clean, safe and well-maintained. The Redbridge Streets Commission has been engaging with residents to understand what they really value about the places where they live. The messages have been clear: people love the Borough's green spaces. "Our Streets" actions in support of greening the borough are;

- Create a Borough wide planting day to make parts of Redbridge even greener and engender community pride

- If we can supplement [LIP3] with initiatives that provide more greenery and promote healthy eating we can have an even bigger impact.
- Work with TfL to put green barriers along the Borough's busiest routes to contain noise and pollution, and regularly report air quality levels on our website

Resident demand for on-street electric vehicle charge points (EVCPs) is increasing and currently has a modest number of publicly available on-street EVCPs. These will shortly be joined by a small number of shared supply on-street EVCPs for resident use funded via London's Go Ultra Low City Scheme (GULCS). The Borough, through Local Plan policy LP23: Cycle and Car Parking 1(e) requires new development to provide at least 20% of car parking spaces accessible to electric charge points for the use of electric and hybrid vehicles and through adoption of the London Plan parking standards requires 100% passive provision on all new development parking bays.

Redbridge was the third London Borough to install a rapid charge point on Borough land funded via the TfL Rapid Charge programme. The Borough is committed to introduce electric vehicle charging points in partnership with TfL to encourage the use of low-emission vehicles. The Borough is also pro-actively investigating further potential EVCPs sites, both on-street and within Borough car parks.

Evidence of the link between exposure to air pollution and health is compelling. Poor air quality has been linked to 9,400 premature deaths in London. Most of air pollution in the capital is caused by the 6 million car journeys made daily. Nearly 2 million Londoners, including 400,000 children, live in areas that exceed the annual average nitrogen dioxide levels set by the World Health Organisation (WHO). Over 800 schools and educational institutions in the capital are within 150m of roads that breach legal air quality limits. Redbridge has taken up a number of opportunities to facilitate improving air quality in the vicinity of schools within the borough. These include competitive bids and mayoral partnership schemes: -

- Mayor's Air Quality Fund (Round 1) – Redbridge Air Action Project
- The Mayor's school air quality audit programme
- Redbridge Schools Clean Air Zones Project

Redbridge will seek to build upon the lessons learned from the above projects to improve air quality at all schools within the Borough.

The Redbridge Parking Strategy for 2019 – 2023 will consider issues relating to the encouragement of the take-up of electric vehicles and any deterrent to the use of internal combustion engine vehicles.

The recently adopted Redbridge Local Plan Policy "LP39 Nature Conservation and Biodiversity" sets out the framework for protecting and enhance the borough's natural environment and seeking to increase the quantity and quality of the borough's biodiversity. Actions include incorporating sustainable drainage systems (SuDS) principles in scheme delivery, minimising light pollution, green infrastructure and the blue ribbon network. All new development should make a positive contribution to nature conservation and biodiversity to safeguard our future environment.

## Borough Objectives

Redbridge has set the following objectives funded under the Our Streets programme in relation to this MTS Outcome:

- MTS4a Promote the use of EVs including through best practice in greening the council fleet
- MTS4b Expand electric vehicle charging infrastructure for both residential use and rapid charging to support ZEC taxis and commercial vehicles
- MTS4c Implement the Air Quality Action Plan
- MTS4d Implement Clean air zones around schools, parks and leisure facilities
- MTS4e Introduce measures to complement the expansion of the ULEZ to the A406 North Circular in 2021
- MTS4f Implement a pro-active parking policy to encourage take-up of clean vehicles and discourage use of dirty vehicles.
- MTS4g Use trees and other green infrastructure such as green walls to improve biodiversity, the street environment and reduce levels of pollution

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

### Challenges and opportunities

The Borough of Redbridge is projected to have one of London's greatest population increases (Figure 2), rising 33.2% from 281,521 in 2011 to a projected 375,020 in 2041 (London datastore). It is clear that there will need to be a substantive uplift in the attractiveness of using the public transport offer in Redbridge to meet the demands created by the greater population and the local mode shift target of 65% in 2041.

Crossrail will provide a substantive change in the public transport offer for Redbridge residents. Over the LIP3 period the Borough will work with TfL on a number of issues to maximise the benefits for Redbridge residents and business from this rail investment including: -

- Ensuring that the new services commence at the soonest possible opportunity.
- The planned service best meets the needs of residents and business in Redbridge e.g. enhanced levels of direct access to Heathrow Airport, peak hour services west of Paddington, direct services to Reading.
- A smooth rebuild of Ilford Station, maintaining public transport connectivity and minimising disruption to passengers and residents / business in the immediate vicinity of the station.
- Completion of the southern entrance to Ilford Station.

There are substantive works taking place on the Central Line during the LIP3 period and towards 2041. The Central Line Improvement Programme due to be completed by 2024 will improve train performance and the on-train passenger environment. The Deep Tube Upgrade Programme due to be completed on the Central Line by 2033 will transform the service with new air-conditioned trains, improved signalling to enhance capacity and step-free access at platform level. The borough will continue to work with TfL regarding the noise issues experienced on some sections of the line.

Whilst it is recognised that total bus mileage in London is set to reduce and not increase until 2022/2023 reallocation of buses from Oxford Street [on opening of the Elizabeth Line] provides an opportunity for an uplift in bus frequencies to coax Redbridge residents out of their private cars and raising confidence levels of bus journey reliability and overall journey time. There is potential for reallocating buses within the borough e.g. the Ilford to Gants Hill corridor. The existing bus frequencies and infrastructure in Redbridge make interchange between bus services an unattractive and slow process which needs to be addressed as a priority in order to influence travel mode choice positively.

Reallocation of buses will facilitate two actions to improve the service provided in Redbridge. Firstly, the extra vehicles can be used to increase bus frequencies, especially on the high street corridors. Secondly, the introduction of new, or revised routes to serve those parts of the Borough that do not have an existing bus service and new express bus routes. The borough will investigate new types of bus service, notably on the Hainault – Goodmayes – Dagenham corridor to support the major redevelopment opportunities there.

The local bus network is shown in Fig 12 indicates there is currently between 10 -20 services running on the A123 Cranbrook Road north-south arm of the Ilford Cross but only 1 service running on the A118 Romford Road east-west arm. The Hainault to Goodmayes corridor is also not served. The phasing of upscaled bus services to the tiered bus system envisaged needs to be carefully modelled to maximise opportunities for modal shift for new and existing residents.



**Fig 12: Local bus route map**

Night bus links to Night Tube / Elizabeth Line must be improved to enable the evening economy to develop, notably in Ilford where the population is projected to rise steeply and there is a desire to develop the evening economy as identified in the Ilford Manifesto, the boroughs strategic masterplan for Ilford, [https://www.redbridge.gov.uk/media/2873/dnco\\_ilford\\_manifesto.pdf](https://www.redbridge.gov.uk/media/2873/dnco_ilford_manifesto.pdf) .

The Borough supports demand responsive bus services and will seek to implement this type of intervention through the redevelopment of several large railway station car parks to maintain the link between commuters and the station whilst reducing the associated private car trips that originate outside of the borough.

The success of the Redbridge Healthy High Streets approach is predicated on making bus use on the traditional high roads both convenient and economic over the duration of the LIP3. Our aim is to make hopping on a bus the first choice for all trips starting in Redbridge.

There are a number of bus infrastructure issues in Redbridge that need to be addressed during the LIP3 period, in particular to deliver the high street tiered structure and to facilitate access into and through our town centres.

Bus standing arrangements will need to be reviewed and improved across the borough to facilitate reliability and a higher turn around service. This also includes the provision of suitable toilets for use by bus drivers. Special attention needs to be paid to those in Ilford where the four existing bus stands (Ilford Hill, Roden Street, Ley Street (main) and Ley Street) are all located in or adjacent to areas identified for regeneration in the Regenerating Ilford Delivery prospectus <https://www.redbridge.gov.uk/media/4465/ilford-prospectus-web.pdf>.

New bus depot facilities located within the Borough will be supported as part of this step change in service delivery. Good passenger transport interchange routes and physical infrastructure will include smart timetabling and a public realm that supports easy interchange at all rail stations and bus interchanges.

