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London Borough of Bexley Local Implementation Plan

2019/20 – 2021/22

May 2019

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Foreword

I am pleased to introduce the third Local Implementation Plan (LIP) of the London Borough of Bexley.

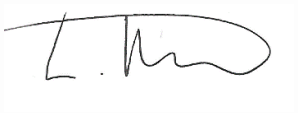
It is a statutory requirement of every London borough to produce a LIP that sets out how the Council will contribute towards the implementation of the Mayor of London's Transport Strategy (MTS), the most recent version of which was published in March 2018.

The structure of this LIP follows TfL's recommended format and our officers have worked closely with those of TfL to develop a number of objectives that promote the transport improvements that both Bexley needs and supports the goals set out in the MTS.

We have consulted widely on the draft LIP and have taken into account the responses and, in developing our objectives, we have considered local needs and aspirations as well as taking into account challenges and opportunities. As a result of this process, we have a set of objectives that not only serve the purposes of the LIP but will support the Council's emerging Local Plan.

Transport is fundamental to keeping Bexley moving and will have a crucial role to play in helping Bexley achieve its growth potential. This is reflected in the Delivery Plan and the Programme of Investment for 2019/20 to 2021/22 in this document. Mindful of the funding constraints, we have selected our priorities carefully.

I would like to thank all individuals and interested organisations for their participation in the process and Council officers for their ongoing work.



Councillor Louie French

Cabinet Member for Growth

(May 2019)

1. Introduction and Preparation of the Draft Local Implementation Plan

1.1 Introduction

1.1.1 The Local Implementation Plan (LIP) is a statutory document prepared under Section 145 of the Greater London Authority (GLA) Act 1999 and sets out how the Council proposes to deliver the Mayor's Transport Strategy (MTS) in the borough, 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 issued by Transport for London (TfL).

1.1.2 This document is the third LIP for the London Borough of Bexley. Whilst the third LIP covers the same period as the MTS published in March 2018 [2019-2041], 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 term goals and transport objectives for Bexley as well as 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 Council is seeking to achieve. A more detailed delivery plan is provided for the financial year 2019/20.

1.1.3 This LIP identifies how the Council will work towards achieving the MTS goals of:

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

1.1.4 The Council is aware that the overarching aim of the MTS is for 80 per cent of all trips across London to be made on foot, by cycle or using public transport by 2041, compared to 63 per cent today, and that there are different targets set for central, inner and outer London. Bexley's target is 63% against an observed mode share of 42% between 2013/16. The LIP outlines how the Council will set local priorities and targets to assist with achieving this aim.

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

1.2 Local Approval Process

1.2.1 Elected Members provided guidance during the development of the Draft LIP.4

1.2.2 A draft was approved for consultation by the Cabinet Member for Growth in October 2018. The Final Draft LIP gained approval by the Public Cabinet on 28 January 2019 prior to

submission to TfL for the Mayor's consideration. The LIP was adopted at the Full Council meeting on 6 March 2019 and The Mayor of London issued his approval on 12 April 2019.

1.3 Statutory Consultation

1.3.1 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

1.3.2 The Cabinet Member for Growth approved the submission of the Consultation Draft LIP to TfL by the stipulated deadline of 2 November 2018 and the commencement of the five-week wider consultation with the relevant stakeholders in accordance with TfL's Guidance.

1.3.3 The Council directly consulted the following:

- TfL
- Metropolitan Police (Bexley Borough Commander)
- Bexley Business Partnership
- Bexley Association of Disabled People
- Bexley Local Agenda 21 UK – Traffic/Transport Forum
- Erith Forum
- LB Havering
- LB Barking & Dagenham
- LB Bromley
- RB Greenwich
- Dartford BC
- Kent CC

1.3.4 The consultation details, including a copy of the Consultation Draft LIP3, were included on the Council's website. Details were also included in the Council's monthly email newsletter Bexley

Magazine Extra, which goes out to thousands of subscribers and links to all current consultations. The consultation was also promoted via Twitter and received many "retweets".

1.3.5 A summary of the responses received, and actions taken is included at Appendix C.

1.4 Statutory duties

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

1.4.2 The Council has met its statutory duty and completed a Strategic Environmental Assessment (SEA) Environmental Report and undertaken an Equality Impact Assessment (EqIA) on the proposals for this draft LIP. The LIP Outcomes and programmes have been assessed for both purposes.

1.4.3 The SEA Environmental Report and the EqIA were included with the Consultation Draft LIP3 and revised as necessary as a result of comments received during the consultation process. The Environmental Report and EqIA remain on the Council's website.

1.5 LIP approval

1.5.1 The Consultation Draft LIP3 was revised to address the consultation responses, including those from TfL, to produce the Final Draft LIP3 which was submitted to TfL by the deadline of 16 February 2019. The Mayor of London gave his approval on 12 April 2019.

2. Borough Transport Objectives

2.1 Introduction

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

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

2.2 Local Context

Spatial Context

2.2.1 Bexley is an outer London borough situated at the heart of the Thames Gateway [London] sub region in south east London and covers about 64 square kilometres. Its location is shown below in Fig.2.1. Bexley's location on the A2 and A20 corridors makes it a gateway to London from the Channel port of Dover and the Channel Tunnel near Folkestone. There is also good access to Stansted, Gatwick, Heathrow and London City airports and Ebbsfleet International railway station is just a few miles away.

2.2.2 Much of Bexley is residential in nature with many areas of open space but with several large areas of industrial activity. There is less office activity compared with most areas of London. The borough has a five-mile frontage onto the River Thames in the north which includes the Belvedere Employment Area, one of the largest concentrations of industrial activity in London. Bexley is one of the greenest boroughs in London with over 100 parks and open spaces covering 638 hectares.

2.2.3 Bexley has four district centres – Crayford, Erith, Sidcup and Welling – and one strategic town centre, Bexleyheath, defined as a Major Centre in the London Plan as well as a number of smaller local centres and neighbourhood parades. A new District Centre at Belvedere and new local centres at Abbey Wood and Slade Green are also planned as part of major growth proposals focussed in the north of the borough. Fig. 2.2 shows the borough's main centres, growth areas and current and proposed strategic transport infrastructure.

Demographic Context

2.2.4 Bexley's population is about 245,000 [GLA 2016 estimate], an increase of 5% since the 2011 Census and is predicted to rise to about 300,000 by 2040. It is also an ageing population – by 2050 over 65s will make up about 22% of the population, up from 16% currently. The

population will also become more diverse – black and ethnic minority groups will account for an estimated 30% of the population by 2045, up from 18% at the 2011 Census.

2.2.5 There were about 93,000 households in 2011 [Census data] which is estimated to have increased to nearly 100,000 in 2017 and predicted to increase to more than 125,000 by 2040. Household size is predicted to decrease over the same period although the picture is complex with intensification in the use of the housing stock a recent trend, together with evidence of some increase in household sizes within some populations in some areas.

Fig. 2.1 Map showing Location of Bexley within Greater London

Fig. 2.2 Map showing Key transport improvements and local centres in Bexley

2.2.6 Unemployment for the borough at 4.5% [Labour Market data 2017] is slightly lower than for London as a whole [5.3%]. Overall the level of deprivation from Indices for Multiple Deprivation [IMD 2015], using 37 separate indicators to measure deprivation, show a clear strip of deprivation in the north of the Borough and a small area in the south of the Borough, as shown in Fig. 2.3. The darker the shade the higher the level of deprivation as measured in IMD deciles.

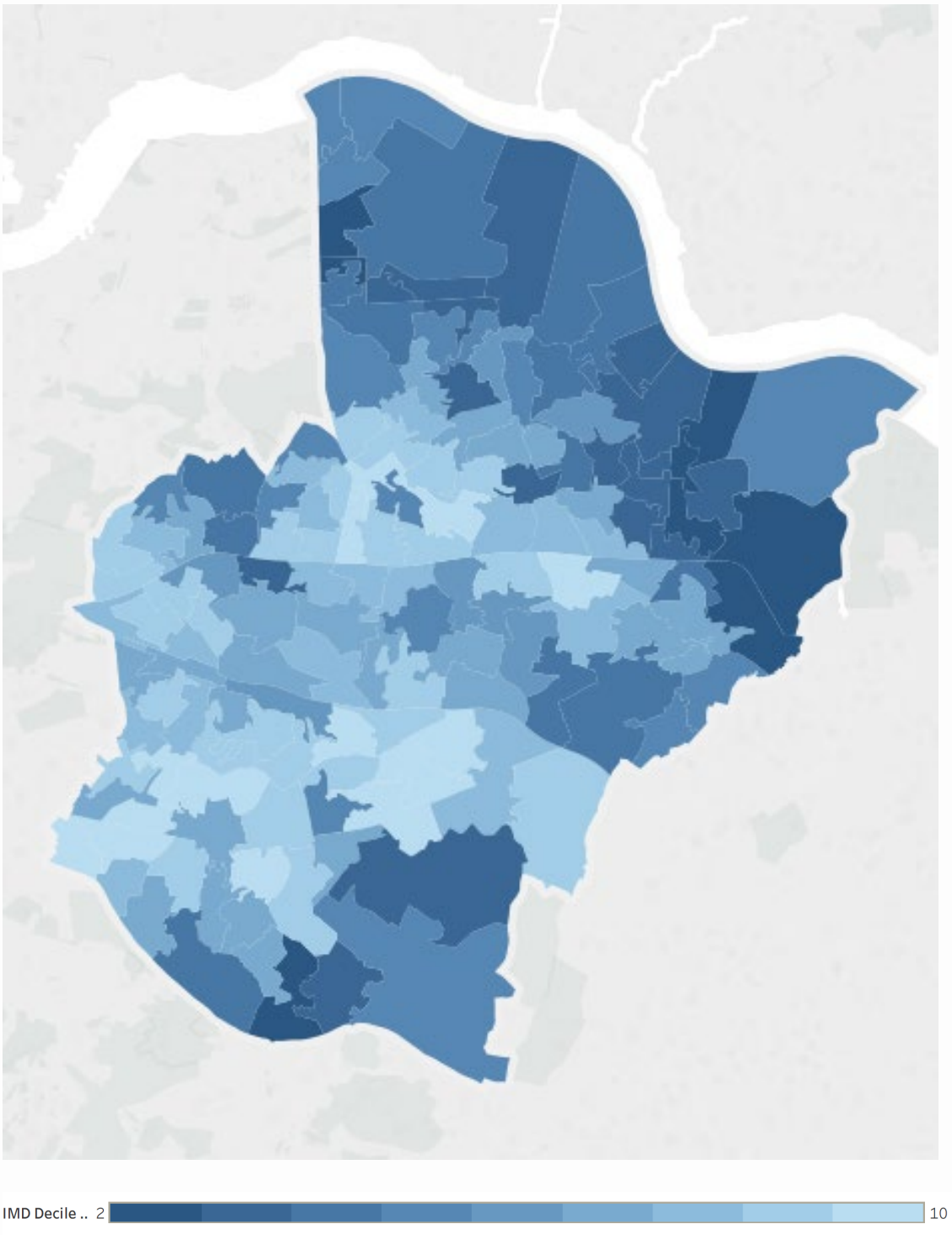


Fig. 2.3 Map showing levels of Borough Deprivation [IMD 2015]

2.3 Transport Context

Public Transport

2.3.1 Bexley does not benefit from access to TfL Underground or Overground rail services, or the Docklands Light Railway (DLR) or tram routes. The public transport network is focused on national rail services and local bus services. Currently there are 34 bus routes serving the borough including 7-night bus routes, of which 15 are high frequency services. The borough's main centres as shown in Fig 2.2, and Thamesmead, are generally well-served by buses. However, the Belvedere industrial area in the north is poorly served by buses and for some of the residential areas of the borough service frequencies are relatively low. There will be changes to the bus network to meet the demand for access to Elizabeth line services from Abbey Wood including a direct bus route 301 serving Bexleyheath. The Elizabeth line services were expected to commence in Autumn 2019 when the original commencement in December 2018 was deferred, however at the time of preparing this document TfL has still not confirmed a firm opening date and further testing is being undertaken.

2.3.2 There are three east-west radial rail services into central London with services typically going to Dartford, Gravesend and the Medway towns. Rail services are currently operated by Southeastern with the main rail movement being commuting into central London. However, the franchise for these services is undergoing a re-tendering process. North-south movement in the borough by rail is difficult although some services are operated on a loop between the radial routes which does allow some orbital journeys. Some Thameslink services have commenced on the North Kent line offering greater connectivity and journey opportunities into central London and areas to the north. The commencement of Elizabeth line services from Abbey Wood were re-scheduled to commence in autumn 2019 rather than the original commencement of December 2018, which will provide new capacity and journey opportunities into Docklands, the City, the West End and Heathrow airport. However, at the time this document was prepared TfL had not confirmed a firm opening date. Public transport accessibility will be greatly improved in areas in the north of the borough as a result and Abbey Wood station has been rebuilt to cater for the increase in train services.

2.3.3 Access to public transport is relatively low in Bexley due to the reliance on national rail services and buses. Only a relatively small area in Bexleyheath town centre benefits from a higher public transport accessibility index [PTAI], as indicated on Fig. 2.4 below. One of the

reasons for poorer accessibility within the town centres compared to other boroughs is due to many of Bexley's railway stations being relatively remote from the centres.

2.3.4 It is noted that MTS proposal 59 for "Potential Orbital Expressways" includes a route between Beckenham Junction and Bexleyheath, indicated on figure 22 of the MTS as an Express Bus Corridor. The Council supports this initiative and looks forward to working with the London Borough of Bromley in identifying any related cross-boundary issues and opportunities.

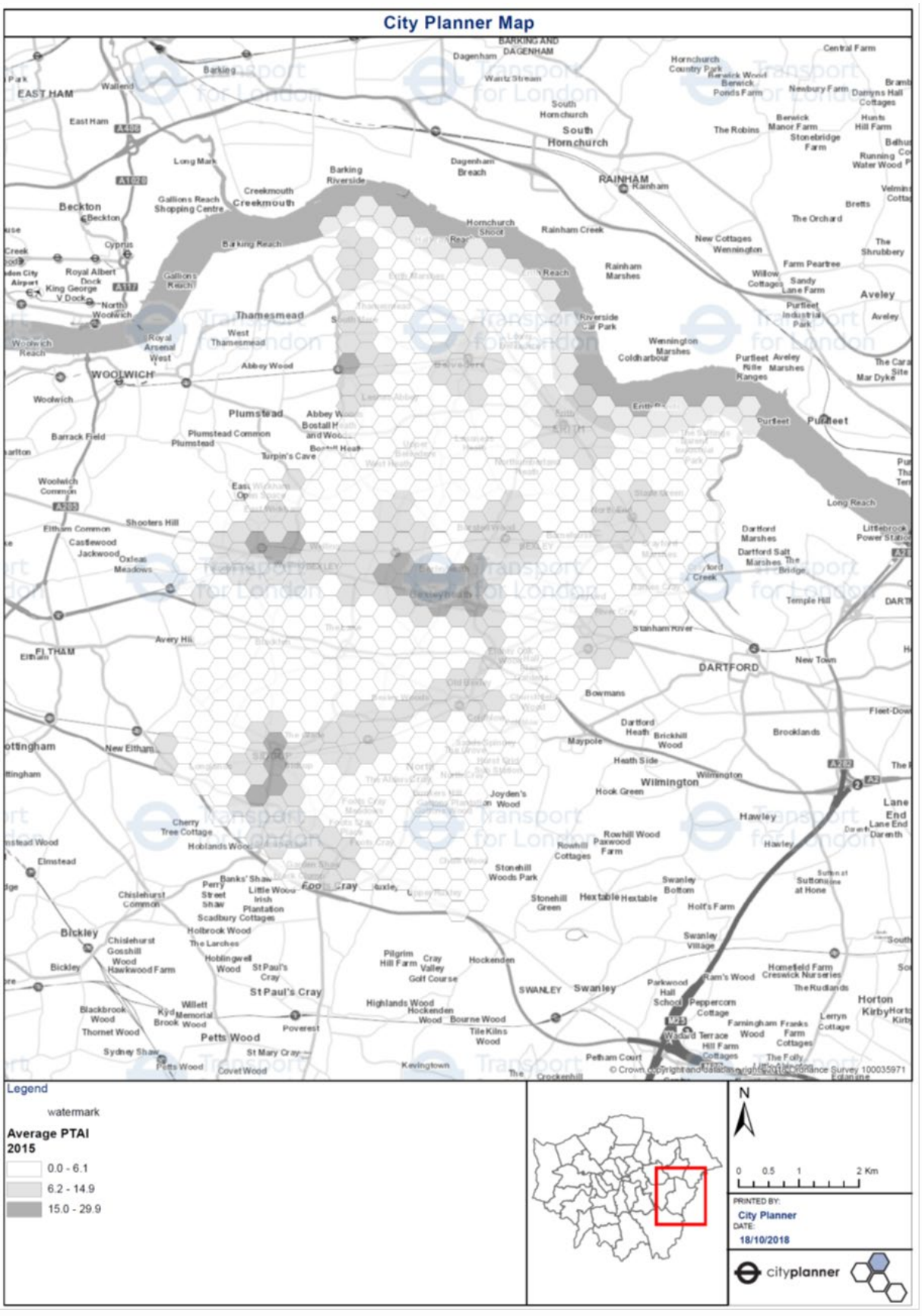


Fig. 2.4 Map showing Public transport accessibility index for Bexley [PTAL - TfL City Planner]

Road Network

2.3.5 There is a total of 348 miles of road in Bexley, of which 50 miles are A and B roads and 298 miles are classified and unclassified local roads. The A2 and A20 are part of the TfL Road Network [TLRN]. The A2 is at or near capacity for extended periods of the day which leads drivers to divert onto local roads as alternative routes. The A2 carries as many as100,000 vehicles per day [DfT 2016] of which 4,500 per hour are in the evening peak period. Fig. 2.5 below provides an overview of traffic flow on the major road network [A roads] since 2000 which shows that the broad trend is a reduction in the volume of traffic despite an upturn in recent years. The pattern is much the same for all the roads in the borough.

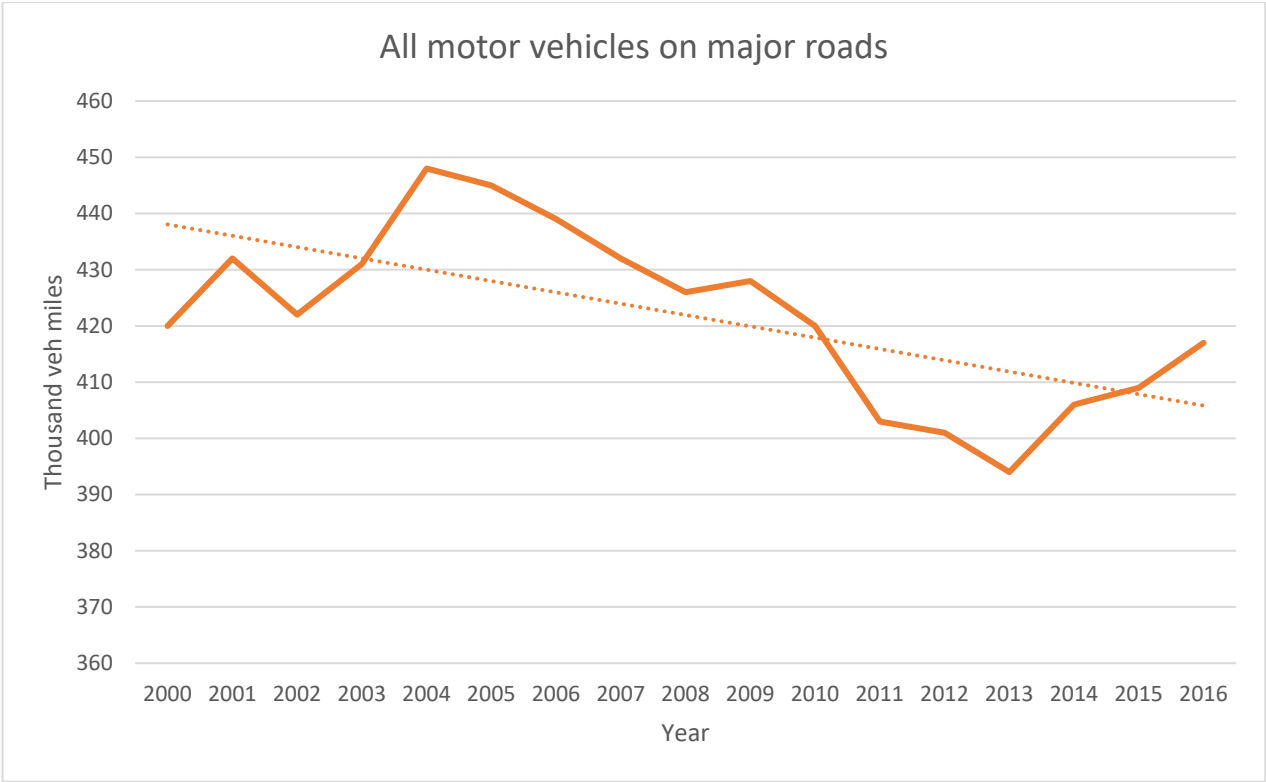


Fig. 2.5 Graph showing Volume of traffic on A roads [DfT 2016 data]

2.3.6 As part of the TfL led Roads Task Force work on developing a strategic road investment programme, the function for Bexley's road network has been defined. Fig. 2.6 shows the existing road definition in which roads are classified by a matrix of place and movement

functions. Most of the borough's roads are classified as Local Street with the focus on access to residential areas. Conversely the role of the majority of Bexley's main road network is for movement. Fig 2.7 shows the matrix of street types, which is also the key to Fig 2.6.

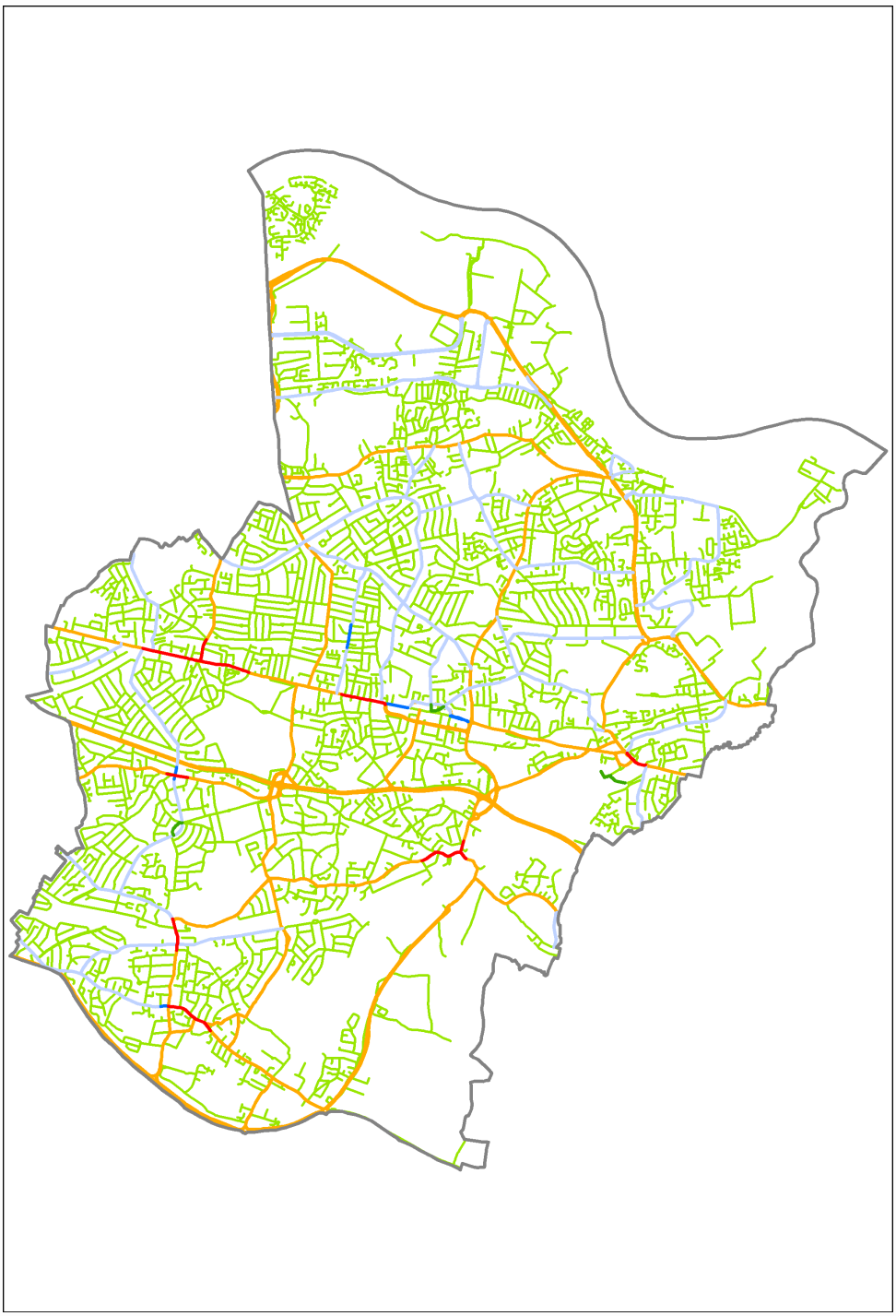


Fig. 2.6 Map showing Movement and Place function for Bexley's Streets

[Key shown in Fig. 2.7]

Fig. 2.7 Movement and Place matrix of street types

2.3.7 The Council has been undertaking traffic counts at particular locations on the road network. Fig. 2.8 below shows the location of the screenlines and traffic count sites [temporary and permanent]. Table 2.1 below summarises the traffic count data [average 7-day traffic flow], which appear to indicate a reduction in radial/east-west movements with an increase in radial/north-south traffic movements on borough roads.

Table 2.1 Traffic Counts and Screenlines

Screenline	Number of count sites	2013/14	2014/15	2015/16	2016/17	% change 2013/14 – 2016/17
1	7	87,166	78,960*	89,596	84,057	-3.6
2	9	128,129	131,565	132,778	134,763	+5.2
3	4	64,463	63,242	62,417	66,144	+2.6

*data missing for one site

2.3.8 Journey time data has been collated by the Council. Table 2.2 summarises average journey speeds for ten A and B roads in the borough.

Table 2.2 Journey time speeds [mph]

Time period	2008	2017	% change
AM peak	16.2	15.2	-6.2
Inter peak	17.6	17.7	+0.6
PM peak	15.3	15.8	+3.3

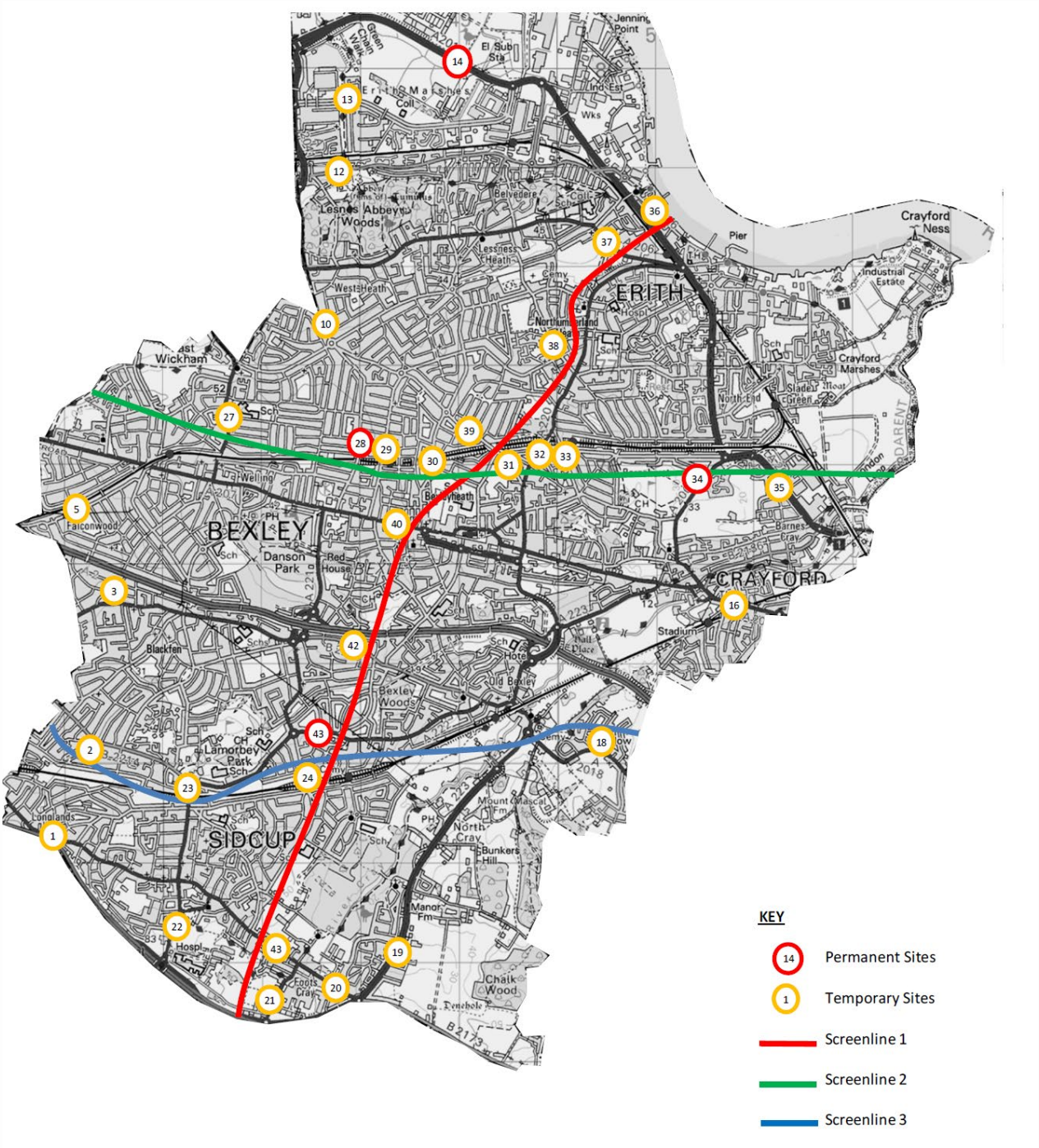


Fig. 2.8 Map showing Traffic count sites and screenlines

2.3.9 Fig 2.9 below shows the locations of traffic delay in the morning peak period. Many of the delays are on the roads approaching the borough's town centres.

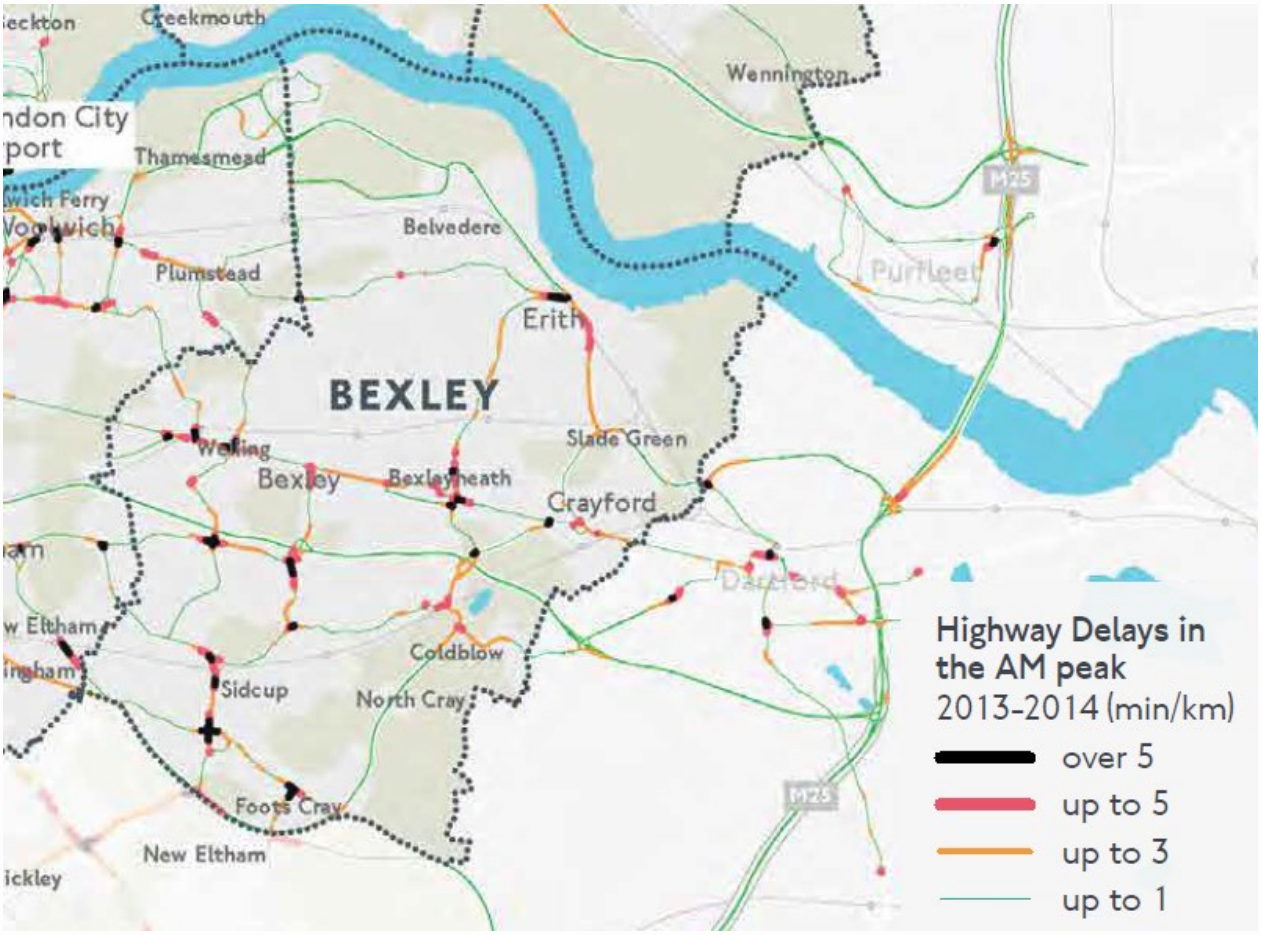


Fig. 2.9 Map showing Delays in morning peak period [TfL Sub Regional Transport Plan (SRTP) 2016]

Car Ownership

2.3.10 With a relatively low level of public transport connectivity across the majority of the borough, Bexley has the fifth highest level of car ownership in London percentage-wise, with an average of 1.2 cars or vans per household. 31% of the borough's households have 2 or more cars [Census 2011]. Overall 76% of Bexley households have a car available. The proportion of the borough's households without a car available has remained constant at 24% between the 2001 and 2011 censuses, and although the use of percentages suggests that there has been little change in car ownership, in terms of absolute numbers the amount of car ownership has risen contrary to the trend London-wide. Car ownership does vary across the borough with areas in the north of the borough having a higher proportion of non-car owning households.

Mode Share

2.3.11 Car forms the main mode of transport for journeys by Bexley residents at 57%. The car is the main mode of transport to work with 40% using a car [Census 2011] compared to 30% London-wide. This would be a reflection on the relatively high level of car ownership and

generally low level of access to public transport. Table 2.3 below details the current mode share by Bexley and London residents [TfL LTDS data 2014/15 to 2016/17].

Table 2.3 Mode share in Bexley and London

Mode	Bexley %	Outer London %	London %
Car/motorcycle	57	47	34
Walking	24	28	33
Cycling	1	2	3
Rail	5	4	5
Tube/DLR	0	5	9
Bus/tram	12	13	14
Taxi/other	1	1	2

2.3.12 In addition to the dominant role of the car for travel by Bexley residents, the table highlights the relatively low proportion of travel by public transport [17%] compared to London [28%] as well as the low level of cycling and walking compared to outer London and London-wide.

Road User Collisions and Casualties

2.3.13 Prior to late November 2016 figures for Killed or Seriously Injured casualties (KSIs) were collated using the STATS 19 system. Table 2.4 shows the number of killed and seriously injured collisions and casualties on borough and TfL roads between 2014 and 2016 in comparison with the average 2005/9 baseline using the STATS 19 reporting method. On average the number of the 'killed or seriously injured' (KSI) collisions has more than halved.

Table 2.4 Killed or Seriously Injured (KSI) Collisions and Caualties 2014-2016 (based on STATS 19 Data up to 2015)

	All roads		Bexley roads
	KSI collisions	KSI casualties	KSI casualties
Average 2005/9 baseline	79	90	81
2014	23	24	21
2015	30	30	26
2016	48	51	47
Average 2014/16	34	35	31
% change	-57	-61	-62

The sharp increase in 2016 KSI casualties is likely to be a reflection of the new way road collision data is collected and recorded by the police which commenced in late 2016. The new data collection method, COPA, is discussed further at paragraph 2.4.29.

2.3.14 Table 2.5 summarises the KSI and total casualties on Bexley's roads between 2014 and 2016.

Table 2.5 KSI and Total Casualties on Bexley roads by Mode 2014-2016 (based on STATS 19 Data up to 2015)

KSI	2014	2015	2016	Total	%
Pedestrian	6	10	14	30	29
Cyclist	2	2	3	7	7
Powered 2-wheeler [P2W]	9	13	16	38	36
Car	5	5	13	23	22
Other	2	0	5	7	7
Total	24	30	51	105	

All casualties	2014	2015	2016	Total	%
Pedestrian	80	76	107	263	16
Cyclist	32	35	39	106	6
P2W	80	82	78	240	14
Car	319	324	311	954	57
Other	45	37	36	118	7
Total	556	554	571	1681	

Between 2014 and 2016 29% of KSI casualties are pedestrians and 36% of KSI casualties are related to powered two-wheelers (P2W). The proportion for pedestrians and P2W decreases for all casualties. Cyclists form 6-7% of KSI and total casualties. The Council will be focusing on reducing road user casualties rather than collisions.

2.3.15 For all road casualties, Tables 2.6 and 2.7 identify the sections of roads and junctions respectively with the highest road user casualties [TfL 2014-2016 data].

Table 2.6 Roads with Highest Road User Casualties (based on STATS 19 Data up to 2015)

Road	From	To	Highway Authority	No. of Casualties 2014 - 16
East Rochester Way	Bourne Road	Lodge Lane	TfL	43
East Rochester Way	Danson Road	Westwood Lane	TfL	31
Danson Road	Park View Road	Lodge Lane	LBB	30
	Wickham Way	Danson Road	LBB	26
Yarnton Way	Eastern Way	Harrow Manorway	LBB	25
Brampton Road	Crook Log	Okehampton Crescent	LBB	23
Broadway Bexleyheath			LBB	23
Blackfen Road	Penhill Road	Wellington Road	LBB	20
Avenue Road/Pickford Lane	Crook Log	Long Lane	LBB	20
East Rochester Way	Bourne Rd	Borough boundary	TfL	18
Abbey Road	Harrow Manorway	Picardy Road	LBB	18

Table 1 Junctions with Highest Road User Casualties (based on STATS 19 Data up to 2015)

Junction	Highway Authority	No. of Casualties 2014 - 16
Sidcup bypass/Cray Rd/Borough boundary	TfL	31
Walnut Tree Rd/Bexley Rd	LBB	23
Ruxley Corner	LBB	19
Perry St/Thames Rd	LBB	16
Erith Road/Gravel Hill	LBB	15
Station Road/Longlands Road	LBB	12
Park View Rd/Danson Road	LBB	11
Blackfen Road/Penhill Rd	LBB	10
Blackfen Rd/Wellington Ave	LBB	10
Woolwich Road/Picardy Rd	LBB	10

2.3.16 The tables show that TfL managed roads have the highest number of casualties which will require the Council to work closely with TfL to reduce total casualties within the Borough. TfL roads tend to have higher traffic flows and vehicle speeds which are likely to be factors influencing the number of road casualties.

Air Quality

2.3.17 The poorest air quality is alongside the borough's main road network as shown in Figs. 2.10 to 2.12 below, clearly illustrating the link between road traffic and pollution levels.