Taxi stands have been provided at all rail stations and town centres over the course of LIPs 1 and 2 and any requests for improvements to on-street taxi infrastructure will be considered utilising an evidence-based approach. Similarly, these taxi amenities will be kept under review to ensure the provision is justified as peoples travel patterns change and competing services enter the market.

There is competition for high value urban kerb space for a variety of uses including loading, drop off, disabled parking and town centre bays need to be actively used to support the wider regeneration of our urban centres. Consideration needs to be given to providing more road space for pedestrians on approaches to town centres and stations.

The Borough will work with TfL to identify further suitable locations for the installation of electric vehicle rapid charge points for businesses, including taxi drivers, on Borough owned land, on the Highway and through new development.

The Borough will support all urban / sub-urban cycle initiatives (such as dockless cycle hire) that assist the process of behavioural change regards cycle mode share, particularly for last mile trips. The Borough wants to work with the wider community to unlock the potential for radically more cycling in the Borough to create more civilised streets with healthier residents living in them.

Redbridge wishes to address real and perceived road dangers that are significant barriers to more cycling by reallocation of road space to this mode and providing good cycle interchange facilities at stations with ample secure cycle parking facilities available at work, retail and home. The Borough has a good track record of promoting cycling in schools and will be developing complimentary workplace initiatives based on the council's innovative workplace travel scheme which will be rolled out to include local businesses.

Redbridge is supportive of future technological developments and is willing to host or take part in innovative pilots for on-street electric vehicle charging, connected and autonomous vehicles, drones and any future public transport technologies.

## Borough Objectives

Redbridge has set the following objectives funded under the Our Streets programme in relation to this MTS Outcome:

- MTS5a Support the introduction of the Elizabeth Line and work with TfL to maximise the benefits for Redbridge residents and business.
- MTS5b Work with TfL to maximise the benefits for Redbridge residents and business of the Central Line Improvement and Deep Tube Upgrade Programmes.
- MTS 5c Work in partnership with TfL to regularly review bus operations, including demand responsive services, within the borough to ensure capacity meets potential demand and supports Redbridge Healthy High Streets.
- MTS 5d Work in partnership with TfL to regularly review bus infrastructure requirements within the borough to ensure capacity meets potential demand and support Redbridge Healthy High Streets.
- MTS 5e Work in partnership with TfL and the taxi trade to improve on-street taxi infrastructure utilising an evidence-based approach.
- MTS 5f The Borough will support Mayoral and private sector urban / sub-urban cycle initiatives within the Redbridge low emission neighbourhood programme.
- MTS 5g The Borough will support the trial and implementation of future passenger transport technologies.

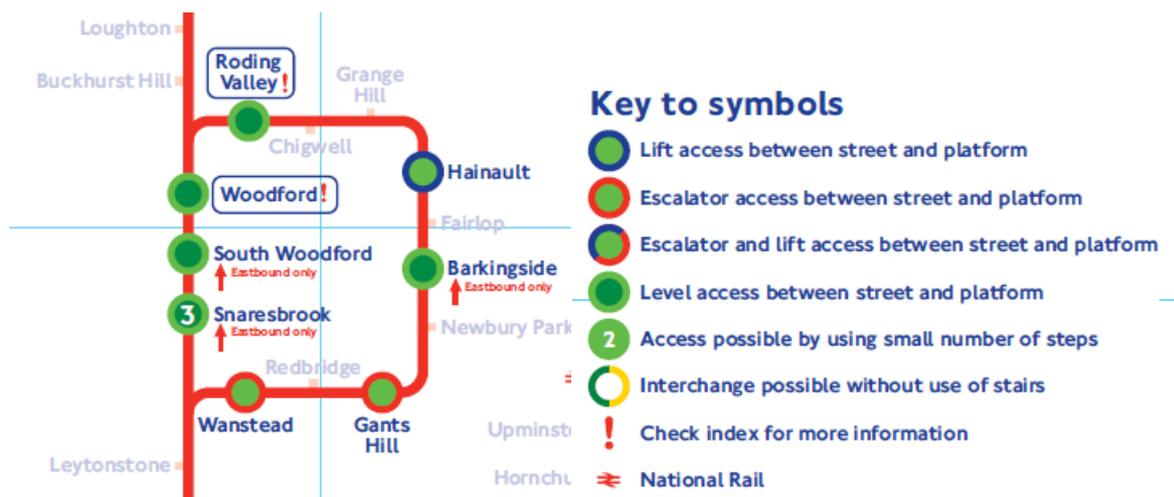
## Outcome 6: Public transport will be safe, affordable and accessible to all

### Challenges and opportunities

Redbridge is served by four Elizabeth Line stations (Ilford, Seven Kings, Goodmayes and Chadwell Heath) and ten Central Line Stations (Snaresbrook, South Woodford, Woodford, Wanstead, Redbridge, Gants Hill, Newbury Park, Barkingside, Fairlop and Hainault). In addition, several rail stations that are adjacent to the Borough boundary so are used by Redbridge residents.

On commencement of services the four Elizabeth Line stations will be fully accessible from platform to street. Redbridge will lobby TfL to provide future step free access (SFA) between the platform and the train at all stations.

Step free access from street to platform is provided at Woodford and Roding Valley – (both having platform interchange via the street). Hainault is fully accessible, including platform interchange, whilst Barkingside and South Woodford are accessible eastbound only, indicated below in Figure 13.



**Figure 13: Access Restrictions on the Central Line**

TfL has a programme of extending step free access to station platforms on the Central Line. Lift works have recently concluded at Newbury Park and are planned at Snaresbrook and South Woodford stations.

Currently there are no plans to provide step-free access at Wanstead, Redbridge, Gants Hill, Fairlop and Grange Hill stations.

Redbridge will lobby TfL to provide step free access at all stations from street to platform and from platform to train to enable fully inclusive access for all. Where barriers to level access exist, we will work with TfL to utilise technology to inform users of the alternatives.

The residential catchment surrounding each of the 14 rail stations in the Borough and half dozen bordering stations will be audited to develop schemes to encourage a 1km walk or

2km cycle as part of everyday journey planning. Tackling resident's preconceptions of cost, time, distance, weather and convenience in reaching their local station is essential to create a healthy and modern urban environment that achieves the mayoral mode share targets.

Large station car parks offer opportunities for new neighbourhoods with excellent public transport interchange on the developments doorstep. LUL and the council both own several of these car parks and we will seek best practice solutions as part of any redevelopment proposals. Promotion of demand responsive bus services, direct walking and cycling routes and safe, well-lit interchanges are key to good growth on these key sites.

Redbridge, along with all public bodies is subject to the statutory requirements of the Equality Act 2010 Public Sector Equality Duty (PSED) and the duty to make reasonable adjustments.

Following a programme of work over recent years Redbridge has a high number of accessible bus stops. There are however still a number of stops that require to be made fully accessible. The first step is to produce an agreed updated list of inaccessible bus stops within the Borough to establish a baseline. Once this list has been completed then a programme of works can be implemented and delivered to ensure maximum accessibility for residents and visitors.