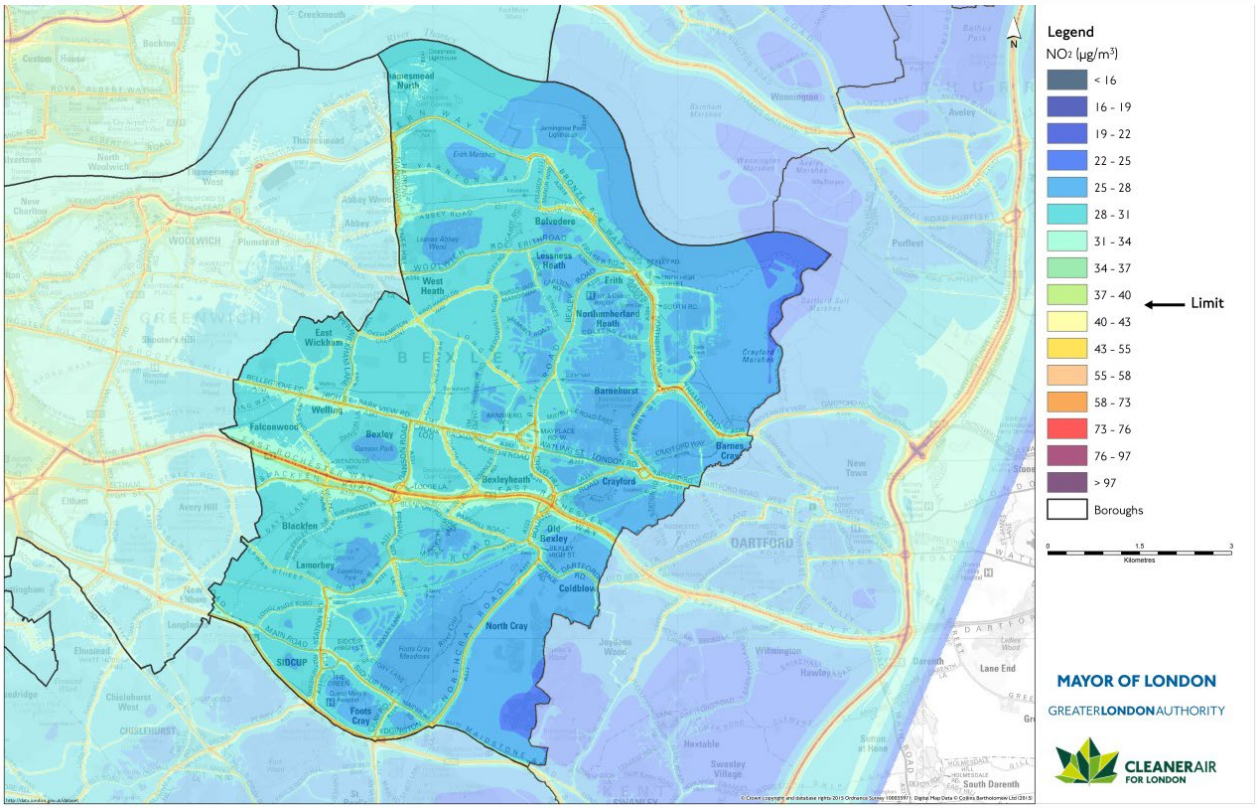


Fig. 2.10 Map showing Annual Mean Nitrogen Dioxide concentrations [London Atmospheric Inventory 2013]

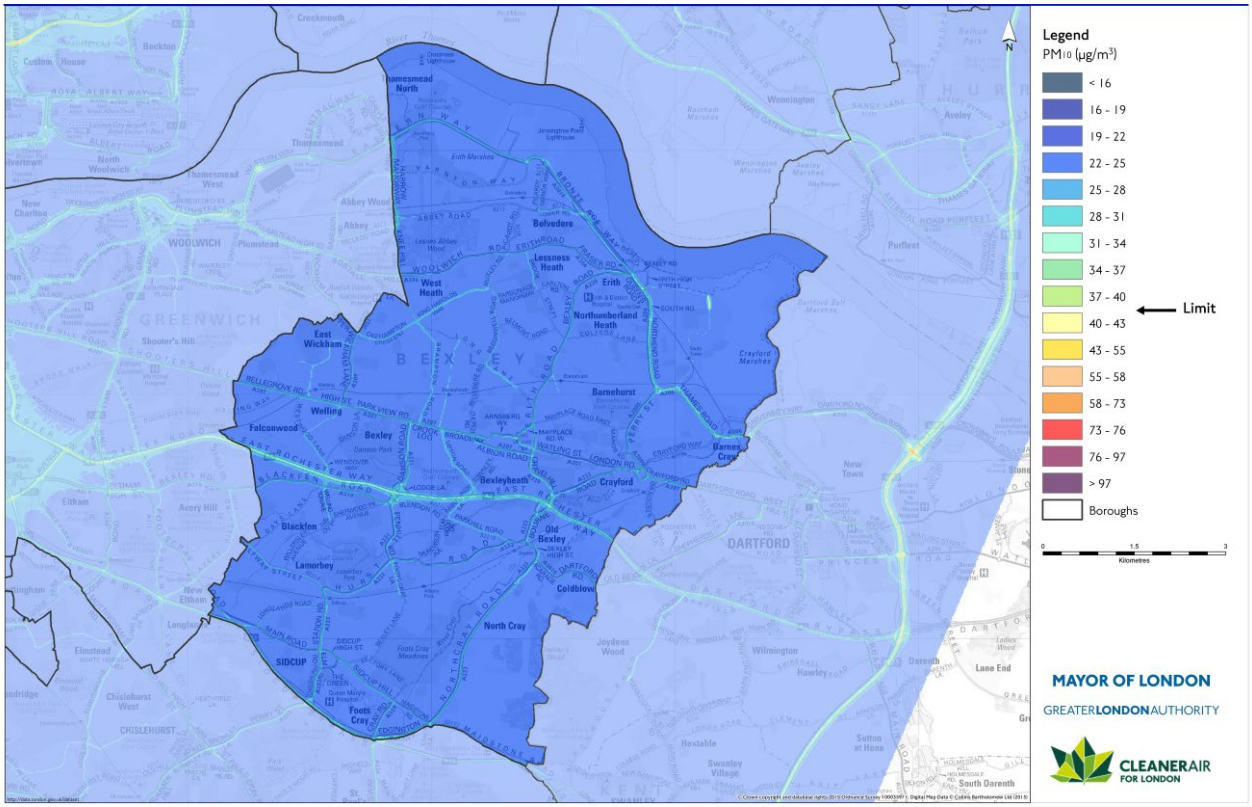


Fig. 2.11 Map showing Annual Mean PM10 concentrations [London Atmospheric Inventory 2013]

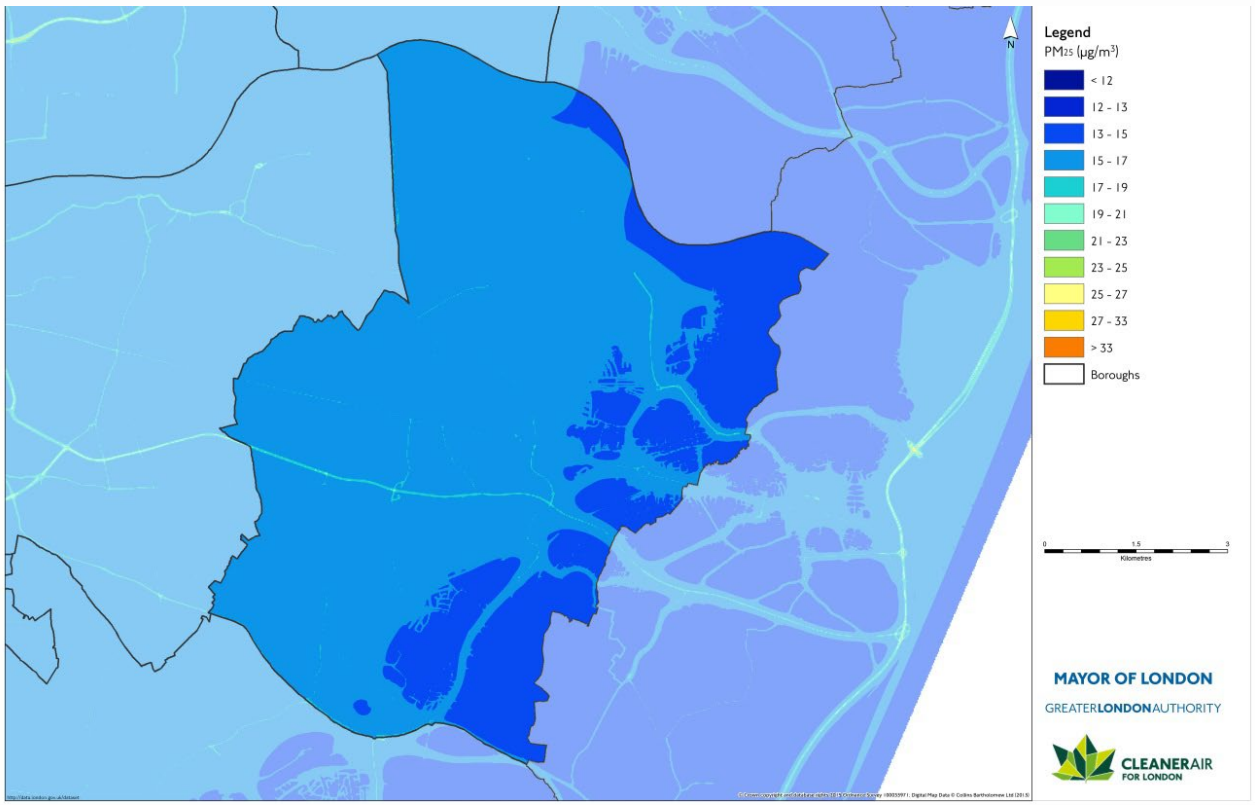


Figure 2.12 Map showing Annual Mean PM2.5 concentrations [London Atmospheric Inventory 2013]

2.4 Changing the Transport Mix

Challenges and Opportunities

2.4.1 Bexley benefits from radial rail access into central London. However, there are no orbital railway lines and, in general, there are relatively poor bus connections north-south across the borough, meaning that for relatively short journeys travel times are long. Many local and longer distance journeys are made by private transport. Even so, in general the road network does not suffer from congestion for much of the working day. This encourages short journeys to be made by car. The challenge will be to reduce car travel whilst still allowing for journeys to be made by car when there are few alternatives by sustainable transport.

2.4.2 TfL has set trajectories for increasing the proportion of journeys by sustainable means of transport. For Bexley this postulates an increase in the proportion of such journeys from 42% [2013/4 – 2015/16] to 46% in 2021 and 63% by 2041. Currently the car is used for 57% of journeys made by Bexley residents. The required increase in the proportion of journeys by sustainable modes of transport [at 21%] is the second highest of all boroughs in London, and with less alternatives to the car than other boroughs may need comparably higher investment to be made available. The MTS includes a number of scenarios for public transport investment to support any change including an extension of the Elizabeth line east from Abbey Wood, a possible extension of the DLR from Gallions Reach to Thamesmead and other public transport river crossings in East London as well as devolution of some suburban rail services to TfL. The Council, in partnership with TfL and the Royal Borough if Greenwich, is also looking at a bus transit network in the north of the borough to support Bexley's growth agenda. Alongside investment in bus service provision and reliability enhancements, investment in cycle, walking and public realm improvements are predicted by TfL to meet the London-wide 80% target for sustainable transport by 2041.

2.4.3 TfL's Strategic Cycle Analysis (SCA) identified the scope for more journeys to be made by cycle. This was developed from analysis of current and potential cycling along broad corridors. It also considered where cycling, walking and public transport usage coincides which would allow a Healthy Streets approach to investment with sustainable transport modes considered together. The SCA identifies three medium priority corridors for cycling focused on Bexleyheath town centre connecting Woolwich, Erith and Crayford, which align broadly with the Council's Mini-Holland Vision. Medium priority corridors could be progressed by TfL after 2022. A similar pattern is discerned for walking journeys which can be an alternative to short motorised trips in Bexleyheath, Erith, Crayford and Welling. On the approach to Bexleyheath town centre from the west there are high bus service frequencies coinciding with cycling and walking potential offering scope for the adoption of a Healthy Streets approach to this corridor.

2.4.4 TfL analysis on the potential for cycling estimates that for Bexley 238,000 daily trips are potentially cycleable. Currently, there are only 3,500 daily cycle trips made, representing 1% of the total potential achieved. The vast majority of the cycleable trips are being made by

private vehicles, typically short car trips to and from home, with few being made by public transport. About 42,000 of the potentially cycleable trips could be to Bexleyheath town centre. New rail infrastructure such as the Elizabeth line to Abbey Wood can attract cycle trips to the railway station. The planned much greater provision of cycle parking at the railway station and better cycle facilities on roads approaching Abbey Wood could help to realise this potential.

2.4.5 A similar analysis has been carried out by TfL to assess the potential for more walking. For Bexley there are currently 138,000 existing walk trips per day with a potential addition of 68,000 trips each day. Many of these walkable trips could be to Bexleyheath town centre – an estimated 10,000 trips could be made wholly on foot as well as about a further 3,000 walk trips as part of longer journeys. The relatively low number of walkable trips compared to cycleable trips reflects the typical journey length of Bexley residents with many living in lower density residential areas located quite some distance from local shops and services. As in the case of potential cycle trips, many of the walkable trips are to and from home by car, mainly for leisure and shopping purposes. There is also an element of overlap between potential cycle and walking trips as some of the potential cycle trips are currently being walked. TfL data shows that 84% of journeys of less than 1km are walked with the proportion halved for journeys of between 1km and 2km [TfL Walking Action Plan 2018].

2.4.6 The Council has recently approved its Growth Strategy. This sets out a 30-year strategy until 2050 to deliver jobs and housing in the borough. The strategy will inform the review of Bexley's Local Plan and two Opportunity Area Planning Frameworks [Bexley Riverside and Thamesmead and Abbey Wood]. Borough-wide the strategy seeks to deliver up to 31,500 new homes and up to 17,500 new jobs. Growth would be concentrated in Belvedere, Erith, Thamesmead, Slade Green and Crayford.

[https://www.bexley.gov.uk/services/planning-and-building-control/planning-policy/planning-strategies]

2.4.7 However, the delivery of sustainable growth depends crucially on the achievement of public transport orientated development supported by the appropriate timing and delivery of major transport infrastructure investment and local connectivity improvements such as walking and cycling. The north of the borough has been identified in the London Plan by the Mayor as two Opportunity Areas. The key strategic transport infrastructure requirements have been identified within the Growth Strategy as:

- The extension of the Elizabeth line [Crossrail] east of Abbey Wood towards Ebbsfleet
- The completion of a public transit corridor, in phases, from North Greenwich to Slade Green
- The completion of a Docklands Light Rail [DLR] extension from Gallions Reach through Thamesmead to Belvedere

and

- The completion of road-based river crossings connecting Belvedere with Rainham and Thamesmead with Gallions Reach

2.4.8 It is considered essential that investment in strategic and local transport infrastructure is delivered to enable the challenging targets for sustainable mode share by 2041 and the growth targets for housing and jobs to be met. This is not likely to happen in the short to medium term. However, there is a clear role for enhancements to bus services and development of cycling infrastructure in supporting sustainable development in advance and complementary to longer term major rail and road infrastructure. In the MTS, of the major transport infrastructure investment, only the extension of the Elizabeth line east from Abbey Wood and pilot bus transit in Opportunity Areas are identified proposals with timescales of 2020 - 2041.

2.4.9 The Council will continue to work closely with neighbouring boroughs to encourage a joined up approach to identifying, developing and delivering cross boundary transport initiatives including opportunities for walking, cycling and public transport.

Borough Transport Objectives

2.4.10 The following borough transport objectives support the Mayor's overall objective of increasing the sustainable transport mode share and thus reducing car usage.

- To encourage as much movement as possible to use sustainable modes of transport [public transport, walking and cycling].
- To provide good networks for pedestrians and cyclists particularly in growth areas and linking them to the communities beyond.
- To support more reliable and faster bus services through bus priority measures with segregation from other traffic as much as possible.

2.4.11 These transport objectives have support through the Council's Core Strategy[1] adopted in 2012. Specific policy support is provided for:

- Increasing the capacity, frequency, accessibility and safety of established bus and rail facilities

[1] https://www.bexley.gov.uk/sites/default/files/2020-05/Bexley-Core-Strategy.pdf

- Securing Crossrail to Abbey Wood and its potential extension to Gravesend and Hoo Junction [now the extension to Ebbsfleet]

- Supporting the improvement of interchange facilities at Abbey Wood and within the borough's major town centres

- Promoting improvements in north-south transport provision including enhancing bus services and facilities

- Initiating or supporting the future development of major new transport infrastructure proposals including the North Bexley Transit and DLR

- Encouraging walking and cycling within the borough through implementation of local and strategic walking and cycling programmes, school travel plans and local safety schemes

- Promoting travel awareness campaigns, workplace travel plans, area-based travel plans and car clubs

2.4.12 The Council is developing its strategic policies for the ongoing Local Plan review. These will be consulted on through the Preferred Approach for Strategic and Detailed Policies [Reg 18] which is expected to be published in early 2019.

2.4.13 In the recently published Corporate Plan[2] for 2017-2025 the Council supports new networks to connect the borough's parks and open spaces and new safe cycle routes linked to Elizabeth line services. The Council also supports investing in local initiatives, including Living Streets, to help more residents incorporate walking and cycling throughout the borough as part of an active lifestyle whilst reducing car use.

2.4.14 There is also policy support for the LIP transport objectives in the Growth Strategy. This has a number of key themes including Theme 3 Transport. Specific support is given for a shift from motorised transport to public transport with a hierarchy of public transport provision:

- "Heavy rail" – North Kent line and Elizabeth line train services including potential Elizabeth line services extending east from Abbey Wood towards Ebbsfleet, offering enhanced service frequencies at Belvedere, Erith and Slade Green

[2] https://www.bexley.gov.uk/about-the-council/strategies-plans-and-policies/brilliant-bexley/shaping-our-future-together-2017-2025

- "Intermediate mode" – a new public transport system with a segregated right of way in the form of rapid transit corridors. Initially bus rapid transit may be easiest to introduce but trams or other "intermediate modes" may well be justified in due course

- "Buses" – more buses on more routes should be provided to ensure the enhanced connectivity that the growth areas will need

2.4.15 Transport orientated development [TOD] is a key theme of the Council's Growth Strategy with integration between transport and land use planning. The Growth Strategy also supports in the immediate/short term better cycle and walking routes within the growth areas and linking them with the communities beyond.

2.4.16 Specific proposals and programmes to support the nine outcomes in the MTS is provided in the next section.

2.5 Mayor's Transport Strategy Outcomes

2.5.1 The MTS was published in March 2018. The document includes 26 policies, nearly all of which are relevant for boroughs in preparing their 3rd LIPs. The MTS sets out three priority areas for action by TfL, the boroughs and other delivery partners:

- Healthy Streets and healthy people, including traffic reduction strategies
- A good public transport experience
- New homes and jobs

2.5.2 The overarching aim of the MTS is for 80% of all trips across London to be on foot, by cycle or using public transport by 2041, compared to 63% today. TfL acknowledges that some boroughs would not be able to achieve this mode share by sustainable transport by 2041 but are expecting all boroughs to work towards this aim. TfL has issued trajectories for a range of metrics to be used to assess progress against the overall aim and the nine MTS outcomes. For Bexley the specific trajectories are shown in Table 2.8 on the next page.

2.5.3 By meeting TfL's required trajectory of 63% of trips by sustainable transport in Bexley by 2041 the Council will be contributing significantly to achieving the pan-London aim of 80%, but this is dependent on an adequate level of investment being made available to deliver the appropriate initiatives.

Table 2.8 Bexley Trajectories for MTS Outcomes

Aim	Measure	Baseline	Trajectory	
			2021	2041
Overall				
80% of trips to be made by active, efficient and sustainable modes	Walking, cycling & public transport mode share [%]	42% [2013/14 – 2015/16]	46%	63%
Healthy Streets and healthy people				
MTS Outcome 1a: London's streets will be healthy, and more Londoners will travel actively	Londoners to do at least 20 minutes of active travel each day by 2041	26% [2014/15 – 2016/17]	35%	70%
MTS Outcome 1b: London's streets will be healthy, and more Londoners will travel actively	70% of Londoners will live within 400m of the London-wide strategic cycle network by 2041	0% [2016]	7%	38%
MTS Outcome 2: Vision Zero – deaths and serious injuries from all road collisions to be eliminated from our streets	65% reduction in KSIs by 2022 (based on the 2005-09 baseline)	149 [2005-09]	52 [2022] Generic London-wide percentage reduction target based on the MTS targets and back-casted casualty data.	0
MTS Outcome 2: Vision Zero –	70% reduction in	85 [2010-14]	25 [2030] Generic London-wide	0

Aim	Measure	Baseline	Trajectory	
			2021	2041
deaths and serious injuries from all road collisions to be eliminated from our streets	KSIs by 2030 (based on 2010-14 baseline)		percentage reduction target based on the MTS targets and back-casted casualty data.	
MTS Outcome 3a: London's streets will be used more efficiently and have less traffic on them	10-15% reduction in veh kms by 2041	917 [million veh kms] [2015]	917	871 [-5%] 825 [-10%]
MTS Outcome 3c: London's streets will be clean and green – traffic will fall, and congestion kept in check, allowing more efficient operations	Household car ownership. 250,000 fewer cars owned in London by 2041 (assuming that percentage car ownership will decrease but no allowance for increase in number of households)	111,208 [2015]	106,700	94,300
MTS Outcome 4a: London's streets will be clean and green – a 72% reduction in CO2 emissions from road	Reduction in CO2 emissions [in tonnes] from road transport	185,000 [2013]	169,000	52,200

Aim	Measure	Baseline	Trajectory	
			2021	2041
transport by 2041				
MTS Outcome 4b: London's streets will be clean and green – a 94% reduction in road transport NOx emissions by 2041	Reduction in NOx emissions [in tonnes] from road transport	610 [2013]	270	30
MTS Outcome 4c: London's streets will be clean and green – a 45% reduction in road transport PM10 emissions by 2041	Reduction in PM10 emissions [in tonnes] from road transport	64 [2013]	55	38
MTS Outcome 4d: London's streets will be clean and green – a 53% reduction in road transport PM2.5 emissions by 2041	Reduction in PM2.5 emissions [in tonnes] from road transport	37 [2013]	27	18
A good public transport experience				
MTS Outcome 5: the public transport network will meet the needs of a growing London – between 14 and	Increased number of trips per day by public transport	105,000 [2014/15 – 2016/17]	124,000	196,000

Aim	Measure	Baseline	Trajectory	
			2021	2041
15 million trips will be made by public transport every day by 2041				
MTS Outcome 6: public transport will be safe, affordable and accessible to all – everyone will be able to travel spontaneously and independently	Reduce on average the difference between total network and step-free network journey times by 50% by 2041	Average journey time using full network [minutes]: 97 Average journey time using step-free network [minutes]: 105 Time difference [minutes]: 7		Average journey time using full network [minutes]: 83 Average journey time using step-free network [minutes]: 86 Time difference [minutes]: 4 % change in travel time difference between 2015 and 2041: -49%
MTS Outcome 7: journeys by public transport will be pleasant, fast and reliable	Bus speeds [in mph] will improve by approx. 5-15% London-wide by 2041, with particular improvement expected in inner London	12.4 [2015]	12.8 [3% improvement] 12.5 [1% improvement]	14.2 [15% improvement] 13.0 [5% improvement]

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

Challenges and Opportunities

2.5.4 The Council agrees with the principles of a shift in modal choice set out in the MTS. The need to promote active travel is recognised as one means of addressing weight reduction amongst obese and overweight adults and children. There are many other benefits of being physically active including reducing risk of cardiovascular disease, reducing risk of type 2 diabetes, reducing risk of some types of cancer, strengthening bones and muscles, improving mental health and wellbeing and reducing the risk of falls in older adults. Fig. 2.13 on the next page shows the amount of residents' daily active travel.

2.5.5 Bexley has the second highest prevalence of excess weight in adults in the London region, with 66.8% of the population being either overweight or obese although Bexley is comparable to the national average. There is a similar pattern for child obesity with a significantly higher prevalence of excess weight in children in Bexley compared to the national figure and this has increased since 2007/8 [Joint Strategic Needs Assessment 2016]. Physical activity among adults in Bexley is significantly lower than the London and national average. It has been estimated that the cost of physical inactivity in Bexley is more than £20m per annum [Public Health England].

2.5.6 Currently Bexley has a relatively low proportion of people walking and cycling. Only about 25% of trips are on foot or by cycle which is significantly lower than London as a whole and below the average for outer London boroughs. As TfL analysis shows, there is much scope for more walking and cycling. The borough benefits from many open spaces and parks which can encourage active lifestyles, but the road network could be made more appealing for pedestrians and cyclists, so adults and children can walk or cycle to the borough's green spaces as well as to schools, shops and workplaces. This includes making the roads safer and more pleasant to use.

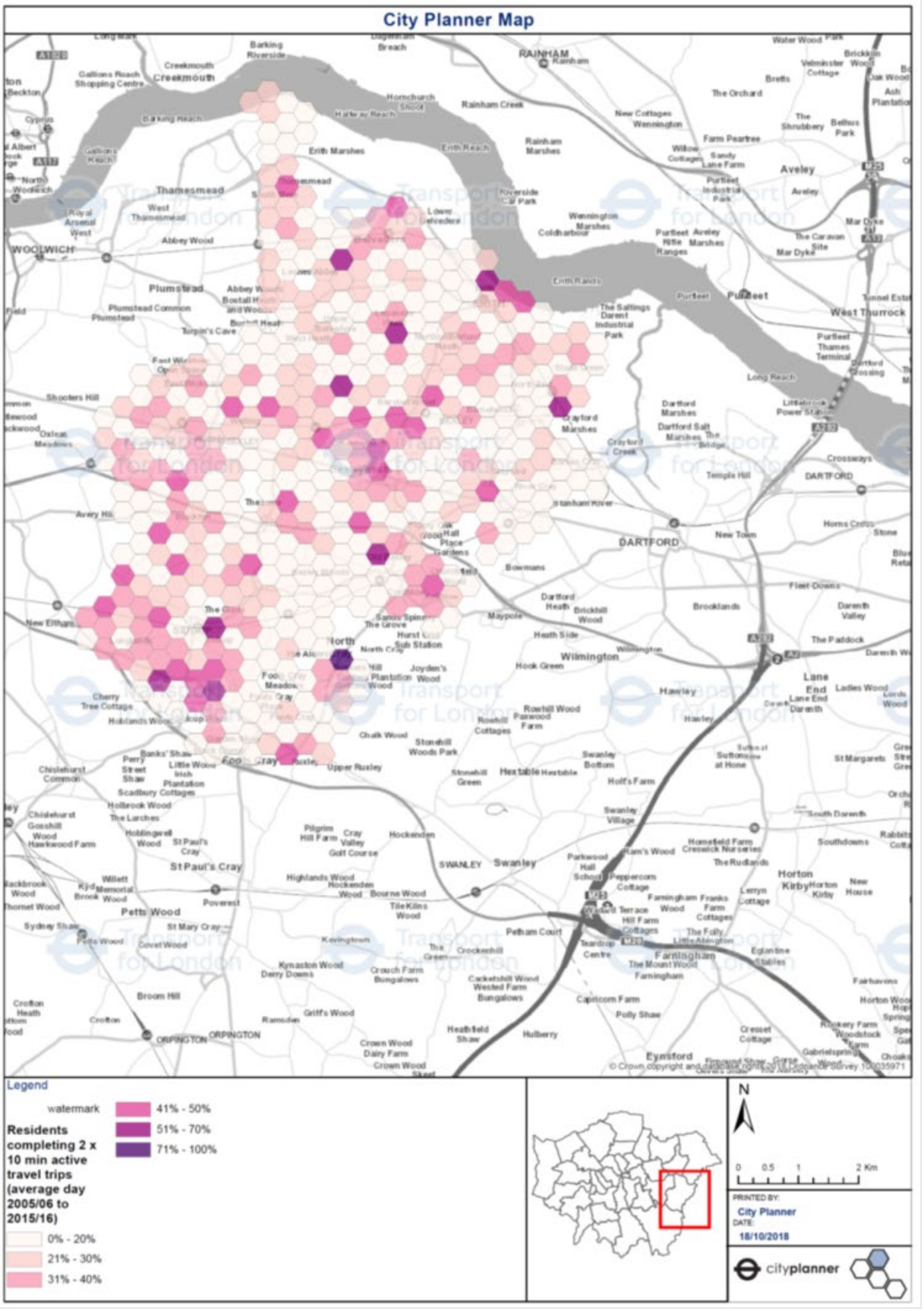


Fig. 2.13 Map showing Residents completing 2 x 10-minute Active Travel Trips per day [TfL City Planner]

2.5.7 Figs 2.14 and 2.15 provide details of Cycling and Walking Potential [TfL City Planner]. Cycling and walking potential is a measure of cycling or walking trips that could reasonably be made but which are not made currently.

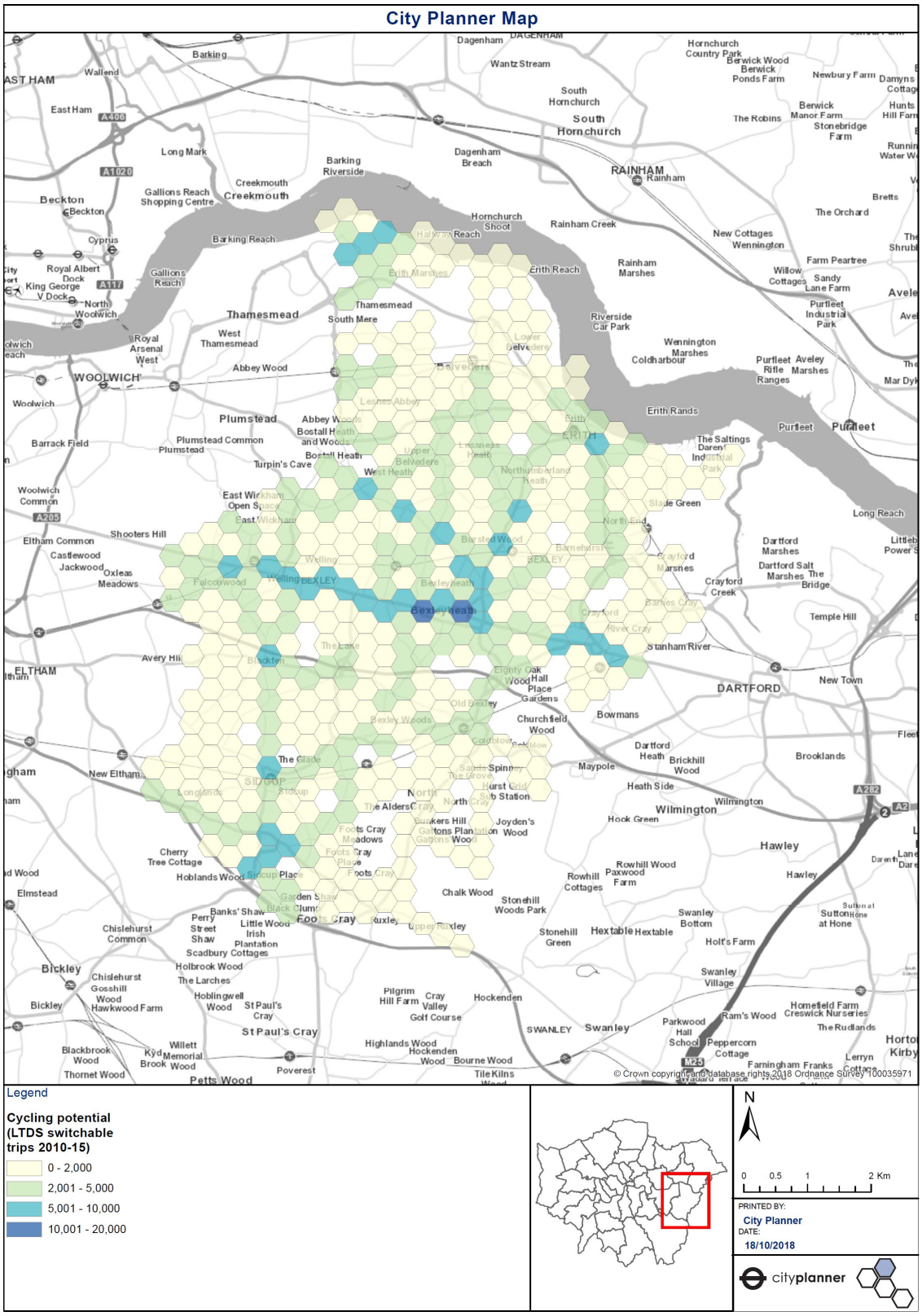


Fig. 2.14 Map showing Cycling Potential [TfL City Planner]

2.5.8 In relation to strategic cycle routes, currently Bexley will only be benefitting from Quietway 1 between Greenwich and Bexleyheath. It is disappointing that there are no firm plans for other

strategic cycle routes to serve the borough, with the focus from TfL's Strategic Cycle Analysis being on developing cycle routes mostly within inner and central London. Three potential corridors, focused on Bexleyheath town centre, are identified in the SCA and the Council will be willing to work with TfL on progressing proposals along these indicative alignments. The lack of investment in strategic cycle routes in outer London will make it much harder to meet the Mayor's aspirations for regular active travel. The Council will be seeking to provide local cycle routes, in particular in Abbey Wood and Thamesmead to complement Elizabeth line services at Abbey Wood railway station and the cycle hub facilities provided there. The Council has also demonstrated its commitment to promoting cycling by its creation of a Cycling Development Officer post separate to the LIP.

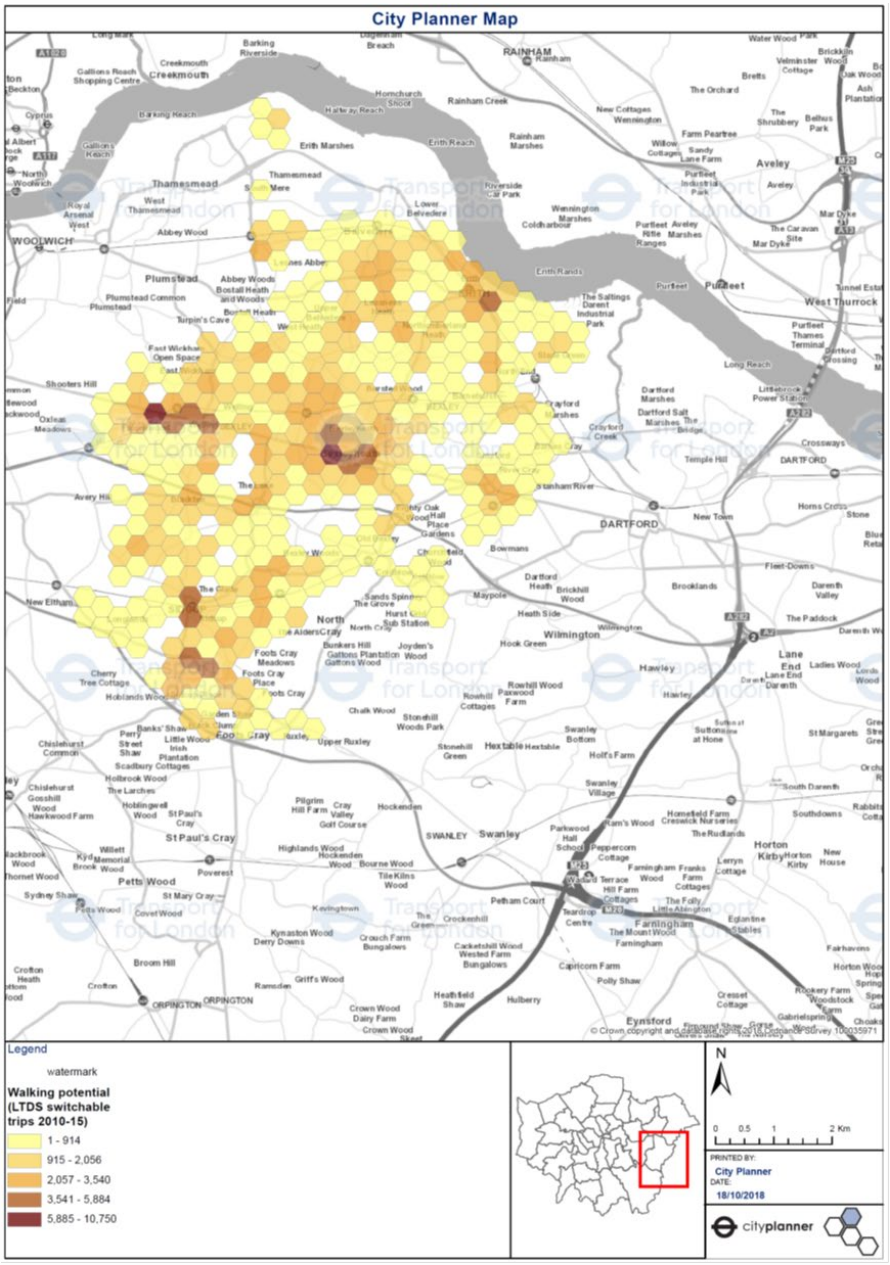


Fig. 2.15 Map showing Walking Potential [TfL City Planner]

2.5.9 The Mayor has published the Walking action plan which identifies a range of actions and includes targets to:

- increase the number of trips made by walking
- increase walking to school

For outer London the focus is on:

- identifying opportunities for new walking trips
- improving walking access to town centres and transport interchanges, including rail and underground
- reducing the impact of traffic making local streets better places to walk and spend time
- targeting trips to school, with a focus on reducing car use and increasing walking

2.5.10 The Walking action plan supports the Healthy Streets Check for Designers. Design guidance for walking is due to be published in 2019. A Strategic Walking Analysis is also due to be published by TfL in 2018. The Council will engage with these in developing its new LIP funded Healthy Streets schemes. The Council will support measures to reduce road danger around schools to encourage more walking particularly to primary schools.

2.5.11 The Council has completed a transformation of Bexleyheath town centre including improvements to the public realm and connections for pedestrians and cyclists, such as new paving allowing shared use, Legible London signage, new pedestrian and cycle crossings, cycle parking and measures to enhance bus access. New pedestrian links including improvements to the pedestrian route from Bexleyheath railway station to the town centre have also been completed.

2.5.12 The Council is commissioning the preparation of a masterplan for Bexleyheath which will seek to realise the potential for the town centre. It is expected the masterplan will be adopted in early 2019 and will support the delivery of Outcome 8 (Active, efficient and sustainable travel will be the best option in new developments) and Outcome 9 (Transport investment will unlock the delivery of new homes and jobs) through the following objectives:

Homes - To optimise the number of new homes in the town so as to contribute significantly to meeting local need and cater for people at all stages of life.

The offer- To create a vibrant town centre offer that is not just a great place to shop and access services but also a place to spend leisure time throughout the day, for people of all ages.

Movement - To ensure that Bexleyheath is a walkable town which is easy to get to and move around in, by improving public transport access; providing a resilient highway network supported by an appropriate amount of convenient and good quality parking, and securing streets and spaces that are safe, pleasant and convenient for pedestrians and cyclists.

The place and space - To deliver an exemplar public realm which links the different parts of the town together coherently and connects the centre to important facilities in the wider area, increases the amount of green cover and creates a safe and inviting place where people want to linger and socialise.

2.5.13 The Council is working on a transformation of Erith town centre under the Erith Links project, which has already commenced. This will seek to address transport and environmental issues to assist the regeneration of the town centre. Issues identified include:

- severance for pedestrians and cyclists caused by the strategic road network
- separation between the local residential areas and the town centre through major roads and the railway line
- traffic congestion in the town centre and on its approaches and on the A206/A2016 corridor, impacting on bus service speed and reliability
- rat running traffic in and around the town centre, linked to the one-way traffic system
- poor public realm and poor pedestrian and cyclist environment, confusing street layout and poor legibility for pedestrians

2.5.14 The Council's plans for Erith include removing the one-way traffic system to enhance permeability, accessibility and bus speeds and reliability; better pedestrian crossings within the town centre and on its approaches; improved cycle paths and facilities, measures to reduce congestion at the access points into the town centre and better pedestrian waymarking between the railway station and the town centre. The objectives include enabling more walking, cycling and use of the bus for journeys into Erith; support sustainable residential development close to the town centre with minimal car parking provision; and support more footfall and regeneration. In addition to Council resources it is intended to seek additional financial support with bids being submitted to the GLA and TfL for growth-related funding, or other appropriate programmes, to deliver these plans.