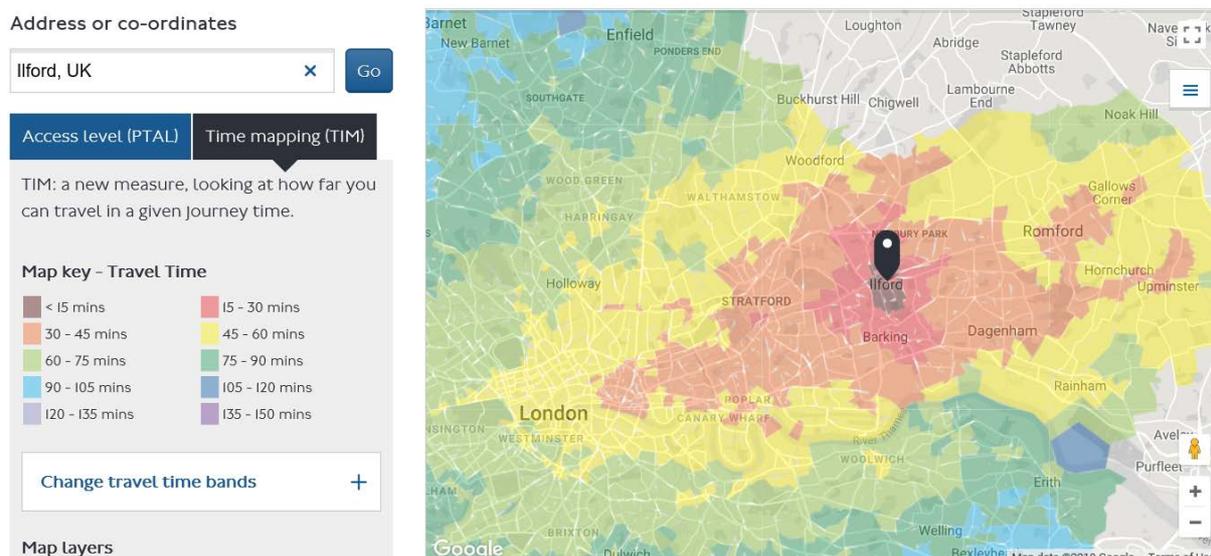
Redbridge will work with the Public Carriage office and the taxi trade to ensure that all existing and new taxi ranks are fully accessible and that people are not able to travel due to inadequate highway infrastructure.

Redbridge will ensure that Crime Prevention Through Environmental Design (CPTED) principles are incorporated into the design of all public space to maintain an inclusive, safe and accessible Borough.

We visualise a future Redbridge to have high quality urban realm between stations and their associated town centres so non-car mobility is as seamless as possible. In Ilford this concept is central to the Ilford manifesto, a document which sets out the direction for our metropolitan town centre, see [https://www.redbridge.gov.uk/media/2873/dnco\\_ilford\\_manifesto.pdf](https://www.redbridge.gov.uk/media/2873/dnco_ilford_manifesto.pdf).

Much of the proposed housing targets has been centred on Ilford to take advantage of its high PTAL and the imminent arrival of the Elizabeth Line from 2019. Planning development control will restrict car parking to the absolute minimum so new residents will be dependent on more sustainable travel options and the council will direct associated Community Infrastructure Levy (CIL) contributions to enable a broad travel mode choice. This will be communicated to residents and businesses through continuously updated travel plans and established information tools such as the TfL travel planner.

The Ilford Manifesto seeks to expand the pedestrianised parts of the town centre to create a modern and enjoyable public realm that connects these new homes with the job opportunities and amenities in Ilford and nearby centres. The heat map below shows in orange how much of East London will be within 45 minutes travel of Ilford in 2021: -



**Figure 14: PTAL Heat Map – Trip envelope by time from Ilford, 2021**

This accessibility brings the City and Canary Wharf within a reasonable 45 minute commute and the West End within 1 hour which makes Ilford particularly suited to intensification. The redevelopment will bring private sector investment to Ilford, that will aid the ongoing regeneration of our metropolitan town centre.

### Borough Objectives

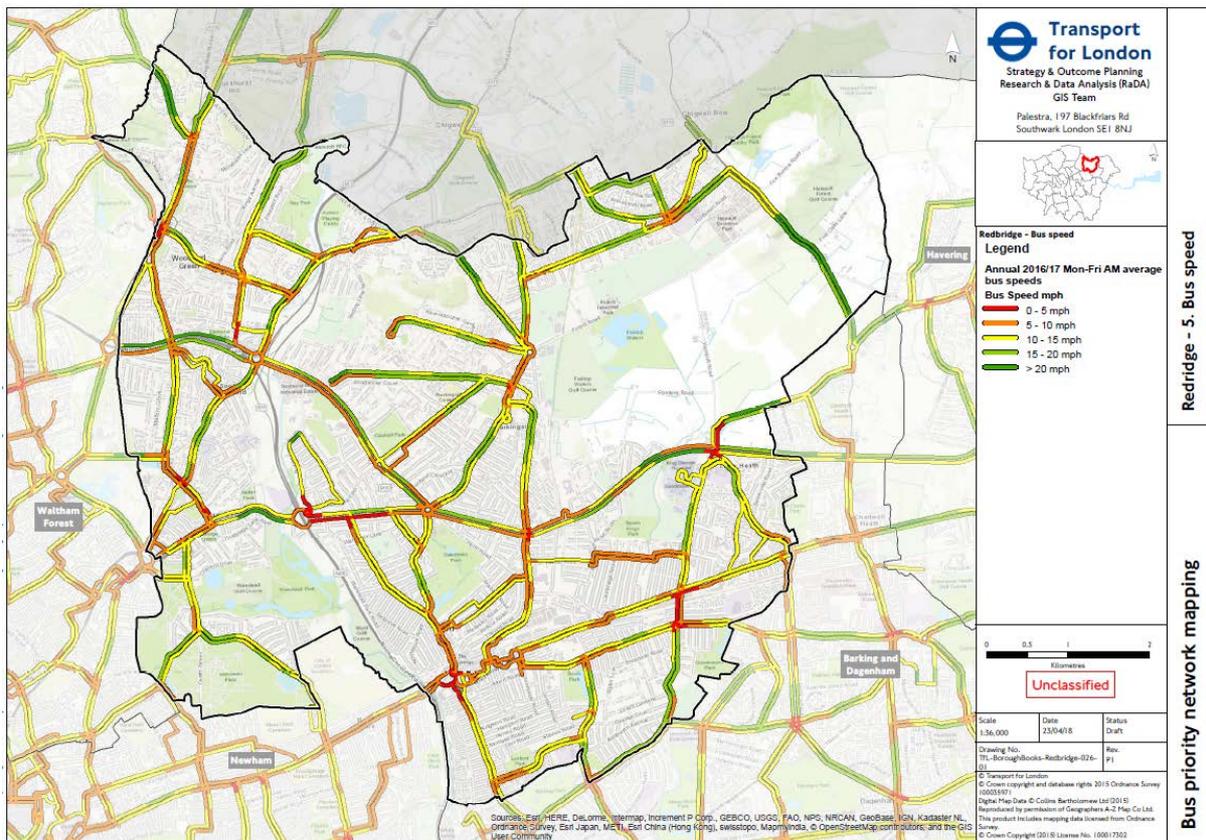
Redbridge has set the following objectives funded under the Our Streets programme in relation to this MTS Outcome:

- MTS6a Work with TfL, train operators and Network Rail to introduce step-free access at stations, including from platform to train.
- MTS6b Develop healthy and accessible routes to stations through the Redbridge low emission neighbourhood programme.
- MTS6c Ensure that all new and relocated bus stops and taxi ranks are accessible, and keep other stops/ranks under review.

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

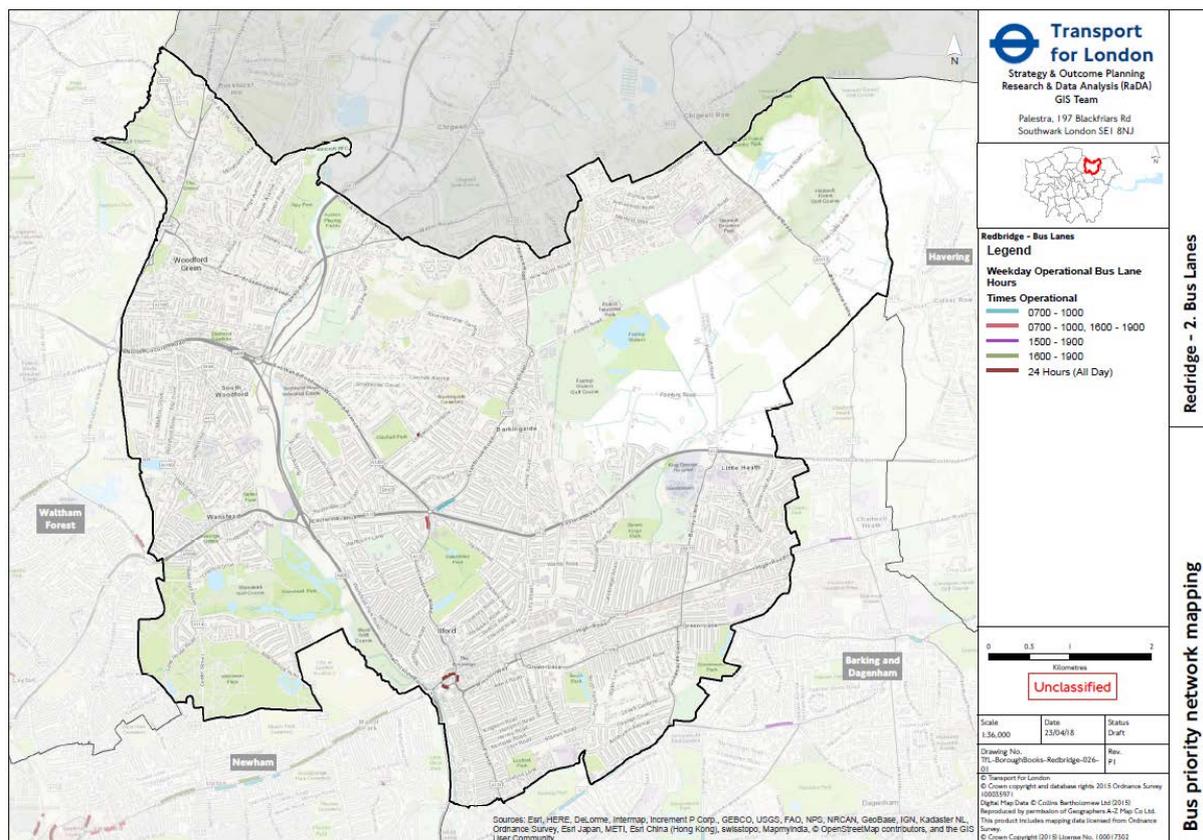
### Challenges and opportunities

The key passenger requirement for a public transport service is reliability. Average bus speeds in Redbridge are shown in Figure 15. As would be expected for an outer London Borough there are a variety of bus speed profiles across the borough with lack of junction priority being the main cause of bus journey delay. It is also notable that east/west movement appears slower than north/south movement where the through commuter traffic loading is heaviest.



**Figure 15: Average bus speeds in Redbridge**

There is a low level of bus priority measures within Redbridge as shown in Figure 16. The Borough will work with TfL to utilise bus priority measures that include assessing bus standing amenity, turning facilities and priority over other traffic where it makes a significant improvement to journey time and is deliverable.



**Figure 16: Bus Lane Infrastructure in Redbridge**

TfL iBus data can be used to quantify where the greatest delays/lowest speeds are incurred within the Borough. This can be analysed and a programme of interventions developed to improve bus reliability and average speeds. The focus for future capital improvements from the LIP corridor and neighbourhood programme will be to deliver the healthy high street corridors with the tier 1 routes delivered first.

The Borough will seek to work alongside TfL and other public transport providers to improve interchange at stations. Where the stations align with the healthy high street programme we will seek bus priority measures and pedestrian amenity improvements at junctions and bus stops to make interchange between modes as seamless as possible.

There is a requirement for bus passengers to cross the road at all bus stops to complete their return journey and we will seek to reduce this barrier throughout the bus network by calming these roads and improving pedestrian crossing amenity throughout to compliment more dynamic high streets where people have easy access to amenities both sides of the street.

Pedestrian amenity improvements will include provision of crossing facilities and drop kerbs on desire lines and Legible London wayfinding across all our town centres, low emission neighbourhoods, leisure destinations and business hubs. We will also promote use of mobility apps that empower residents with live travel information from multiple transport providers / modes.

Whilst the provision of public transport information is not a direct responsibility for Redbridge it has a role in facilitating the provision of good public transport information in accessible formats at key on-street locations. It can signpost sources of travel information and publicise the TfL and other journey planning apps to schools, businesses and residents via the council website, council libraries and through smarter travel initiatives.

### Borough Objectives

Redbridge has set the following objectives funded under the Our Streets programme in relation to this MTS Outcome:

- MTS7a Working with TfL improve bus speeds through traffic management (e.g. bus priority, parking/loading controls) at key locations (corridors/junctions) where buses are delayed the most.
- MTS7b Review and improve interchange at key locations, including bus-bus interchange where routes intersect in Redbridge low emission neighbourhoods.
- MTS7c Improve cycle parking at public transport hubs and interchanges in Redbridge low emission neighbourhoods.
- MTS7d Work with public transport providers to improve the public transport waiting environment in Redbridge low emission neighbourhoods.
- MTS7e Roll out Legible London signage across town centres in Redbridge.
- MTS7f Utilise Redbridge resources e.g. libraries, website etc. to signpost sources of public transport information.

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

### Challenges and opportunities

The recently adopted (March 2018) Redbridge Local Plan 2015 – 2030 ([https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan\\_070318\\_web-1.pdf](https://www.redbridge.gov.uk/media/4934/10-redbridgelocal-plan_070318_web-1.pdf)) sets out the challenges facing the Borough with regard to housing, jobs and the supporting community infrastructure. The targets for Redbridge are for the creation of 17,250 homes and 5,000 jobs during this period.

Local Plan Policy LP1: Spatial Development Strategy 1 states that the Council will promote growth to deliver the Council's vision by directing new development including new homes, shops, businesses, leisure facilities and infrastructure to:

- a) The borough's five Investment and Growth Areas;
- b) The borough's main town centres; and
- c) Other identified Opportunity Sites outside of Investment and Growth Areas and town centres.

Indicative numbers of housing and jobs to be provided in each Investment and Growth area are shown in table 2.

Within the Redbridge Local Plan policies LP22 Promoting Sustainable Transport and LP23 Cycle and Car Parking set out the Borough's requirements for new developments. These provide the framework for provision of enhanced infrastructure to increase walking, cycling and public transport use, thereby ensuring that active, efficient and sustainable travel will be the best option in new developments. These requirements include;

- Directing investment in housing to areas having a high PTAL
- Support transport projects that improve the usage, reliability, quality, safety and integration with other transport modes of the public transport network
- Actively encourage walking and cycling providing an attractive public realm, safe, convenient and accessible cycle and footpath networks
- Work in partnership with TfL and bus service providers to increase the number of routes in the borough, improving the frequency and efficiency of the bus network, and ensure integration of night bus services with all night Underground services
- Require major development to provide Travel Plans to demonstrate what measures will be introduced to ensure that the future users of developments will be less reliant on private motor vehicles, and promote sustainable forms of transport such as walking and cycling
- Requiring secure accessible and sheltered cycle parking in accordance with the London Plan

Investment and Growth Area		No. of Homes	No. of Jobs
Ilford	LP1A	5,300	3,000
Crossrail Corridor	LP1B	4,850	1,600
King George & Goodmayes Hospitals	LP1Ba	500	-
Billet Road	LP1Bb	800	-
Gants Hill	LP1C	500	600
South Woodford	LP1D	430	600
Barkingside	LP1E	500	125
<b>Total</b>		<b>12,880</b>	<b>5,925</b>

**Table 2: Investment and Growth Areas, Housing and Job Allocations**

Good growth means higher densities near good public transport links. This is particularly relevant in Ilford where the PTAL is highest (6A) but the town centre has a low resident population. The local plan enables this to change substantially with much of the borough's development being proposed on sites in the borough's principal town centre.

Redbridge is currently consulting on amended Development Control guidance to take CIL contributions for workplace travel plan officer revenue support to offer best practice advice on sustainable travel tailored to business needs at a local level.

### Borough Objectives

Redbridge has set the following objectives funded under the Our Neighbourhoods programme in relation to this MTS Outcome:

- MTS8a To support active, efficient and sustainable travel at new developments through planning policies in the Local Plan.
- MTS8b To secure resource to review and manage Travel Plan and Delivery and Servicing Plans in Redbridge and to provide ongoing support to developers and landlords to ensure the delivery of active, efficient and sustainable travel at new and existing developments, which will increase walking and cycling.
- MTS8c Use CIL and S106 funding streams to deliver sustainable transport improvements within the Redbridge low emission neighbourhoods.