2.5.15 To the west a major enhancement is being made to a key north-south route, Harrow Manorway, which will radically change the appearance and nature of this major route with a shift in priority from private vehicle movement to pedestrians, cyclists and public transport and environmental enhancements. The scheme forms part of the Abbey Wood and South Thamesmead Housing Zone project and complements the public realm improvements around Abbey Wood railway station on the Elizabeth line. It will deliver segregated cycleways and enhanced and widened footways with high quality paving and include seating, lighting and extensive new tree planting. A similar approach is planned for Yarnton Way to create a healthier street, with a re-allocation of road space away from general traffic for public transport improvements, together with widened footways and segregated cycle lanes as well as improved crossing facilities for pedestrians and cyclists.

2.5.16 The Council delivers a programme of safety improvements at locations with an identified history of road collisions. Opportunity is taken to link road safety improvement measures with measures to enhance cycle and pedestrian facilities and public realm enhancements such as decluttering and greening. A programme of child pedestrian training complements the physical works to reduce road user casualties. As the data on road user casualties in Table 2.4 above shows there has been progress in reducing casualties but much more needs to be done, particularly in reducing the high number of pedestrian casualties.

2.5.17 A programme of providing on-street cycle parking has been maintained over a number of years and it is planned to continue as funding allows. Table 2.9 below details the delivery of cycle parking which is focused on the borough's town and local centres.

Table 2.9 Table showing On-street cycle parking

2015/16	2016/17	2017/18
9 in Bexleyheath town centre	42 in town centres	10 at Abbey Wood

2.5.18 The Council's emerging Strategic and Detailed Policies in the Local Plan will support minimum cycle parking standards in line with London Plan requirements, support for walking and cycle routes and facilities including Quietways and on-site measures such as cycle parking and showers. An Issues and Options [Reg 18] on the preferred policy approach for the Local Plan is expected to be published at the beginning of 2019.

2.5.19 A high-level review has been completed on the cycle route proposals developed as part of the Mini Holland submission in 2013. The review reflects the Growth Strategy adopted by the Council in December 2017 and the Mayor's expectation of delivering good growth through the MTS. Figure 2.16 outlines an initial potential healthy streets network for cyclists. Many of the borough's roads are already considered reasonably healthy with wide footways and relatively low flows of traffic. Critical roads tend to be on the approaches to town centres

which have generally high traffic flows, relatively narrow footways and bus service speed and reliability can be an issue [see Figure 2.9 above].

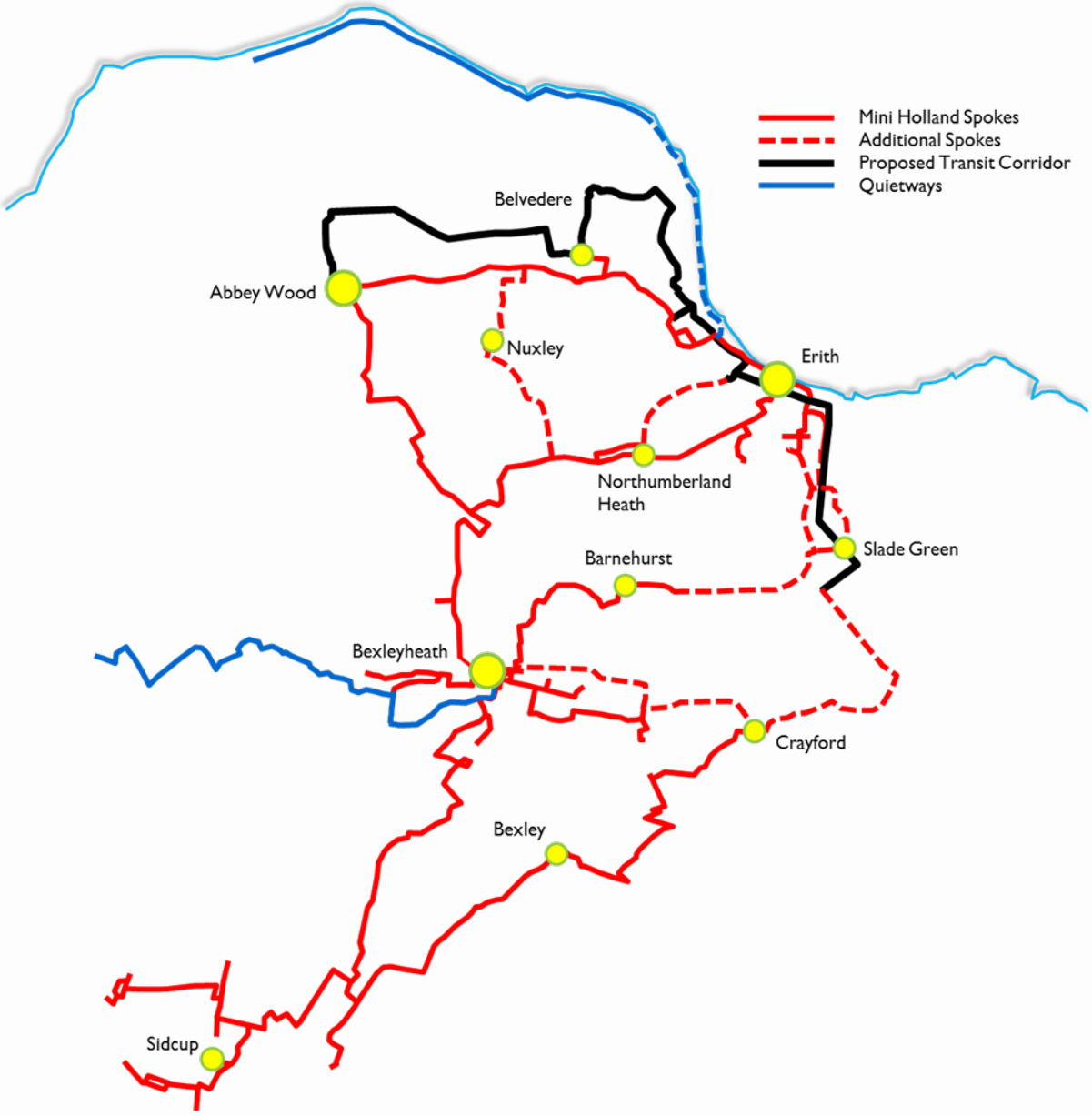


Figure 2.16 Map showing Potential network of Healthy Streets for Cyclists

2.5.20 The Council has for many years provided adult and child cycle training. Table 2.10 shows the number of child and adults receiving Bikeability training over the last 5 years. The demand for adult cycle training has increased rapidly over this period.

Table 2.10 Adult and Child Cycle Training

Year	Child Level 1 and 2	Child Level 3	All child	Adult	Total
2013/14	821	68	889	17	906
2014/15	912	90	1002	54	1056
2015/16	935	72	1007	65	1072
2016/17	1101	93	1194	346	1540
2017/18	1149	112	1261	451	1712

2.5.21 The challenge is to translate the increase in cycle training provision into more day to day cycling and to and from school. Recent national research [National Foundation for Educational Research 2015] shows children were more confident cycling on the road following Bikeability training but this has not led to more cycling by children. It is likely that the design of the road network and the volume and speed of traffic strongly influence the level of cycling by children and adults. Making the streets safer and more pleasant for cycling is therefore crucial in seeking to realise the increase in sustainable transport sought by the Mayor.

2.5.22 There are currently 83 Bexley schools with travel plans. 71 or 85% of these schools have uploaded travel plans to the TfL STARS website. 44 schools have achieved Bronze accreditation, 12 Silver and 15 Gold. The number of schools engaged and the number of schools with Gold accreditation has consistently increased since 2013/14. However, schools are increasingly finding it difficult to support the travel plan programme due to pressures on teacher and pupil time and budget cuts. Table 2.11 shows the change in mode share over the last 5 years. It shows an increase in active travel [park and stride, cycling walking and scootering] between 2012/13 and 2016/17 from 47% to 48% but also shows there is much more work needed to reduce car use on the school run.

Table 2.11 Table showing Average mode of travel for all schools [%]

Mode	2012/13	2013/14	2014/15	2015/16	2016/17
Car	26	27.5	24	28	26
Car share	4	3	3	3	4
Park and stride	6	7.5	8	7	7
Tube/train/Tram	1	1	1	0	1

Mode	2012/13	2013/14	2014/15	2015/16	2016/17
Bus	22	21	21	22	19
Cycle	3	3	3	3	4
Scooter	2	3.5	3	3	4
Walk all the way	36	33.5	34	31	33

2.5.23 The Council has approximately 19,500 street lights. Since autumn 2016 the Council has rolled out a programme to replace all the old lanterns with new LED ones. This programme is almost complete. In addition, there are 1,600 old concrete lighting columns which are being replaced at a rate of about 350 per year. For the remaining steel lighting columns about 6,000 to date have been checked through a structural testing programme. 150 steel columns are to be replaced in 2018/19. The benefits of LED lighting include higher quality lighting and a halving of the lighting energy costs. Poor quality street lighting can be a deterrent to people walking due to concerns on personal security and safety and it is anticipated that the programme of improved lighting should encourage more walking.

2.5.24 Accessibility improvements are delivered such as formal and informal crossing points including zebra crossings and refuges. Other measures include dropped kerb removal of barriers and provision of signage. The proposals will improve walking facilities to help make them accessible to all and will improve access to transport, jobs, education centres / schools, local amenities, key services and health and leisure facilities. The Council has carried out a local area accessibility programme over a number of years and will continue to do so, subject to funding. This is complemented by an accessibility programme linked to the borough's key railway stations aimed at better signage, cycling and walking facilities around the railway station. However, the maximum benefit of the project will only be achieved when linked to the creation of step free railway stations. Most of the borough's 12 railway stations have step free access but a number of important railway stations such as Erith and Falconwood are notable exceptions. Bexley railway station is planned to be accessible under the DfT funded Access for All programme, being delivered by Network Rail, however an acceptable scheme has yet to be put to the Council.

2.5.25 At 61km the borough's network of public rights of way is not extensive but can form useful links, particularly for pedestrians and cyclists in the more urban north of the borough as well as providing links to longer walking and cycle routes such as the London Loop, the Capital Ring, South East London Green Chain, the Cray Riverway, the Shuttle Riverway, the Thames Path and the Thames Cycle Path. The promotion of more walking and cycling and their health benefits can be linked to the availability of rights of way. The Council has adopted a public right of way improvement plan with a range of measures over the short, medium and long term. The overall approach is to prioritise actions which provide maximum benefits to

residents. A lack of specific funding for maintaining or enhancing rights of way means opportunities for funding are explored and sought whenever possible.

2.5.26 The Council has a programme to reconstruct footways although in recent years reductions in funding has necessitated a focus on addressing the deterioration of carriageways. In 2018/19, 1.7km of footways will be reconstructed at a cost of approximately £2.4k.

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

Borough Transport Objectives

- To encourage as much movement as possible to use sustainable modes of transport [public transport, walking and cycling]

- To provide good networks for pedestrians and cyclists particularly in growth areas and linking them to the communities beyond

- To create healthy streets and pleasant routes

- To improve the accessibility of the transport network to assist access to jobs, local amenities and other destinations

Challenges and Opportunities

2.5.27 The Council shares the casualty reduction aspirations set out in the MTS and concurs with the Vision Zero approach to road danger reduction. Progress has been made in reducing KSI collisions, details of which are provided in Tables 2.4 to 2.7 and paras. 2.2.19 to 2.2.22 (data recorded using the STATS 19 method) However, there are significant challenges facing the borough in achieving the Mayor's Vision Zero, particularly as no additional funding has been provided to deliver it. Of the 121 KSI collisions between 2014 and 2016, 17 or 14% occurred on the TfL road network. This will require joint working with TfL on programmes to reduce these collisions. Over the same period all pedestrian and cycle collisions and nearly 80% of motorcycle collisions occurred on local borough-controlled roads. It is recognised that much work will be required to reduce these collisions.

2.5.28 A particular issue of concern is the relatively high number of motorcycle KSI collisions with 39 occurring between 2014 and 2016 recorded using the previous STATS 19 method. These formed 32% of all KSI collisions over this period with 20% of these happening on the TfL road

network. Motorcycle collisions are disproportionately large compared to the mode share of only about 0.4% in outer London. A similar picture emerges in relation to car KSI collisions in which 25% occurred on the TLRN which have the highest traffic flows in the borough. With respect to motorcycles, the Council's Road Safety Team works on the 2 Wheels London Campaign in partnership with the London Road Safety Council. Additional work on addressing the high level of motorcycle casualties will need to be developed and the Council recently enlisted the national Motorcycle Action Group to assist with finding ways to engage with motorcyclists. In addition, the Council is currently in discussions with the area's biggest motorcycle training provider to explore ways of working together.

2.5.29 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 below have been set against Outcome 2 for Vision Zero to reflect the reporting changes. The level of ambition remains unchanged, despite these revised figures which have been set by TfL using generic London-wide percentage reduction targets based on the MTS targets and back-casted casualty data.

Table 2.12 Revised Trajectories based on back-casting using the new COPA method

Killed and seriously injured casualties							
Observed with back casting applied				**Observed**	**Trajectory**		
2005-09 baseline	2010-14 baseline	2015	2016	2017	2022	2030	2041
149	85	61	74	57	52	25	0

2.5.30 The Council supports the MTS objective of reducing vehicle speeds and has already introduced 20mph speed limits in 7 areas across the borough, as shown in Fig 2.17 below.

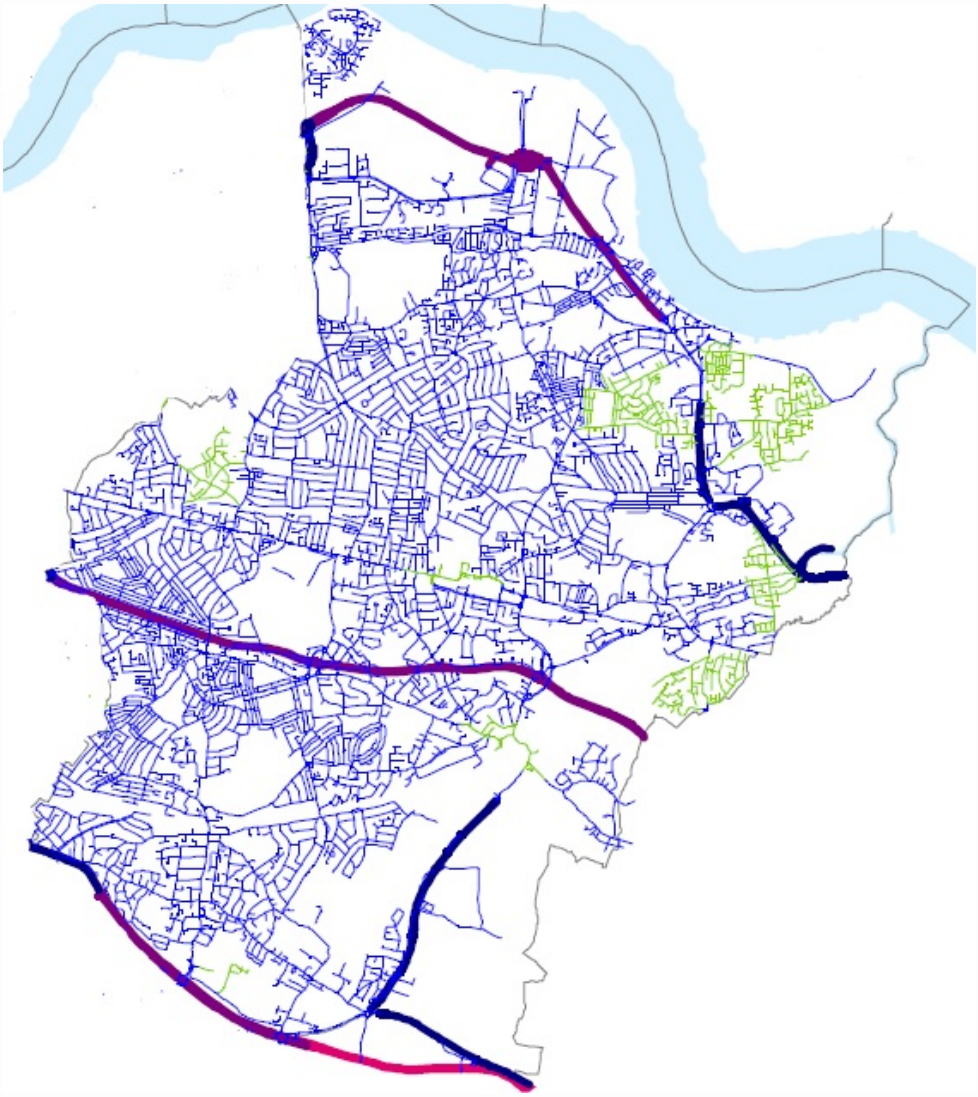


Fig 2.17 Map showing Existing 20mph Zones in Bexley (shown in light green)

2.5.31 The Mayor has published his Vision Zero action plan with three guiding principles:

-the Vision Zero approach is based on the fundamental conviction that loss of life and serious injuries are neither acceptable nor inevitable

-the Vision Zero approach requires reducing the dominance of motor vehicles and creating streets safe for active travel

-the Vision Zero approach ensures road danger reduction is a common priority for TfL, boroughs and roads policing

The action plan identifies five interventions:

- safe speeds: encouraging speeds appropriate to the street
- safe streets: designing an environment forgiving of mistakes

- safe vehicles: reducing risk posed by the most dangerous vehicles
- post collision response: learning from collisions and improving justice and care for victims

The Council's Road Safety Team's behaviour change focussed work can most effectively contribute towards the Safe Behaviours and Safe Speeds pillars.

The Highway Services and Traffic Road Safety Teams' work contributes to the Safe Streets, post collision response and Safe Speeds pillars.

The Safe Vehicles pillar can be supported though ensuring that the Council's contractors follow best practice guidance for the safety of their fleet. In addition, the use of such vehicles can be sought, wherever appropriate, through planning obligations for developments.

2.5.32 The Council's approach to Vision Zero and to making its roads safer and reducing killed and seriously injured road casualties is set out in Table 2.13. The Council has adopted a local target of reducing road casualties by at least 15 per year on borough roads, using engineering measures. The Council will be adopting the Healthy Street Checklist for Designers in the development of new LIP funded Healthy Streets schemes.

Table 2.13 Vision Zero: Bexley's approach

Measure	Specific proposals	Type of KSI casualties targeted	Vision Zero intervention
Hard measures	Road danger reduction – design of schemes to reduce traffic speeds as part of local safety schemes and Healthy Streets programme	Speed related casualties	Safe speeds
	Local safety schemes – high risk junctions and other locations with road collision record	All types of road user casualties	Safe streets

Measure	Specific proposals	Type of KSI casualties targeted	Vision Zero intervention
	Safety measures around schools	Road user casualties on journeys to/from school with focus on child casualty reduction	Safe streets
	Safer school crossings	Road user casualties on journeys to/from school with focus on child casualty reduction	Safe streets
	Cycle routes and facilities – cycle lanes, permeability measures	Cycle casualties whilst supporting increased mode share for cycling	Safe streets
	Pedestrian crossings and other facilities – footway widening, and formal and informal crossings	Pedestrian casualties whilst supporting increased mode share for walking	Safe streets
Soft measures	Cycle training – Bikeability training for children and adults	Cycle casualties for adults and children whilst supporting more cycling	Safe behaviours
	Child pedestrian training initiatives – Walkability pedestrian skills training; Look Out! awareness project	Child pedestrian casualties whilst supporting more walking	Safe behaviours

Measure	Specific proposals	Type of KSI casualties targeted	Vision Zero intervention
	Junior Road Safety officer – primary schools	Child casualties	Safe behaviours
	Youth Travel Ambassador – secondary schools	Young people casualties	Safe behaviours
	Education- Year 6 transition education; Theatre in Education initiative	Child casualties	Safe behaviours
	Motorcycle riders – 2 wheels London campaign	Motorcycle casualties	Safe behaviours
	Drivers – Look Out! before you pull out; Morning after – drink and drive campaign; Safe Drive/Stay Alive	Adult vehicle drivers, particularly new drivers	Safe behaviours
	Speed limit compliance – Speed Indicator Devices [SIDs] to deter speeding traffic	Speed related casualties	Safe speeds

2.5.33 As part of the scheme for Harrow Manorway, extensive provision of new trees and soft landscaping will be included, together with segregated routes for cyclists and bus lanes. A similar approach will be undertaken for Yarnton Way.

2.5.34 The Council has a statutory duty under Section 17 of the Crime and Disorder Act 1998 (revised) to consider the crime, disorder, environmental issues and substance misuse affecting the local area, and to do all it reasonably can to prevent them. Crime and the perception of crime have a big influence on willingness to walk, cycle and use public transport. The Council will continue to work with Transport for London, The Metropolitan Police, transport operating companies and other partners at Officer and Member level to introduce measures for improving behaviour on public transport and bringing about a shift in public opinion about what is acceptable behaviour and what people should expect of others when travelling. Table 2.14 details crime for Bexley's railway stations which shows an overall decrease from the previous year [British Transport Police data].

Table 2.14 Crime on Bexley railway stations

Station	July 2016/June 2017	July 2017/June 2018	Change
Abbey Wood	15	9	-6
Albany Park	6	1	-5
Barnehurst	7	8	+1
Belvedere	10	6	-4
Bexley	26	8	-18
Bexleyheath	24	20	-4
Crayford	26	21	-5
Erith	11	11	0
Falconwood	5	6	+1
New Eltham	10	9	-1
Sidcup	19	19	0
Slade Green	6	8	+2
Welling	24	13	-11
Total	178	139	-39 [-22%]

2.5.35 Table 2.15 summarises the crime related to the bus network [TfL analysis from Metropolitan Police data]. This shows an overall reduction in bus-related crime.

Table 2.15 Crime on Bexley bus network

Type of Crime	2015/16	2016/17	2017/18	% change 2015/16 – 2017/18
Criminal damage	36	50	32	-11
Robbery	6	13	10	+67
Sexual offences	10	16	18	+80
Theft and handling	62	61	37	-40
Violence against the person	116	110	111	-4
Other	13	8	5	-62
Total	243	258	213	-12

2.5.36 It is recognised that the constraints of width and traffic volumes mean that some of the borough's main roads are not currently suitable for more walking and cycling. Opportunities are taken to transform such streets as and when funding allows.

Borough Objectives

- To promote safe travel on the road network and support delivery of measures to reduce road collisions and work towards Vision Zero
- To support road danger reduction through physical road safety measures, travel planning, training and publicity programmes

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

Challenges and Opportunities

2.5.37 Some of the borough's major roads carry high volume of heavy goods vehicles. The A206/A2016 South Thames Development route is the strategic route for lorries accessing the industrial areas on the south bank of Thames Gateway. It has the second highest flow of HGVs in the borough, after the A2. Poor air quality and severance are local issues for these routes. To help address this issue the Core Strategy for the adopted Local Development Framework supports construction and preservation of rail freight interchange facilities.

2.5.38 In addition, the Council recognises the role that the River Thames can fulfil in providing an alternative to road transport for freight. It supports the protection of viable safeguarded wharves in the Core Strategy and the Growth Strategy and encourages the use of the Thames as a transport corridor that can support the future development of riverside locations.

2.5.39 A proposal for the construction of a Strategic Rail Freight Interchange at Howbury Park, close to Slade Green was considered at a public inquiry in 2018. The Secretary of State's decision, issued on 7 May 2019, refused planning permission. The developers had anticipated that their scheme would have the potential for reducing lorry movements on local and strategic roads by transferring freight onto the rail network. Fig. 2.18 shows the modelled freight flow across the borough for the morning peak period.

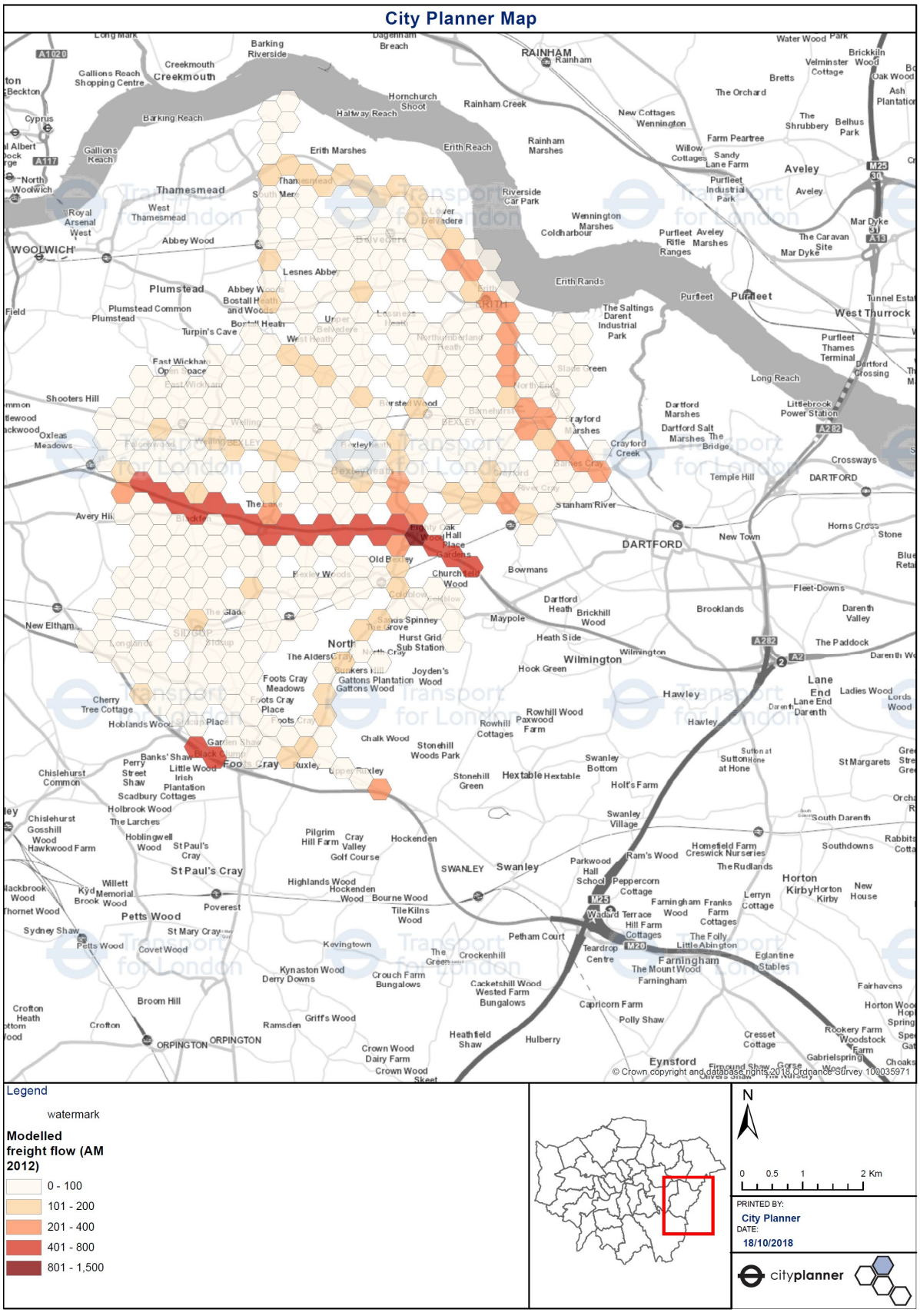


Fig. 2.18. Map showing Modelled Freight Flow in AM Peak [Tfl City Planner tool]

2.5.40 The volume of traffic on Bexley's main roads has decreased since 2000 [see Fig. 2.5 above] although Council collated data paints a more mixed picture with traffic volume increasing on some main roads [see Table 2.1 above]. Figure 2.19 below shows the modelled traffic flow for 2012 in the morning peak as measured in person-kms.

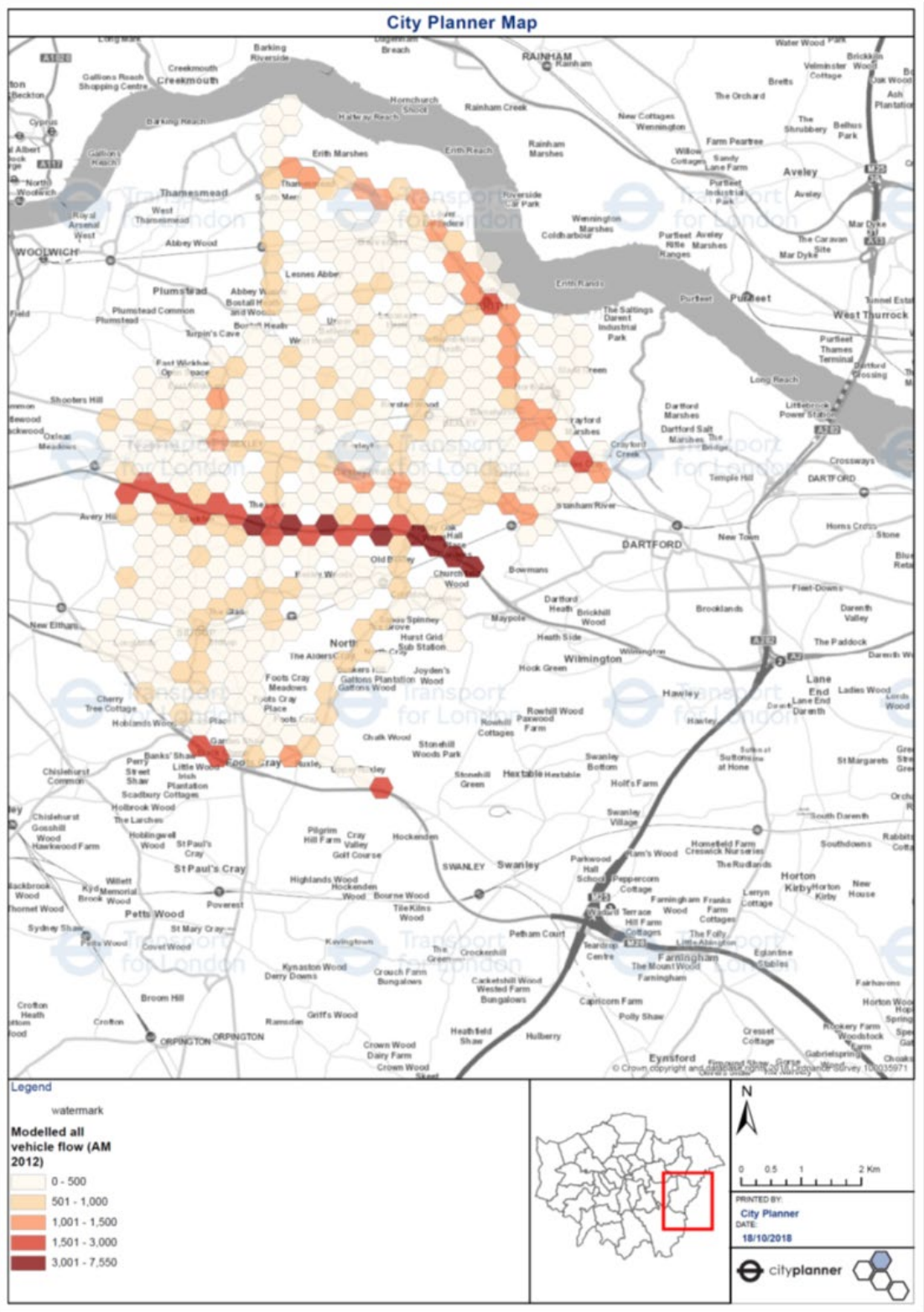


Fig. 2.19. Map showing Modelled Vehicle Flow in AM Peak [TfL City Planner]

2.5.41 The Council requires the submission of Travel Plans [TPs], Car Park Management Plans [CPMPs], Delivery and Servicing Plans [DSPs] and Construction Management Plans [CMPs] as part of major planning applications with the scope of their content informed by TfL guidance.

The first two will facilitate travel alternatives to the private car and to ensure efficient and effective management of car parking, especially where parking ratios may be reduced in the future when public transport connectivity increases. The second two deal with freight deliveries and the management of commercial vehicle movements associated with these developments are monitored and properly controlled. The Council will also seek to manage the impact of servicing in local areas, particularly town centres, through re-timing and quieter delivery initiatives where appropriate.

2.5.42 The population of Bexley is expected to increase by about 55,000 by 2040. The movement needs of the additional population is likely to add to pressure on the road network even with restrictive car parking provision for new developments, particularly in areas that will not directly benefit from identified strategic transport improvements. Car ownership in the borough is high with 76% of households having 1 or more cars available.

2.5.43 Through its existing and emerging Strategic Policies and detailed policies in the Local Plan the Council supports the bringing forward of car clubs as part of new developments as well as the provision of car club vehicles for public use where appropriate. The Local Plan also identifies Strategic Industrial Land which is located in appropriate areas and safeguarded for industrial-type uses. These are identified on the Unitary Development Plan (UDP) Proposals Map which will be reviewed and finalised through the new Local Plan process.

2.5.44 It is recognised that continuing efforts need to be made to reduce the volume of traffic in the borough and to encourage sustainable development. As commented above with increasing population and employment additional pressure will be placed on the road network making it much harder to fully achieve the Mayor's aspirations for Healthy Streets. Table 2.16 summarises the Council's approach to reducing current and future road traffic in the borough.

Table 2.16 Road Traffic Reduction

Measure/Programme	Current Initiatives	Planned Initiatives
Travel planning – School	Range of initiatives such as Walk on Wednesdays, walking week, scooter and cycle training and parking, park and walk/car free zone	The Council has and continues to change its delivery model to offer greater support to schools in developing and updating the plans
Travel planning – Workplace and Residential	The Council requires the provision of travel plans and car park management plans as part of major development proposals. The Council has a staff travel plan.	Effective travel plan and car park management plans, including monitoring and revision will result in developments that rely less on use of the private car and in time will assist in reducing traffic.
Support for Cycling-	The Council has a programme of installing on-street cycle parking. In	More cycle parking is planned for Abbey Wood to support its role as a

Measure/Programme	Current Initiatives	Planned Initiatives
Cycle parking	addition, the Council requires cycle parking provision as part of development proposals.	terminus and interchange for the Elizabeth line. The emerging Local Plan seeks minimum cycle parking standards in line with the London Plan
Support for Cycling – Cycling infrastructure	The Council is implementing a healthy street approach for Harrow Manorway including delivering segregated cycleways and has recently completed major cycle improvements in Bexleyheath town centre.	Healthy streets approach for Yarnton Way is planned. An initial network of Healthy Streets has been identified based on the Mini Holland bid with a focus on cycle routes serving Abbey Wood railway station. Erith Links town centre scheme would include improved cycle permeability such as routes and removal of one-way roads. Better cycle facilities planned for local town centres – Blackfen, Northumberland Heath and Nuxley.
Support for Cycling – Strategic cycle routes	The Council is working with partners to deliver Quietway 1 between Greenwich and Bexleyheath	Local cycle routes proposed to complement proposed strategic cycle routes
Behaviour change – travel awareness	A programme of measures to promote public transport and alternatives to car use	Raising public awareness of realistic alternatives to private car use
Support for Walking – Legible London wayfinding	Bexleyheath town centre major scheme includes Legible London signage	Erith Links town centre scheme would include better pedestrian signage and routes
Support for Walking – public rights of way network	Improvements to the public right of way (PROW) network targeted at maximising benefits for residents	Ensuring appropriate management and maintenance of the PROW network
Support for Walking – accessibility measures	Dropped kerbs, informal crossings	
Support for Walking	Pedestrian skills training	Extension to the programme of pedestrian skills training

Measure/Programme	Current Initiatives	Planned Initiatives
Support for Walking – pedestrian facilities	Erith town centre public realm scheme provides better access to the town centre by foot, cycle and for those with restricted mobility; the scheme also includes bus stop accessibility enhancements and footway paving in high quality materials	Better pedestrian facilities planned for local shopping centres – Blackfen, Northumberland Heath and Nuxley.
Support for public transport – bus services	Better bus access is included in Erith town centre public realm scheme; better bus access into Bexleyheath town centre and provision of additional bus stand provision	Measures to improve bus journey times and reliability included in Erith Links proposals.
Support for sustainable transport – planning policies	The current Local Development Framework policies – supports bus and rail facilities; new major transport infrastructure; reducing the need to travel; support for local and strategic walking and cycling programmes, school and other travel plans, car clubs, EVCPs	The emerging Local Plan strategic and detailed policies support minimum cycle parking in line with London Plan standards, more cycle and walking routes and facilities including Quietways; support for integration between land use and transport with high trip generating developments to be located where these can be served by a range of transport modes; promoting the concept of Healthy Streets
Support for sustainable transport – Growth Strategy	The Growth Strategy, adopted by the Council, supports – minimising the need to travel; integrated transport and land use planning to secure transport orientated development [TOD]; support for sustainable modes of transport.	
Support for sustainable transport - managing car ownership and use	There are currently 16 CPZs in the borough of which 7 are around railway stations [Abbey Wood, Sidcup, Welling, Crayford, Falconwood, Bexleyheath and New Eltham] and 5 are in town centres	Current CPZs around railway stations will be reviewed following the commencement of rail services on the Elizabeth line. The emerging Local Plan policies support car clubs and car sharing schemes for new

Measure/Programme	Current Initiatives	Planned Initiatives
	[Bexleyheath, Erith, Bexley, Sidcup and Welling]. The Growth Strategy seeks to influence car ownership by management of residential parking provision in the context of improved public transport	developments in addition to other measures to promote sustainable travel (through Travel Plans etc).
Support for sustainable transport – management of car parking	The Local Plan supports the shared use of parking particularly in shopping centres and as part of major development proposals	The emerging Local Plan policies will generally support provision of car parking in line with London Plan maximum standards, with minimum levels of parking for certain developments in areas of low public transport connectivity where justified, require developers to produce car park management plans, and support car-free/car-restricted developments in appropriate circumstances

Borough Objectives

- To provide good networks for pedestrians and cyclists particularly in growth areas and linking them to the communities beyond.
- To create healthy streets and pleasant routes

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

Challenges and Opportunities

2.5.45 TfL data shows that the poorest air quality is on the borough's main road network. It is particularly poor along the A2 for which TfL is the highway authority. The whole borough was declared an Air Quality Management Area in 2007. Reducing motor vehicle traffic will contribute towards better air quality. The Council is encouraging improvements to air quality through the promotion of walking and cycling initiatives under Outcome 1 and has completely revised and updated its Air Quality Action Plan. The Plan brings together actions being taken across the Council's areas of responsibility including public health, education, urban renewal and transport and traffic policy. The focus of the plan is to encourage a shift towards more sustainable modes of transport. The Council requires Air Quality Impact Assessments such as for proposals for major developments and new build developments in areas of sub-standard air quality.

2.5.46 The Council is seeking to encourage the uptake of more electric vehicles across the borough. DfT data from 2016 shows that there are only 115 electric vehicles registered in the borough or about 0.2% of the total number of vehicles. However, the number of registered electric vehicles is growing and is predicted to double in London between 2016 and 2020 [TfL/GLA study]. Through the development planning process there are 409 individual charging points which have either been or are in the process of being installed, the majority of which are as part of new residential developments. In addition, there are a further 608 passive charging points where the ducting has already been installed and can easily be converted to charging points in the future.

2.5.47 The GLA has identified the A206 between the Queens Road and Northend Road roundabouts in Erith as an Air Quality Focus Area. The A206 is a strategic route servicing the industrial areas east of Erith and north of Belvedere and the adjoining communities. The road is mainly residential in nature with a primary school situated within 50m of the road. The action plan is likely to include a number of measures, such as an anti-idling information campaign to challenge drivers idling vehicles parked in streets, particularly close to any schools.

2.5.48 The Council has brought together most of its staff onto a single site in Bexleyheath, minimising the need for staff to travel between sites. Desk space is provided at a ratio of 7 desks per 10 staff with remote working normal for many staff. The Council has developed a staff travel plan

with the aim of reducing single occupancy car trips to and from the site including those parking remotely. Pool cars currently operate from the Civic Offices minimising the need for staff to bring their own cars into the office, and these were changed to all-electric and hybrid vehicles for staff use in summer 2018, while discussions with car club operators are ongoing to try and further increase the number of flexible vehicle options available to staff. Cycle parking is provided on site.

2.5.49 As part of the procurement process, nearly all of the Council's Street Services fleet [recycling and waste collection and street cleansing] will be replaced by 2020 to meet the Euro VI standard. Serco, the Council's current Street Services contractor, has a Carbon Reduction Commitment of 40% by 2020 which will be achieved through refuse and recycling round optimisation and area-based resourcing scheduling and deployment for street cleansing.