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

### Challenges and opportunities

The five Investment and Growth areas are shown on the Redbridge Key Diagram (Figure 3). It can be seen from the Ilford Cross that the Healthy High Streets run through four of the five Investment and Growth areas.

The Elizabeth line increases capacity on the metro line by 50% locally and 10% across London as a whole. The new direct services to central London and interconnecting services to Canary Wharf / Abbey Wood, Heathrow Airport and Reading will stimulate the local economy including the night time and weekend leisure offer.

The local plan encourages development in Ilford and along the Crossrail corridor to take advantage of the increased rail capacity and new direct destinations available. Interchange infrastructure between the four main line stations and the A118 Romford Road / High Road town centres will be progressively improved as the Healthy High Street model is realised over the course of the MTS.

The intention is to create an increasingly virtuous circle that links land use to sustainable transport. Investment in transport infrastructure improves already high PTAL levels, which induces "Good Growth" development. This in turn increases passenger numbers which leads to greater sustainability of public transport. Greater passenger demand will then lead to further investment in public transport.

Where Investment and Growth areas are away from main corridors e.g. Billet Road, Goodmayes Hospital etc. then timely public transport investment will have a greater priority for CIL funding to discourage private car use becoming established with new residents when they move in to their new homes.

The Redbridge Local Plan transport assessment matrix identifies highway network mitigation locations associated with the new housing sites identified. As development comes forward CIL funding will be used to improve the highway network in a coordinated manner. Bringing forward improvements at overcapacity junctions will unlock housing sites associated with negative impacts on these parts of the highway network.

Future workplace parking levy mechanisms will be examined to encourage sustainable travel choice. Any monies raised through this mechanism will be reinvested in the delivery and maintenance of the High Streets and Redbridge low emission neighbourhood programme.

## Borough Objectives

Redbridge has set the following objectives funded under the Our Neighbourhoods programme in relation to this MTS Outcome:

- MTS9a        Use the Elizabeth Line, the enhanced Ilford Cross bus network and other new transport infrastructure and services as catalysts for development.
- MTS9b        Explore the introduction of a workplace parking levy in town centres.
- MTS9c        Seek walking and cycling infrastructure improvements and land for future links, as new development is considered through the development management [Planning Application] process.

## Other Mayoral Strategies

The Borough's strategies and plans are closely aligned to the suite of adopted / draft GLA strategies that are available at time of producing this plan. Whilst the LIP is a specific response to the MTS it has many parallel ambitions with the mayors Environment Strategy 2017.

Redbridge supports London becoming a greener and cleaner city, with quiet spaces for reflection and rest which is demonstrated by the Ilford Garden Junction project. This multi-year scheme (currently in detailed design stage) addresses a hostile urban environment that suffers from poor air quality, severance and underinvestment. The scheme is on the A118 Romford Road at the border between Redbridge and Newham where the significant barriers of the elevated A406 North Circular Road, the Greater Anglia main line railway and River Roding converge.

The Ilford Garden Junction project creates a green gateway to both Boroughs from the TfL Route Network (A406 North Circular Road) and an improved walking environment in phase 1 and a segregated cycle route into Ilford, and a new river crossing to address historic local severance in phase 2. The Tunnelling and Underground Crossrail Academy is located in this area and is set back from the high road. Part of the phase 2 proposals are to create a new pedestrian entrance to give it more presence on the street and to entice new development to this area which has river frontages, excellent transport links and a metropolitan town centre on its doorstep, see Figure 17.



**Figure 17: The Ilford Garden Junction Proposal**

Redbridge and its contractors are doing their part to move to a low carbon circular economy with vehicle fleet upgrades programmed and the ambition to deliver services in new ways to reduce environmental impacts by reviewing good practice elsewhere. We support London being a national park city and its ambition to be 50% green by area - as a Borough we are already one of the greenest in London and would expect to exceed 50% to help balance some of the more urban parts of London.

Through our aspiration for sub-regional distribution centres feeding a network of town centre distribution centres we hope to make zero carbon last mile deliveries normal over the life of this plan. The scheme envisaged will initially focus on public sector users but will be rolled out to local businesses to support the mayoral ambitions of making London a zero Carbon city with the best air quality of any major city by 2050.

The draft Economic Strategy is important to this LIP as it relates to the London-wide investment in, and expansion of public transport and how it supports wider regeneration and good growth at a local level. To achieve our ambition of significant mode shift to sustainable means the bus must become a preferred alternative to the private car and enhancements to the frequency and network must be provided in conjunction with penalties for private car use. The Ilford Garden Junction project typifies this link as it is a

joint Borough scheme that improves sustainable links the residential community on Little Ilford (Newham) with the town centre and public transport options in Ilford (Redbridge) as part of a wider regeneration project.

The reallocation of central London bus services to outer London once Crossrail opens is an important step to enable change in Londoners travel behaviour and demonstrates a long-term commitment to transforming the sustainable transport options available throughout Greater London.

Potential future sources of funding include implementation of local or Borough-wide parking levies on private car parks and any new road user charging scheme. These funding streams will need to be coordinated at a London level to avoid unplanned effects such as displacement of traffic and revenue will be locally controlled through a transparent mechanism that creates a better connected urban environment to support a sustainable and healthy lifestyle for residents.

Redbridge has adopted the London Plan parking standards within its Local Plan so it has aligned its development control standards with London's strategic approach to address parking in new development in a sub-urban setting where there are varying levels of access to public transport.

## **3. 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**

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

**TABLE 3 - 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
Programme name										
1	Introduction of Redbridge low emission neighbourhoods.	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	Complete local cycle network	✓	✓	✓	✓	✓	✓		✓	✓
3	Workplace behavioural change initiatives	✓	✓	✓	✓	✓		✓	✓	✓
4	Trial demand responsive transport	✓		✓	✓	✓	✓	✓	✓	✓

## **TfL Business Plan**

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

The following TfL projects have implications for the borough.

- Stratford low emission bus zone
- A12 Gants Hill Speed Reduction
- Redbridge Roundabout
- Ilford to Barking cycle route
- Ilford to Stratford cycle route
- Ilford station rebuild (as part of Crossrail / Elizabeth Line works)

### **Implications for borough**

The council supports the Stratford low emission bus zone which stops short of Ilford in LB Newham. We will seek to link this corridor to the Healthy High Streets at Ilford Cross with complementary works to be carried out by the borough that bring the benefits of improved air quality to this core corridor of high streets.

The council will consider the implications of speed reductions on the A12 at Gants Hill specifically but also on other sections, particularly the built up areas such as Newbury Park and by Beal School on the A1400 Woodford Avenue.

The borough welcomes all investment in sustainable modes, particularly cycling links that link across administrative borders to give our residents better local transport choice.

The two strategic cycle routes linking Ilford with Barking and Stratford will enable sustainable choices for the existing and future residents of these town centres and their surrounding catchments.

It is a key aspiration of the Local Plan and the LIP to facilitate "good growth" in the intensification of Ilford and to encourage existing residents and businesses to change behaviour to take advantage of Ilford's highly accessible location.

## Sources of funding

Table 4 below identifies potential funding sources for implementation of our LIP, including LIP funding allocation from TfL, contributions from the borough's own funds, and funding from other sources.

The key source of funding is the borough's LIP allocation. Figures provided by TfL indicate that the borough will receive £2.076m per year, plus £0.1m local transport initiatives funding for local priorities, totalling £2.176m.

In addition to the above, the borough is seeking £3.7m from TfL between 2019/20 and 2021/22 in response to the following successful bids:

- a. *Liveable Neighbourhood: Ilford Garden Junction Phase 2*
- b. *Mayors Air Quality Fund: Ley Street Low Emission Neighbourhood*

The borough also uses its own, and developer's resources to pursue local objectives and ensure that the footway, cycleway and road networks remain in a safe and serviceable condition through CIL and S106 contributions.

<b>TABLE 4 - Potential funding for LIP delivery</b>				
Funding source	2019/20	2020/21	2021/22	Total
	£m	£m	£m	£m
<b>TfL/GLA funding</b>				
LIP Formula funding –Corridors & Supporting Measures	2.176	2.176	2.176	6.528
Discretionary funding (See 3 Year Programme)	0.940	2.469	1.384	4.793
Strategic funding	3.270	1.578	1.676	6.524

GLA funding	0.070	0.055	0.076	0.201
Sub-total	6.456	6.278	5.312	18.046
<b>Borough funding</b>				
Capital funding	4.505	4.505	3.200	12.210
Revenue funding	2.802	2.802	2.802	8.406
Sub-total	7.307	7.307	6.002	20.616
<b>Other sources of funding</b>				
S106	0.300	0.300	0.300	0.900
CIL	0.500	0.500	0.500	1.500
Sub-total	0.800	0.800	0.800	2.400
<b>Total</b>	<b>14.563</b>	<b>14.385</b>	<b>12.114</b>	<b>41.062</b>

### Long-Term interventions to 2041

In the medium to long-term the borough believes that a number of significant, but currently unfunded, investments will be required to ensure the economic and social vitality of the borough. These are shown in Sample Table 5 below with indicative funding and indicative but uncommitted timescales.

**TABLE 5 - Long-term interventions up to 2041**

<b>Project</b>	<b>Approx. date</b>	<b>Indicative cost</b>	<b>Likely funding source</b>	<b>Comments</b>
Redbridge low emission neighbourhoods Introduction of healthy streets principles to local areas	2020-2030	£20.0M	LB Redbridge, TfL and developer contribution	<ol style="list-style-type: none"> <li>1. Improvements to transport hub accessibility</li> <li>2. Better connected journeys, cycle and walking schemes</li> <li>3. Reduction of air pollution around schools</li> <li>4. Connecting green spaces with communities.</li> </ol>
Our Streets Introduction of healthy street network	2020-2030	£20.0M	LB Redbridge, TfL and developer contribution	<ol style="list-style-type: none"> <li>1. Introduce 20mph speed limit on all Borough roads.</li> <li>2. Introduce the School Clean Air Zones programme.</li> <li>3. Review the road network classification to optimise multi-modal capacity.</li> </ol>
Redbridge low emission neighbourhoods Complete local cycle network	2020-2025	£10.0M	LB Redbridge, and TfL	Complete links shown on Borough cycle map and top TfL Strategic Cycling Connections (Stratford - Ilford and Ilford – Barking Riverside)

Workplace behavioural change initiatives	2020-2041	£5.3m	LB Redbridge, and TfL	Redbridge to provide a workplace travel officer to work with businesses on their travel plans and use the £0.25m/year to run campaigns and initiatives with businesses to reduce their travel requirements.
Trial demand responsive transport	2025-2030	£5.0m	TfL and developer contribution	Trial demand responsive transport at redeveloped rail station car parks.
Introduce Ilford and South Woodford local consolidation centres	2030-2041	£30.0M	LB Redbridge, TfL and developer contribution	Feasibility study required.  Public sector lead.

### Three-year indicative Programme of Investment

The Three Year Indicative Programme of Investment has been completed in the table 6 below.

<b>TABLE 6 - Three-year indicative programme of investment for the period 2019/20 to 2021/22</b>			
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 Redbridge  TfL BOROUGH FUNDING 2019/20 TO 2021/22	Programme budget		
	Allocated 2019/20	Indicative 2020/21	Indicative 2021/22
Local transport initiatives	0.100m	0.100m	0.100m

CORRIDOR, NEIGHBOURHOODS & SUPPORTING MEASURES	2.076m	2.076m	2.076m
<b>Redbridge Low Emission Neighbourhoods</b>			
School Clean Air Zones	0.035	0.200	0.200
Redbridge Low Emission Neighbourhoods	0.600	1.000	1.000
Vision Zero Interventions	0.165	0.165	0.165
Play Streets	0.045	0.045	0.045
On Street Cycle Parking	0.100	0	0
Traffic Modelling	0.300	0.100	0
Workplace Travel Project	0.165	0	0
Healthy Streets (Street TAG)	0.050	0.050	0.050
Cycle Network Development	0.310	0.210	0.310
Active and Sustainable Travel	0.306	0.306	0.306
Sub-total	£2.176m	£2.176m	£2.176m
DISCRETIONARY FUNDING			
Liveable Neighbourhoods	0.940	1.695	0.610
Ilford Garden Junction Phase 2			

Major Schemes	0	0	0
Principal road renewal	0	0.574	0.574
Bridge strengthening	0	0.200	0.200
Traffic signal modernisation	0	0	0
Sub-total	£0.940m	£2.469m	£1.384m
STRATEGIC FUNDING			
Bus Priority	0.500	0.500	0.500
Borough cycling programme	1.000	1.000	1.000
Crossrail complementary works	0.500	0	0
Mayor's Air Quality Fund Ley Street Depot & Schools	0.470	0.078	0.176
Low Emission Neighbourhoods Ilford Garden Junction Phase 1	0.800	0	0
Sub-total	£3.270m	£1.578m	£1.676m
All TfL borough funding	£6.386m	£6.223m	£5.236m

## Supporting commentary for the three-year programme

The borough is moving to a neighbourhood based management system for all its environmental service functions and will identify holistic Redbridge low emission neighbourhoods based on the LIP3 principles that address each of the Redbridge street and neighbourhood based priorities to address our MTS targets.

The available [Borough, TfL and other external] budgets will be used together to give more financial programming certainty to a rolling three year implementation plan so delays on one project are offset by advancing other projects based on priority and deliverability.

The neighbourhoods are being developed in a priority order set out in Figure 18.

<b>Scheme Area</b>	<b>Funding Source</b>	<b>Indicative timings</b>	<b>Scheme type</b>
Ilford Garden Junction	MAQF & Liveable Neighbourhood	Starting 2019	TfL Low Emission Neighbourhood
Ley Street	MAQF (bid applied for)	Starting 2019	TfL Low Emission Neighbourhoods
Newbury Park (Horns Road to Cranbrook Road)	TfL LIP Funding	Starting 2019	Redbridge Low Emission Neighbourhoods
Wanstead (Approx area to include roads around Wanstead Station and area to the West of Wanstead High Street)  Oakdale/ George Lane / Chigwell Road area	TfL LIP Funding	Starting 2020	Redbridge Low Emission Neighbourhoods
Cranbrook / Valentines	TfL LIP Funding	Starting 2021	Redbridge Low Emission Neighbourhoods
Ss Peter Paul/ Gordon Primarys Fairlop Primary Churchfields Primary	TfL LIP Funding MAQF (bid applied for)	2019/20	School Clean Air Zone
Redbridge Primary Fullwood Primary Oakdale Primary	TfL LIP Funding MAQF (bid applied for)	2020/21	School Clean Air Zone
Christchurch Primary	TfL LIP Funding MAQF (bid applied for)	2021/22	School Clean Air Zone

**Figure 18: Three-year indicative Scheme Programme**

By engaging more directly with ward councillors, businesses and local people there will be more ownership of the solutions identified that make the borough cleaner, fairer and

healthier in transport terms which should reduce the risks inherent in consultation that is necessary in all transformative regeneration.

This local engagement will in turn shape the priorities and structure of the delivery programme and demonstrate why decisions on resources have been made. The balance of delivery and expectation within the funding, policy and local constraints needs to be robust and transparent so the packages delivered are considered successful at a local level and can be built on to deliver healthier streets and empowered citizens.

The Vision Zero workstream consists of a programme of physical interventions and behavioural change initiatives that are prioritised through an evidence base of data and analysis. This workstream will be funded annually at a strategic level through borough funding and delivered locally through the LIP and council funded infrastructure programme, specifically the Redbridge Low Emission Neighbourhood schemes (RLEN).

The Borough has been divided into 4 Neighbourhood areas – North, South, East and West. The RLEN schemes are local area schemes being developed within each of these 4 Neighbourhood areas. The intention is to merge part of the Borough funded capital programme with part of the LIP funding to deliver these ward / village plans and transform the entire Borough during the 20 year life of this plan.

The local ward / village plans will consider and prioritise Vision Zero, road maintenance, street lighting, tree planting, place setting, station access and sustainable travel considerations in development of holistic and integrated solutions for each location.