2.5.50 As part of school travel planning, idling would be deterred through an anti-idling information and engagement campaign. In addition, the Council will continue to promote AirTEXT, an application that combines all the air quality monitoring in London boroughs with real time modelling to predict AQ values for the next day, which allows those susceptible to increased air pollution to receive warnings when pollution levels are predicted to rise.

2.5.51 The TfL accredited school travel plan programme seeks to reduce car journeys on the school run. Currently 83 Bexley schools have a travel plan with about a third of these schools having the higher-level silver or gold standard. Table 2.11 summarises the impact of the school travel plan programme which does shows some reduction in car use but much more needs to be done. Many of the measures and initiative that would achieve greater modal shift are outside the schools' control and the Council has and continues to change its delivery model to offer greater support to schools in developing and updating the plans.

2.5.52 Through the Local Plan the Council supports development-related travel plans and school travel plans and requires the submission of travel plans as part of the development process for relevant planning applications. Over the period 2015 to 2017, 61 workplace travel plans were secured.

2.5.53 The emerging Local Plan policies support protecting and enhancing the borough's biodiversity assets such as by seeking opportunities to provide for greening of the built environment through green roofs and green walls in new buildings. There is also detailed policy support for biodiversity in new developments including support for green roofs where appropriate as well as detailed policy support for Sustainable Drainage systems [SuDS] for new build developments which should be built into their design. The Council is seeking that natural drainage of surface water from developments should be into the ground wherever possible. The Council will be preparing SuDS design guidance as policy support for its Local Plan.

2.5.54 Opportunities will be taken to include tree planting and landscaping as part of public realm schemes. The current healthy street scheme for Harrow Manorway includes tree planting with

similar proposals planned for Yarnton Way, as well as segregated routes for cyclists and pedestrians and public transport lanes.

2.5.55 Electric and hybrid vehicles have a significant role to play in helping to improve air quality by offering an alternative to purely diesel or petrol- driven vehicles. Bexley is a borough with a high level of car ownership but is also one of the lowest boroughs for ownership of an electric car. Key to encouraging the uptake of electric vehicles, and reducing so called 'Range Anxiety', is increasing the availability of charging points for residents both nearer to their homes and at the destination end for work and other journeys. Through its planning policy, Bexley is successfully driving forward the number of charging points in all new developments. The Council is also working closely with TfL in developing two separate work-streams which are focussing on the introduction of both rapid charging hubs and more localised residential charging infrastructure.

2.5.56 Work is underway to identify sites that are suitable for rapid charging and on-street electric vehicle charging points. It is expected that the majority of rapid charging points in Bexley would be in the form of hubs. These can typically accommodate between 4 and 8 vehicles which can all be charged simultaneously within 10-20 minutes. With many major roads traversing Bexley, the borough will have a number of opportunities/ locations that will be attractive to commercial suppliers for the creation of rapid charging hubs and these could start to be installed by end 2019. The Council is working closely with the taxi and private hire trade on the use and possible locations of these hub-based rapid charging points. A programme to introduce slower, on-street charging points, located nearer to where people live is currently in development.

2.5.57 Road transport can be a significant source of vibration and noise and one of the indicators of a Healthy Street is that streets are "not too noisy". The focus for the borough is on reducing the amount of road transport, and therefore reducing noise levels, as detailed in Table 2.16.

2.5.58 Street trees can mitigate the impact of air pollution and enhance the local environment. The Council seeks to plant street trees as and when opportunities arise, as shown in Table 2.17. Trees are felled due to vandalism, disease or safety reasons.

Table 2.17 Street tree programme

	2015/16	2016/17	2017/18
New	10	15	242
Replacement	51	31	14
Felled	140	231	220

Borough Objectives

- To seek improvements to air quality by supporting the use of zero emission vehicles
- To protect significant green corridors
- To encourage sustainable drainage systems and greening measures through the planning process

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

Challenges and Opportunities



2.5.59 The borough is crossed by three east-west rail lines from central London to Dartford, Gravesend and the Medway towns. The general flow is for commuter traffic into/from central London. However, the rail network is not well located in relation to the borough's town centres and industrial/commercial centres nor is the rail network dense enough. Only 40% of the borough's population live within 800m [a relatively short walk] of a railway station, ranking Bexley 31st out of 33 boroughs. Despite the distance to railway stations, 25% of residents travel to work by train [Census 2011], the third highest of any London borough. There is, therefore, a clear need to improve connectivity to railway stations through bus, cycle and pedestrian links.

2.5.60 With the commencement of Elizabeth line services to Abbey Wood , there is the opportunity to improve bus services to link with the railway station. TfL has been working with the Council on a range of changes to local bus services that will commence operation in conjunction with the Elizabeth line services, including a new faster direct service from Bexleyheath to Abbey Wood. To complement the new rail services a significant investment in public realm is being made around Abbey Wood railway station. Measures include a new signalised crossing for pedestrians and cyclists to enable safe crossing of Harrow Manorway, new taxi ranks and drop off bays, short stay parking bays and an informal public space. Much more cycle parking will be provided at a new cycle hub. This scheme is linked to the Harrow Manorway healthy street project, which includes new footways and cycle and public transport lanes, which forms part of the Abbey Wood and South Thamesmead Housing Zone project.

2.5.61 In its emerging Local Plan strategic policies, the Council expects developments to identify and implement accessible, safe and convenient direct walking routes to town centres, transport nodes and other key destinations.

2.5.62 There are currently three locations on borough roads with bus-only controls, these are the bus lanes on the Harrow Manorway flyover in Abbey Wood, Market Place in Bexleyheath town centre, and between Erith High Street and Colebrook Street in Erith. There are also (service) bus only lanes on the A2 Rochester Way [TLRN] at the Black Prince and Danson interchanges. The Council is working with TfL on developing bus priority measures to complement revised bus service and to mitigate the delays to buses at specific locations. Bus priority schemes originally identified as concepts in the GLA's previous City in the East growth strategy are initially focused on five locations:

- A222 Station Road/Longlands Road/Hatherley Crescent junction
- A220 Gravel Hill/Erith Road/Watling Street/Broadway junction and corridor to Long Lane junction
- A211 Sidcup High St between Hatherley Road and Station Road/Elm Road junctions
- A206 Queens Road/James Watt Way junction
- A206 Bexley Road/A2016 Queens Road/Bronze Age Way between Arran Close and Bexley Road/Fraser Road roundabout

2.5.63 This work is now being taken forward jointly with TfL in connection with their Bus Priority improvement programme and, as well as examining other opportunities to improve journey times across the borough, has resulted in additional funding being provided by TfL in 2018/19 for improvements to existing and new stops/stands in Bexleyheath to accommodate the new services providing better connectivity to Abbey Wood railway station following the opening of the Elizabeth Line. The delay in the commencement of Elizabeth line services has resulted in some of these measures being deferred, along with surveys that will feed into feasibility studies into further improvements to bus journey times approaching Erith town centre, Station Road Sidcup, and Erith Road Bexleyheath.

2.5.64 Improvements to pedestrian and cycle access to key railway stations would form part of an initial healthy streets network shown in Figure 2.9. Public realm enhancements such as better signage, provision of cycle parking, seating and landscaping would be prioritised as part of this in the areas immediately around the railway stations, especially where they will complement other schemes resulting in greater overall benefit.

2.5.65 As part of the cycle parking programme the Council installs stands in local shopping centres, parades, parks and open spaces as shown in Table 2.9.

2.5.66 Amendments to the physical road network facilitates access to public transport services. The programme of bus stop accessibility has made 570 out of 577 [or 99%] of bus stops accessible. Where possible all bus stops will be made fully accessible through programmes to support healthy streets.

2.5.67 The Council provided input to, and support of, the Port of London Authority's (PLA) Thames Vision 2035. The Vision seeks three additional Thames crossings east of Tower Bridge, enhanced use of the river for passenger use and to continue the policy of safeguarding wharves. The PLA also sees the potential for new piers at Erith and Thamesmead by 2025 which can support the goal of more passenger journeys particularly at off peak times.

2.5.68 In terms of links to the wider south east and its strategic infrastructure priorities, the Council strongly supports, through its Core Strategy and Growth Strategy, the extension of the Elizabeth line to Ebbsfleet to improve access to central London and to allow connections with HS1 and hence links to Kent, France and Belgium.

Borough Objectives

- Encourage the use of the River Thames as a transport corridor for potential passenger services and especially for freight, including safeguarding wharves used for this purpose.
- To improve the accessibility of the transport network to assist access to jobs, local amenities and other destinations.
- To support more reliable and faster bus services through bus priority measures with segregation from other traffic as much as possible.
- Provision of excellent public transport links with rail stations, existing communities and other growing nodes.

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

Challenges and Opportunities

2.5.69 Over 95% of Bexley's existing bus stops are accessible. The Council will seek to make all bus stops accessible as described above. All the remaining bus stops have been reviewed but there are difficulties in making all bus stops accessible mainly due to the presence of driveways. In addition, most of the borough's railway stations offer step-free access. However, key railway stations at Erith, serving one the borough's regeneration locations, and Falconwood are not yet step-free. Bexley railway station is scheduled to be step-free through the DfT funded Access for All programme. For Bexley the additional journey time arising from the need to use a step-free public transport network is currently 7 minutes or 8% for a typical journey. Fig. 2.20 shows average travel time index between step free and non-step free considering jobs and population.

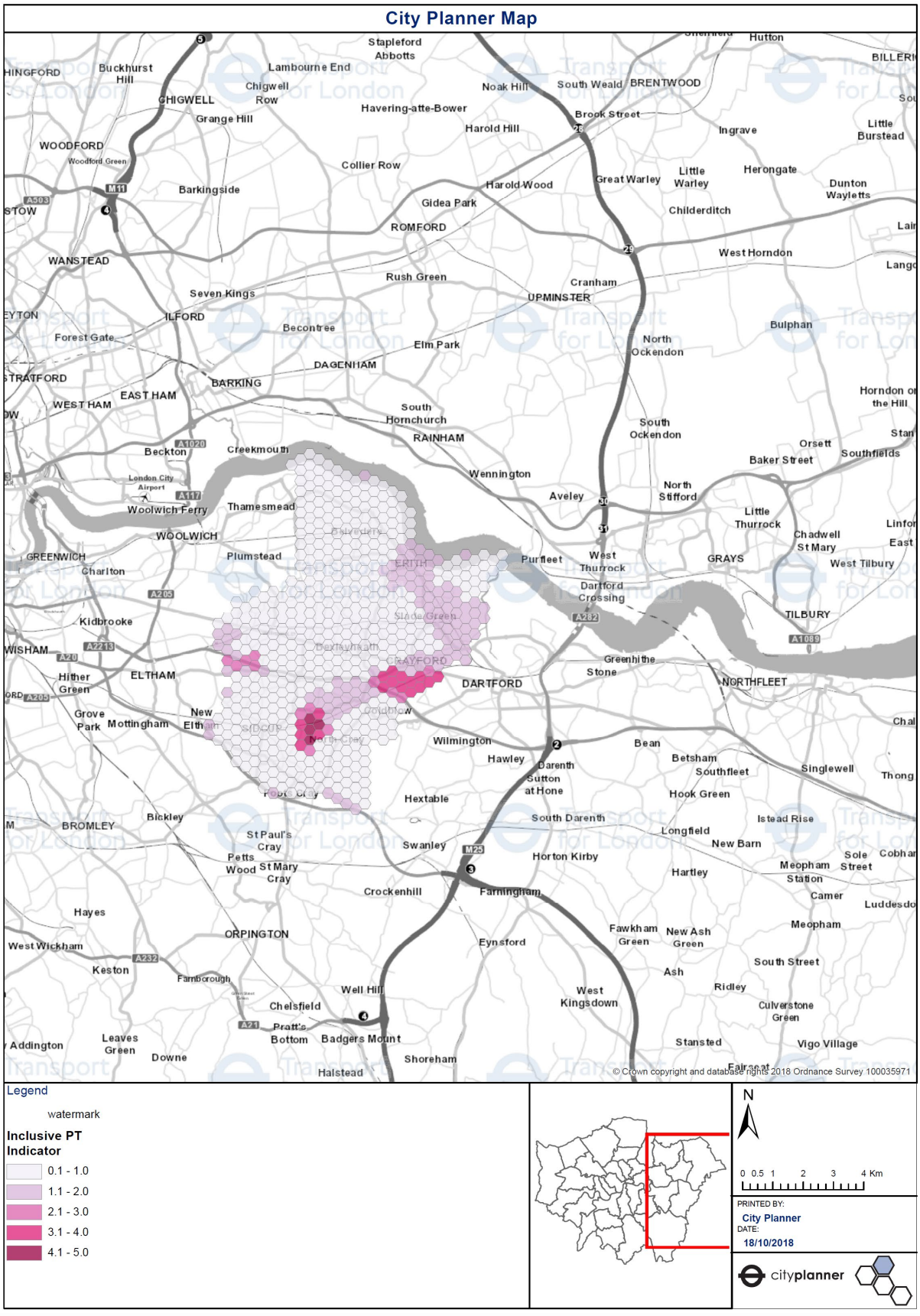


Figure 2.20 Map showing Average travel time step-free vs non-step free index [TfL City Planner]

2.5.70 The Council's approach to improving access to the public transport and road network is outlined in para 2.4.24. Subject to funding, the Council will seek to continue these programmes.

2.5.71 To complement accessibility measures in the public domain, the Council requires the provision of general disabled parking at a minimum provision of 4% set for its parking standards for new developments.

2.5.72 Through its Core Strategy, the Council supports a safe transport system and increasing the accessibility and safety of bus and rail facilities. It will work with TfL to support door-to-door transport services for disabled and older people such as Dial a Ride and Taxicard.

2.5.73 The Council is working with partners to delivery public realm improvements around Abbey Wood railway station, as detailed in para. 2.4.59. These will enhance accessibility and pedestrian amenity by provision of seating, crossing facilities and better signage.

Borough Objectives

- To improve the accessibility of the transport network to assist access to jobs, local amenities and other destinations.
- Support delivery of safe and secure public transport network.

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

Challenges and Opportunities

2.5.74 Most bus services in the borough operate on borough-controlled roads. The Council recognises its role in making bus services quicker and more reliable by its management of the road network. Analysis as part of the Sub Regional Transport Plan prepared by TfL shows that most delays to traffic and hence to bus services tend to occur on the approaches to the borough's town centres: Erith, Bexley, Bexleyheath, Sidcup and Welling. It is recognised that a balance needs to be struck, spatially and temporary, between different types of road user as in the Healthy Streets approach in the MTS. In addition, initial proposals for Heathy Streets based on the proposed cycle route network [Fig. 2.17] would be linked to the need to enhance bus service speed and reliability. The key role of buses in providing much of the access to public transport for borough residents has already been highlighted in this LIP. Fig. 2.21 shows the bus speed in mph for the morning peak period

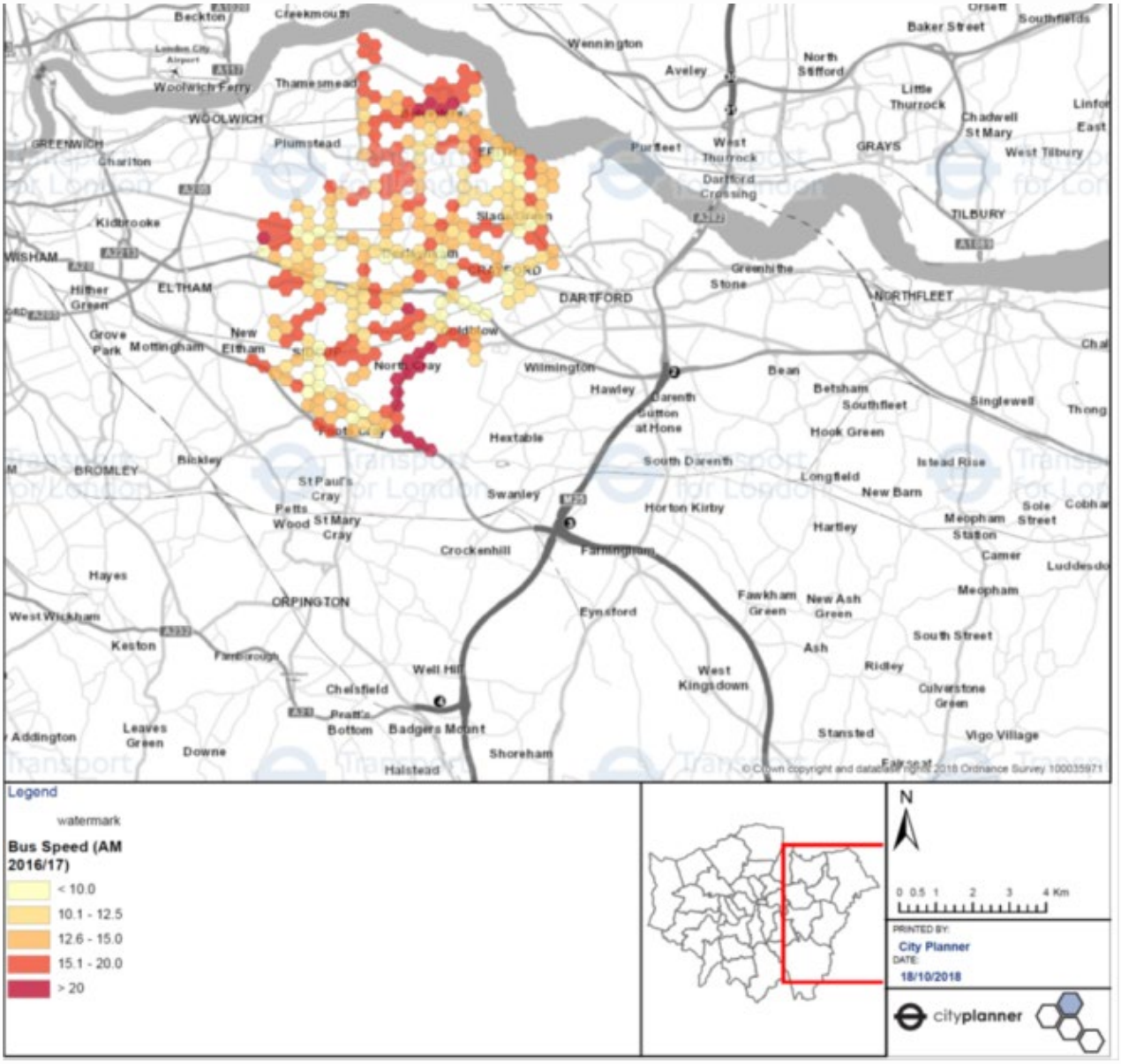


Fig. 2.21. Bus speed AM peak 2016/17 [TfL City Planner]

2.5.75 The Council's work with TfL on bus priority is outlined in the section above. As part of these measures the Council would be seeking to remove parking at junctions where this conflicts with bus movement. There are currently three operational bus lanes in the borough. As part of the development of two OAPFs for Bexley Riverside and Thamesmead and Abbey Wood, the development of schemes to provide better bus access would be a priority.

2.5.76 Rail devolution has shown to provide benefits for London residents through higher service frequencies, all day staffing at railway stations and better customer information. In principle, the Council supports greater devolution of rail franchising and the opportunities this will provide for local authorities to be involved in the franchise specification. However, the Council does have concerns on the impact of rail devolution on Freedom Pass costs for the borough which would need to be addressed prior to TfL taking over additional suburban rail services. It

would also be opposed to any devolution resulting in a reduction resident access to central London termini. Subject to these issues the Council is willing to work with TfL on lobbying for more rail devolution.

2.5.77 Work in enhancing access to Abbey Wood railway station to complement the commencement of Elizabeth line services has already been described. Opportunities will be taken to undertake similar work around the borough's other key railway stations.

2.5.78 As part of the Erith Links programme access by foot, cycle and bus to the railway station in Erith town centre is being enhanced. Initial development work for TfL and GLA growth-related funding has included a placemaking and movement strategy developed by consultants. Proposed measures within the strategy include new cycle routes, signage and wayfinding, seating and tree planting, improved access by bus including a bus only street and changes to bus routes and amendments to the road network to reduce car dominance and enhance the approaches to the town centre to make it a more appealing destination

2.5.79 Smaller scale town centre renewal schemes such as the review of Active Travel connections in Crayford, will include better pedestrian, cycle and bus access

2.5.80 Access to the public transport network will be supported through the bus stop accessibility and railway station accessibility programmes.