Vulnerable road users will be targeted with specific safety interventions and education and safety campaigns to address the specific dangers that affect motorcyclists, pedestrians and cyclists. Our Schools Clean Air Zone programme restricts vehicular access to roads fronting school entrances to improve the air quality impacting children at peak school times also improves safety at these locations by removal of traffic conflicts.

We will use our Smarter Travel resources to target activities through the Schools Clean Air Zone programme and RLEN ward / village plans including cycle parking, play streets and Street TAG to demonstrate alternative lifestyle choices and sustainable transport options which will then be used strengthen the plans as they develop further.

### **Risks to the delivery of the three-year programme**

Table 7 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.

**TABLE 7- LIP Risk Assessment for three-year programme 2019/20-2021/22**

Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
<b>Financial</b>					
Liveable Neighbourhood bid [Ilford Garden Junction] fails and match funding not used		M		Advance other priority projects to utilise LBR funds set aside.	Ilford Garden Junction remains at stage 1 and other funding sources are required to complete project.
<b>Statutory / Legal</b>					
TfL Buses raise concerns over High Street proposal changing their ticket box receipts.		M		Brief for modelling work to be compiled with key stakeholders.	Bus routes will not be realigned to create well connected high streets.

<b>Third Party</b>					
EVCP roll out does not match demand.			L	Capture of EVCP requests to council and keep roll out use under review.	Negative impact on EV owners who do not have private parking facilities.
<b>Public / Political</b>					
Public Consultation response not in favour of loss of parking / reallocation of road space to sustainable modes.	H			Promotion of benefits of Healthy Streets approach in consultation and member briefing.	Re-design scheme in phases to deliver gains and seek alternative design solutions that deliver similar benefits with less adverse impact for future consideration.
<b>Programme &amp; Delivery</b>					
Changing local priorities that effect programme delivery.			L	Work closely with Neighbourhood Forums on the vision, funding and programme issues to establish an agreed local priority list of works and initiatives.	Funding to be relocated according to funding source either within the Neighbourhood or boroughwide.

## **Annual programme of schemes and initiatives**

The annual programme of schemes has been completed and submitted to TfL via the Borough Portal. The programme of schemes will be updated annually.

## **Supporting commentary for the annual programme**

The submitted annual spending submission for 2019/20 sets out the emergent Neighbourhood approach to future TfL LIP funded projects. This funding will be partly merged with the Redbridge funded highway capital programme, specifically for the Vision Zero and Redbridge Low Emission Neighbourhood (RLEN) projects.

The Local Priority Initiative funding will be complemented by Borough funds and used to match fund external bids including preparatory works and bidding materials.

The Corridor, Neighbourhood and Supporting Measures funding will deliver specific measures as identified in Table 6 which are explained below.

The Boroughs School Clean Air Zones trial is intended to be rolled out to all qualifying schools to address the impact of traffic congestion at the school gate by use of CCTV to restrict vehicles at peak times. The trial schools will be completed in 2019/20 and a prioritisation mechanism developed to assess the order of the remainder of this programme. Schools that do not qualify for this programme will be identified for other improvements through the RLEN plans.

The RLEN projects are intended to be the principal mechanism to deliver local capital programme improvements in Redbridge. The programme will draw on LIP and Borough funding to fund improvements that have been locally agreed via village / ward plans. These plans are being developed with local stakeholders and ward councillors and will be updated on a regular basis so they support the RLEN consultations and reflect on works undertaken elsewhere and help deliver the LIP3 targets and wider MTS ambitions.

By identifying safety, maintenance, place setting and sustainable travel improvements together we expect to make delivery savings in capital and time, and make a greater local impact with each scheme.

The specific interventions will include 20mph speed limits on borough roads (as part of the Borough wide 20 mph transformation), picking up highway / footway works identified in the 4 year priority programme, make improvements to station areas to enhance bus/cycle/foot interchange routes based on local demand and create better places in line with the Healthy Streets model and Our Streets strategy.

Part of the Borough capital programme funding will be directed to borough-wide strategic works which will include evidence based maintenance and safety works. The LIP2 accident

remedial programme identified A rated schemes based on Redbridge's Prioritization Matrix. This programme of work will be completed in 2019/20 after which the assessment process will be changed to include the Vision Zero objectives and the outputs will be produced at a strategic and local level. The LIP3 Vision Zero strategic interventions will continue to be funded using Borough funding to address wider safety concerns and these will be complemented by the local RLEN funded safety improvements.

Redbridge introduced play streets in 2018/19 and they are very popular and successful so funding is being set aside to set up more of these borough-wide including initiatives such as Play-Road which is a large scale event that consists of zebra crossings, traffic lights, road signs, one/two way cycling and a dress up wardrobe that promotes who keeps us safe on our roads and communities.

By merging play streets ideas with temporary street closures on school streets, and at community and private events we can expose large audiences to active travel and behaviour change in a positive way and challenge the dominance of the private car on residential streets.

Since the Borough Cycle Programme ended the borough has not had a dedicated budget for on street cycle parking and a one-off intervention is proposed to address this short-coming to capitalize on existing support for interventions such as cycle hangers which replace car parking spaces with secure cycle parking for residents. This programme is intended to be a quick win (removing barriers to cycling where residents live in flats) to demonstrate sustainable initiatives to local communities as the RLENs are developed.

We will model the impacts of the removal / downgrading proposals for the Ilford gyratory system. The phasing of these works must be introduced in a manner that identifies and minimises adverse impacts. A bus re-routing study also needs to be commissioned to enable the interchange between routes that capitalises on the new hopper fare mechanism to enable mode change on the proposed tiered bus network.

We are about to deliver a transformative workplace travel project for Redbridge staff and Ilford residents to make transport within Ilford safer and more sustainable. This scheme will utilise car clubs, electric pool bikes and pool Oyster cards to change staff travel behaviour whilst working for the council and offer these benefits to local people, specifically those residents living in car free development in Ilford.

Street TAG (or similar) is an interactive activity aimed at young people and families that encourage walking in local parks and other accessible spaces. This activity will be trialled across the Borough and will be a new tool for the Smarter Travel team to use to engage with residents.

The local cycle network will be reviewed and incrementally improved commencing with works to the north of Ilford. It is essential to complete the local cycle network to enable sustainable transport options and comply with our LIP3 targets and Mayoral ambitions.

The active and sustainable travel programme continues the well established borough-wide smart travel work within schools that encourage sustainable transport in line with wider objectives. The smarter travel team will also specifically target the Schools Clean Air Zone programme and RLEN ward / village plans with cycle parking, play streets and Street TAG to demonstrate alternative lifestyle choices and sustainable transport options.

### **Risk assessment for the annual programme**

Table 8 below shows the principal risks associated with delivery of the LIP together with possible mitigation actions for the annual programme. The risk register summarises the strategic risks identified that could impact on the annual programme of schemes / initiatives.

**Table 8 - LIP Risk Assessment for annual programme - 2019/20**

Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
<b>Financial</b>					
Changes to funding levels		M		Confirmed funding allocation(s).	Delivery Programme will need to be reduced to suit budget.
<b>Statutory / Legal</b>					
Legal challenge to use of CCTV enforcement outside schools.			L	Robust data collection to quantify benefits and impacts of scheme at consultation stage.	Delay to roll out of trial programme and potential abandonment of the programme.

<b>Third Party</b>					
Lack of support/ cooperation from key stakeholders			L	Strong cooperative/partnership working arrangements.	Some aspects of programme delivery are dependent on close partnership working with neighbouring authorities and TfL (in the case of the TLRN). The support/cooperation of other stakeholders (e.g. developers, businesses, transport operators, residents, etc.) is also crucial.
<b>Public / Political</b>					
Projects not supported at public consultation		M		Use of local Neighbourhood Forum to agree vision and direction of local investment that aligns with the Our Streets strategy and MTS objectives.	Schemes to be modified to common ground or investment re-directed to other programmes.

Programme & Delivery					
Schemes delayed/not completed			L	Schemes delayed/not completed	<p>Assessing schemes to ascertain their deliverability from the outset (both in terms of available resources and buildability) will prevent abortive work or uncompleted schemes.</p> <p>Regular project management meetings will help ensure that programme slippage is identified at an early stage so that remedial action can be taken to bring delivery back on track.</p>

High Medium • Confirmed funding allocation(s) • determined on the basis that funding will be as indicated in the original settlement letter from TfL. If a higher level of funding is available, then the programme can be extended. Similarly, if funding is lower than the indicative amount, then the programme

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

### **Overarching mode-share aim and outcome Indicators**

A key aim of the MTS is for 80% of all journeys to be made by active, efficient and sustainable modes – public transport, walking and cycling - by 2041. In recognition of this, boroughs have been set ambitious targets to increase walking, cycling and public transport mode share over this period.

Figures for Redbridge reveal that currently 48% of average daily trips are made by walking, cycling and public transport. Our targets for sustainable mode share are 50% by 2021 and 65% by 2041.

As set out in Chapter 3, a variety of public transport initiatives; cycling and walking schemes; 'behaviour change' initiatives; traffic management/reduction measures; and highways and public realm enhancements will inform our approach to increase the proportion of travel by these modes through the Redbridge low emission neighbourhoods. This in turn will help us achieve our LIP priorities of promoting healthy, sustainable travel and creating better streets and neighbourhoods and our Borough priorities of improving health, wellbeing and improving the environment.

Achieving an increase in walking, cycling and public transport mode share is dependent on successful partnerships with a range of stakeholders, including schools, residents, businesses and developers. We will also need to better understand the factors that influence travel mode in each area.

### **Delivery indicators**

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

### **Local targets**

The Council has the option to set and monitor its own local targets for a number of MTS delivery indicators if required. Owing to pressures on resources, the decision has been taken not to set any at this stage. However, this will be kept under review and we will consider setting locally specific targets for a number of indicators during the course of this LIP.

**Table 9 - Borough outcome indicator targets**

Objective	Metric	Borough target	Target year	Delivery Plan Measures to Achieve Targets
<b>Overarching mode share aim – changing the transport mix</b>				
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.	50% 65%	2021 2041	<ul style="list-style-type: none"> <li>• Public Transport Initiatives;</li> <li>• Cycling/Walking Schemes;</li> <li>• ‘Behaviour Change’ Initiatives;</li> <li>• Traffic Management/Reduction Measures;</li> <li>• Highways/Public Realm Enhancements.</li> </ul>

Objective	Metric	Borough target	Target year	Delivery Plan Measures to Achieve Targets
<b>Healthy Streets and healthy people</b>				
<b>Outcome 1: London's streets will be healthy and more Londoners will travel actively</b>				
Londoners to do at least the 20 minutes of active travel they need to stay healthy each day	Proportion of London residents doing at least 2x10 minutes of active travel a day (or a single block of 20 minutes or more).	30% 70%	2021 2041	<ul style="list-style-type: none"> <li>• Cycling/Walking Schemes;</li> <li>• 'Behaviour Change' Initiatives;</li> <li>• Highways/Public Realm Enhancements.</li> </ul>
Londoners have access to a safe and pleasant cycle network	Proportion of Londoners living within 400m of the London-wide strategic cycle network.	6% 47%	2021 2041	<ul style="list-style-type: none"> <li>• Cycling/Walking Schemes;</li> </ul>
<b>Outcome 2: London's streets will be safe and secure</b>				
Deaths and serious injuries from all road collisions to be	Deaths and serious injuries (KSIs) from road collisions, base year 2005/09 (for 2022 target)	56	2022	<ul style="list-style-type: none"> <li>• Highways/Public Realm Enhancements;</li> </ul>

Objective	Metric	Borough target	Target year	Delivery Plan Measures to Achieve Targets
eliminated from our streets	Deaths and serious injuries (KSIs) from road collisions base year 2010/14 (for 2030 target).	38  0	2030  2041	<ul style="list-style-type: none"> <li>• Traffic Management/Reduction Measures;</li> <li>• 'Behaviour Change' Initiatives;</li> <li>• Cycling/Walking Schemes.</li> </ul> <p>The 0 target is aspirational across London.</p>
<b>Outcome 3: London's streets will be used more efficiently and have less traffic on them</b>				
Reduce the volume of traffic in London.	Million vehicle kilometres in given year. Base year 2015. Reduce overall traffic levels by 10-15 per cent.	1089  1035	2021  2041	<ul style="list-style-type: none"> <li>• Traffic Management/Reduction Measures;</li> <li>• 'Behaviour Change' Initiatives;</li> <li>• Public Transport Initiatives;</li> <li>• Cycling/Walking Schemes.</li> </ul>
Reduce the number of freight trips in the	10 per cent reduction in number of freight vehicles crossing into central London in the	N/A	N/A	N/A

Objective	Metric	Borough target	Target year	Delivery Plan Measures to Achieve Targets
central London morning peak.	morning peak period (07:00am - 10:00am) by 2026.			
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.	104,200 101,200	2021 2041	<ul style="list-style-type: none"> <li>• Traffic Management/Reduction Measures;</li> <li>• 'Behaviour Change' Initiatives;</li> <li>• Public Transport Initiatives;</li> <li>• Cycling/Walking Schemes.</li> </ul>
<b>Outcome 4: London's streets will be clean and green</b>				
Reduced CO <sub>2</sub> emissions.	CO <sub>2</sub> emissions (in tonnes) from road transport within the borough. Base year 2015/16.	225,600 73,300	2021 2041	<ul style="list-style-type: none"> <li>• Traffic Management/Reduction Measures;</li> <li>• 'Behaviour Change' Initiatives;</li> <li>• Public Transport Initiatives;</li> </ul>
Reduced NO <sub>x</sub> emissions.	NO <sub>x</sub> emissions (in tonnes) from road transport within the borough. Base year 2013.	360 50	2021 2041	<ul style="list-style-type: none"> <li>• 'Behaviour Change' Initiatives;</li> <li>• Public Transport Initiatives;</li> </ul>

Objective	Metric	Borough target	Target year	Delivery Plan Measures to Achieve Targets
Reduced particulate emissions.	PM <sub>10</sub> emissions (in tonnes) from road transport within borough. Base year 2013.	72	2021	<ul style="list-style-type: none"> <li>• Cycling/Walking Schemes.</li> <li>• Highways/Public Realm Enhancements.</li> </ul>
		53	2041	
Reduced particulate emissions.	PM <sub>2.5</sub> emissions (in tonnes) from road transport within borough. Base year 2013.	35	2021	
		25	2041	
<b>A good public transport experience</b>				
<b>Outcome 5: The public transport network will meet the needs of a growing London</b>				
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.	153	2021	<ul style="list-style-type: none"> <li>• Public Transport Initiatives;</li> <li>• 'Behaviour Change' Initiatives;</li> <li>• Traffic Management/Reduction Measures.</li> </ul>
		230	2041	
<b>Outcome 6: Public transport will be safe, affordable and accessible to all</b>				

Objective	Metric	Borough target	Target year	Delivery Plan Measures to Achieve Targets
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	<ul style="list-style-type: none"> <li>• Public Transport Initiatives;</li> <li>• Traffic Management/Reduction Measures;</li> <li>• Highways/Public Realm Enhancements.</li> </ul>
<b>Outcome 7: Journeys by public transport will be pleasant, fast and reliable</b>				
Bus journeys will be quick and reliable, an attractive alternative to the car	Annualised average bus speeds, base year 2015/16	10.4	2021	<ul style="list-style-type: none"> <li>• Public Transport Initiatives;</li> <li>• Traffic Management/Reduction Measures;</li> <li>• Highways/Public Realm Enhancements.</li> </ul>
		10.8	2041	
<b>New homes and jobs</b>				
<b>Outcome 8: Active, efficient and sustainable travel will be the best options in new developments</b>				
<b>Outcome 9: Transport investment will unlock the delivery of new homes and jobs</b>				

<b>Objective</b>	<b>Metric</b>	<b>Borough target</b>	<b>Target year</b>	<b>Delivery Plan Measures to Achieve Targets</b>
These two outcomes have no identified indicators				