Borough Objective

- To support more reliable and faster bus services through bus priority measures with segregation from other traffic as much as possible.

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

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

Challenges and Opportunities

2.5.81 Bexley is facing significant growth in population and jobs. The borough's population is expected to increase by 22% between 2016 and 2040 [GLA data] Jobs growth could be around 17,500 by 2050 [GLA data]. A key principle is to seek to locate people and jobs in areas which are, or could be, well-served by a range of transport modes. As discussed earlier, much of the borough has relatively poor access to public transport. The Council has adopted its Growth Strategy which sets out a 30-year strategy to 2050. It will inform the development of Bexley's Local Plan and two OAPFs for Bexley Riverside and Thamesmead/Abbey Wood. Under the strategy growth would be concentrated in Belvedere, Erith, Thamesmead, Slade Green and Crayford and within the borough's other main town centres. Borough-wide the strategy seeks to deliver up to 31,500 new homes and up to 17,500 new jobs. The Council's approach to growth and the transport investment required to support this is detailed in paras. 2.3.6 to 2.3.8 above.

2.5.82 In the absence of policies to integrate land use and transport planning such growth could add significant pressure on the borough's road network as well as on rail services towards central London. Within the Growth Strategy the Council considers the first principle in considering location of development is to reduce the need to travel. This is the approach in the Core Strategy and emerging Local Plan strategic policies. The Council also advocates the integration between land use and transport planning to secure transport orientated development [TOD]. It believes this approach is in line with the principles of Good Growth set out in the MTS that the boroughs are expected to follow:

- good access to public transport
- high-density, mixed-use developments
- people choose to walk and cycle
- car-free and 'car-lite' places

- inclusive, accessible design
- carbon-free travel
- efficient freight

2.5.83 To support TOD a number of key transport infrastructure requirements have been identified:

- the extension of the Elizabeth line [Crossrail] east of Abbey Wood to Ebbsfleet [C2E];
- the completion of a public transit corridor, in phases, from North Greenwich to Slade Green
- the completion of a Docklands Light Rail [DLR] extension from Gallions Reach through Thamesmead to Belvedere; and
- the completion of road-based river crossings connecting Belvedere with Rainham and Thamesmead with Gallions Reach

These are considered further in the Delivery Plan – long term interventions to 2041.

2.5.84 Strategic cycle routes are identified in the MTS. Only one route currently benefits Bexley: Quietway 1 between Bexleyheath and Greenwich. The MTS also identifies three potential cycle routes serving Bexleyheath town centre. However, Bexleyheath is not the main focus for growth in the borough. Much of the growth in housing and jobs is being targeted in the north of the borough as part of the Council's Growth Strategy and linked to proposed strategic transport infrastructure: Belvedere, Erith, Thamesmead and Slade Green which in total could deliver up to 26,000 homes and up to 11,500 jobs through the Council's Growth Strategy. Local cycle routes and better pedestrian links to rail stations and town centres would need to be developed connecting housing developments with transport interchanges, shopping centres and other local amenities.

2.5.85 It is recognised that for the two OAPF areas a higher mode share for sustainable travel would be sought than that for the borough as a whole. To support this aspiration significant investment would be required in strategic transport infrastructure by TfL, Network Rail and the Government. This would need to be complemented by local transport networks such as cycle and pedestrian links, better bus services and measures to enhance bus service speed and reliability.

2.5.86 It is also recognised that parking policies can have a strong influence on car usage and even ownership. A balance needs to be struck between requiring car parking provision to enable development, particularly in areas of the borough which have poor access to public transport and which can support delivery of much needed housing for the borough, against over provision leading to additional traffic on the borough's roads, with increased congestion, poor air quality and discouraging greater use of sustainable transport. The Council's parking

standards are generally in line with London Plan standards. Residential car parking standards tend to be higher reflecting the low access to public transport and to minimise on-street car parking. In Bexley's emerging Local Plan detailed policies the Council is supporting car free/car restricted developments in appropriate locations, such as where there is better public transport connectivity and sufficient parking available parking capacity to ensure that development-related parking will not exacerbate existing on-street parking stress.

2.5.87 As part of new development proposals the Council already require the provision of cycle parking. In the emerging Local Plan detailed policies, the Council is requiring on-site secure cycle parking provision in line with London Plan standards for all land uses. Cycle parking would also be part of public realm schemes where feasible. On-street cycle parking is being provided as part of a LIP funded programme.

2.5.88 To support efficient freight movement and servicing the Council requires the submission of Delivery and Servicing Plans and Construction Management Plans as part of major planning applications with requirements on their content provided by TfL guidance. Freight deliveries and management of these are controlled by DSPs and CMPs. The Core Strategy [policy CS15] supports improving the efficiency and promotion of sustainable freight movement in the borough, the protection of viable safeguarded wharves on the River Thames and ensuring the construction and preservation of rail freight interchange facilities and new wharves.

2.5.89 The Growth Strategy, which is focused on the two Opportunity Areas of Bexley Riverside and Thamesmead and Abbey Wood, is predicated on the provision of strategic transport infrastructure as outlined above. To complement this strategic investment further financing will be sought in local bus services to connect with key railway stations and to support better access to town centres as well as better cycle and walking links through proposals such as the Erith Links programme. The Council will be seeking to complement new and enhanced bus services with bus priority measures to assist bus service speed and reliability.

2.5.90 The Council welcomes the inclusion of the extension of the Elizabeth line in the MTS [proposal 86] and will continue to work with TfL and the Mayor, as well as the other C2E partners, to deliver this key project which would support regeneration in the north of the borough including the two Opportunity Areas and for the Thames Gateway corridor in general. The Council will also support public realm measures around railway stations on the extension such as better pedestrian and cycle links. Similarly, the Council very much welcomes the support for bus transit schemes in Opportunity Areas [proposal 91]. Such schemes will form a key element of the plans for the two Mayoral Opportunity Areas.

2.5.91 The recently published Thames Estuary 2050 Growth Commission report supported the extension of Crossrail 1 to Ebbsfleet which could deliver 55,000 new homes and up to 50,000 jobs including 30,000 new homes in Bexley. It also supports the regeneration of Thamesmead which could provide 20,000 new homes. The extension of Crossrail 1 would also relieve congestion on the commuter rail lines into central London.

2.5.92 As already identified, much of the borough is relatively poorly served by public transport. The Council supports the principle of innovative bus services such as demand responsive transport which could enhance access for residential areas of the borough which are not well-served by conventional route-based bus services.

2.5.93 During 2018 works to Erith railway station and the station forecourt will be carried out which will enhance pedestrian and vehicle access as well as providing seating, trees and landscaping and more secure cycle parking.

Borough Objectives

- To work with TfL and the Mayor to deliver a Government-led extension of the Elizabeth line to Ebbsfleet.
- To secure the key transport infrastructure investment of an extension of the DLR from Gallions Reach through Thamesmead to Belvedere, the completion of a public transit corridor from North Greenwich to Slade Green and the completion of road-based river crossings connecting Belvedere with Rainham and Thamesmead with Gallions Reach.

2.6 Summary of Borough Transport Objectives

Table 2.18 Summary of Borough Transport Objectives

Objectives	
Objective 1	To encourage as much movement as possible to use sustainable modes of transport [public transport, walking and cycling]
Objective 2	To provide good networks for pedestrians and cyclists particularly in growth areas and linking them to the communities beyond
Objective 3	To support more reliable and faster bus services through bus priority measures with segregation from other traffic as much as possible
Objective 4	To create healthy streets and pleasant routes
Objective 5	To improve the accessibility of the transport network to assist access to jobs, local amenities and other destinations
Objective 6	To promote safe travel on the road network and support delivery of measures to reduce road collisions and work towards Vision Zero
Objective 7	To support road danger reduction through physical road safety measures, travel planning and education, training and publicity programmes
Objective 8	To seek improvements to air quality by supporting the use of zero emission capable [ZEC] vehicles
Objective 9	To protect significant green corridors
Objective 10	To encourage sustainable drainage systems and greening measures through the planning process
Objective 11	Encourage the use of the River Thames as a transport corridor especially for freight, including safeguarding wharves used for this purpose
Objective 12	Provision of excellent public transport links with railway stations, existing communities and other growth nodes
Objective 13	Support delivery of safe and secure public transport network
Objective 14	To work with TfL and the Mayor to deliver a Government-led extension of the Elizabeth line to Ebbsfleet

Objectives	
Objective 15	To secure the key transport infrastructure investment of an extension of the DLR from Gallions Reach through Thamesmead to Belvedere; the completion of a public transit corridor from North Greenwich to Slade Green and the completion of road-based river crossings connecting Belvedere with Rainham and Thamesmead with Gallions Reach

2.6.1 Other Mayoral Strategies

2.6.2 Boroughs are expected to take account of a number of strategic policy documents in preparing their LIPs. The sections below highlight the relevant policies within each strategy in relation to the development of the objectives for the LIP. As some of these Mayoral strategies are all still only in draft form, final versions of these documents will be considered as part of the process of preparing the draft and final LIP.

Table 2.19 Non-Transport Mayoral Strategies

Strategy	Final Published	Draft Published
Environment	May 2018	August 2017
Health Inequalities	Summer 2018	August 2017
Housing	May 2018	September 2017
Economic development	Spring/summer 2018	December 2017
Culture	Summer 2018	March 2018
London Plan	Late 2019	December 2017

Draft London Plan

2.6.3 The most relevant policies in relation to the preparation of the LIP and Local Plan strategic policies are set out in Table 2.18.

Table 2.20 London Plan policies

Policy Number	Policy
Good Growth policies	
GG2	Making the best use of land
GG3	Creating a healthy city
GG5	Growing a good economy
Spatial Development patterns policies	
SD1	Opportunity Areas
Transport policies	
T1	Strategic approach to transport – see Table 2.18 below
T2	Healthy Streets
T3	Transport capacity, connectivity and safeguarding
T4	Assessing and mitigating transport impacts
T5	Cycling
T6	Car parking
T6.1	Residential parking – see Table 2.19 below
T6.2	Office parking
T6.3	Retail parking
T6.4	Hotel and leisure use parking
T6.5	Non-residential disabled persons parking
T7	Freight and servicing
T9	Funding transport infrastructure through planning

2.6.4 The following schemes have been extracted from the draft London Plan including information on the timescale for delivery.

Table 2.21 Relevant transport schemes for Bexley

Scheme	Timescale
Healthy Streets and active travel	
Accessibility and inclusivity embedded in the planning and design of Healthy Streets	2017-2041
Borough-led traffic reduction strategies (including workplace parking management)	2017-2030
Cycle network development (London-wide)	2017-2030
Electric vehicle charging infrastructure	2017-2041
Freight consolidation programme	2017-2041
Freight fleet emission reductions	2017-2041
Personal safety and security improvements on London's streets	2017-2041
Street tree increases	2017-2041
Sustainable drainage system improvements on London's streets	2017-2041
ULEZ London-wide for buses, coaches and HGVs	2020-2030
Vision Zero (safer road user behaviours through education, engagement and enforcement, and improved vehicle safety including banning most dangerous HGVs/HGV Direct Vision)	2017-2041
Walk and cycle to school schemes	2017-2041
Walk and cycle to work and in local community schemes	2017-2041
Walk and cycle wayfinding improvements	2017-2041
Walking: improved local routes	2017-2030
Public Transport	
Bus network: demand-responsive bus services [subject to further assessment]	2017-2041
Bus network: enhancement to meet existing and future demand	2017-2041

Scheme	Timescale
Bus network: retrofitting and procuring cleaner buses	2017-2041
Bus network: wheelchair accessible bus stops	2017-2020
Bus priority network and supporting infrastructure	2017-2030
Bus transit pilots in Opportunity Areas	2020-2041
Devolved suburban rail services to enable London suburban metro	2020-2030
DLR extension from Gallions Reach to Thamesmead (subject to further assessment)	2017-2030
Elizabeth line	2017-2020
Elizabeth line extension east of Abbey Wood	2020-2041
London Overground extensions (subject to further assessments)	2030-2041
National Rail capacity increases (other lines)	2020-2030
National Rail freight upgrades, especially to enable freight to bypass London	2017-2041
National Railway station capacity and step-free access upgrades	2017-2041
River crossing at Gallions Reach and/or Belvedere (subject to further assessment)	2030-2041
River services extensions to the east (subject to further assessment)	2017-2030
Thameslink programme	2017-2020

2.6.5 The GLA's suggested maximum car parking standards for residential developments are set out in the Draft London Plan, as shown in table 2.22, and will be considered at the examination in public in May 2019.

Table 2.22 Draft London Plan residential Parking Standards

Location	Maximum parking provision
Metropolitan and major town centres **All areas of PTAL 5-6**	Car -free
Outer London PTAL 4 **Outer London Opportunity Areas**	Up to 0.5 spaces per unit
Outer London PTAL 3	Up to 0.75 spaces per unit
Outer London PTAL 2	Up to 1 space per unit
Outer London PTAL 0-1	Up to 1.5 spaces per unit*
*** Where small units (generally studios and one-bedroom flats) make up a proportion of a development, parking provision should reflect the resultant reduction in demand so that provision across the site is less than 1.5 spaces per unit**	

Whether there is justification to vary these proposed standards within Bexley to take account of local circumstances will be considered as part of the Local Plan review.

2.6.6 Bexleyheath town centre is defined as a Major Town Centre in the London Plan. Based on published data from 2012 the only location in the borough benefitting from a PTAL rating 5-6 in places is Bexleyheath town centre, although other parts of the town have PTALs of 3-4. For the other borough district centres the PTAL ratings are:

Belvedere Village (Nuxley Village)	PTAL 2	-District Centre
Bexley Village	PTAL 3	District Centre
Blackfen	PTAL 2	District Centre
Crayford	PTAL 2-3	Major District Centre
Erith	PTAL 3	Major District Centre
Northumberland Health	PTAL 2	District Centre
Sidcup	PTAL 3-4	Major District Centre
Welling	PTAL 3-4	Major District Centre

2.6.7 The Council's approach to cycle parking for new developments is set out in para. 2.4.87 above.

Housing Strategy

2.6.8 There is a strong linkage between the draft Housing Strategy and the draft London Plan. The most relevant policy is Policy 3.1 Increasing the supply of land for new homes. The draft London Plan has a proposed target for Bexley of 12,450 homes or 1,245 per annum between

2019/20 and 2028/29. Under the Council's Growth Strategy, housing development is targeted at two Opportunity Areas in Bexley Riverside and Thamesmead and Abbey Wood with growth concentrated in Belvedere, Erith, Thamesmead, Slade Green and Crayford. The transport requirements to support delivery of this growth is set out in the Growth Strategy and includes completion of a public transit corridor from North Greenwich and Slade Green; an extension of the DLR from Gallions Reach through Thamesmead and Belvedere; an extension of the Elizabeth line east of Abbey Wood towards Ebbsfleet and the completion of road-based river crossings connecting Belvedere with Rainham and Thamesmead with Gallions Reach.

Environment Strategy

2.6.9 Most of the policies and proposals are linked to the draft MTS and draft London Plan. There is one specific policy relevant for boroughs: Policy 4.2.4 relating to improving air quality which states the Mayor will work with the government, the London boroughs and other partners to accelerate the achievement of legal limits in Greater London and improve air quality. The Council's LIP policies and proposals would support this policy.

Economic Development Strategy, London Health Inequalities Strategy and Culture Strategy

2.6.10 There are no specific policies and proposals within these documents that will require Bexley to consider in developing its transport objectives.

3. The Delivery Plan

3.1 Introduction

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

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

3.2 Linkages to the MTS priorities

3.2.1 The Delivery Plan was developed to align the borough's projects and programmes with the policy framework of the MT, the overarching mode share aim, each of the nine outcomes and the relevant policies and proposals. It will be subject to ongoing monitoring and review, particularly whether the required levels on internal investment are being provided to deliver the MTS priorities.

Table 3.2 Table showing 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 and Green	No. 5 Connected	No. 6 Accessible	No. 7 Quality	Nos. 8 & 9 Sustainable growth/ unlocking
Healthy streets	√√	√√	√√	√√	√√	√	√√	√	√√
- Yarnton Way; active travel connections (part-Council S106)	√	√	√	√√	√		√√		
- Bus priority portfolio (TfL funded)	√√		√	√√		√		√	√√
- Cycle route network – strategic and local (part-Council S106)	√√	√√	√√	√	√√				√
Vision Zero	√√	√	√√	√	√				√
- School and Local Safety Schemes	√√	√	√√	√					√
- Traffic management & parking issues (Council revenue)	√√	√	√√	√	√				√
- Road Safety Education, Training and Publicity (Council revenue)	√	√	√√						
- Safer school crossings (part-Council revenue)	√	√	√√						
- Young Driver & Passenger Safety	√	√	√√						
- Local Area Accessibility for pedestrians	√					√	√√		

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 and Green	No. 5 Connected	No. 6 Accessible	No. 7 Quality	Nos. 8 & 9 Sustainable growth/ unlocking	
Behavioural change	√√	√√	√	√	√√				√	
- **School Travel Planning (Council Revenue)**	√√	√√	√	√	√√				√	
- **Cycle training – adult and child**	√√	√√	√	√	√√				√	
- **Pedestrian safety campaign (new)**	√	√	√√							
- **Child pedestrian training**	√	√	√√							
- **Travel awareness**	√√	√√	√	√	√√				√	
Town centre renewal	√√	√√	√	√	√√			√		
- **Erith Links**	√√	√√	√√	√	√√	√		√	√√	
- **Crayford**	√√	√√	√	√	√√			√		
- **Bexleyheath**	√√	√√	√	√	√√	√		√	√√	
- **Secondary town centres**										
On-Street Parking Management (CPZs & RPZs) (part-Council S106)	√√	√	√	√	√					

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 and Green	No. 5 Connected	No. 6 Accessible	No. 7 Quality	Nos. 8 & 9 Sustainable growth/ unlocking
- **Bus stop accessibility (TfL funded)**	√					√	√√		
- **Station accessibility/routes to stations**	√					√	√√		
Air Quality	√	√		√	√√				√
- **Electric Vehicle Charging Points – hubs and lamp columns**	√	√		√	√√				√
- **Anti-idling campaign**	√				√				
- **Street Tree planting(LBB revenue)**	√				√				
Footway resurfacing (LBB capital & revenue)	√	√	√	√	√				
Street lighting programme (LBB cap & rev)	√	√	√	√	√				
Bridge strengthening (TfL, LBB rev & Network Rail)				√					

Key

√ Support MTS outcomes

√√ Strongly support MTS outcomes

3.3 TfL Business Plan

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

3.3.2 TfL's Business Plan for 2018/19 to 2022/23 does not identify any specific new major projects affecting or benefiting Bexley. As part of the Elizabeth line [Crossrail 1] complementary measures the Council worked with TfL, Network Rail and other stakeholders to deliver public realm improvements around Abbey Wood railway station. Linked to the new rail services from Abbey Wood, TfL is re-designing local bus services to provide new connections. The Council is working with TfL to deliver bus priority measures to support the introduction of these services.

3.3.3 With the new MTS TfL's investment on local roads would be delivered through the Healthy Streets portfolio. The Council will work with TfL on schemes which could benefit the borough over the Business Plan period.

3.3.4 The Council is also working with TfL on the roll out of rapid charging points with a focus on creating hubs of several charging points at the same location.

3.3.5 The Plan also includes the development work for an extension of the DLR to Thamesmead. As detailed in this LIP, the Council strongly supports such an extension and will work with TfL and the Mayor to secure its development and delivery including possible future extension to Belvedere.

3.4 Sources of Funding

3.4.1 Table 3.2 below identifies potential funding sources for implementation of this LIP, including LIP funding allocation from TfL, contributions from the borough's own funds and funding from other sources.

3.4.2 The key source of funding is the borough's LIP allocation. TfL has provided indicative allocations for 2019/20 to 2021/22 of £1,364,000 each year of LIP formula funding for Corridors, Neighbourhoods and Supporting measures. In addition, TfL has also indicated provisionally that boroughs may receive £100,000 Local Transport Fund (LTF) per annum over the same three-year period, giving a total of £4,392,000 of LIP and LTF funding over the three years of the Delivery Plan. It is recognised that this funding may well reduce in the future, which will have a direct impact on the measures set out in this Delivery Plan, as well as the targets contained in this LIP that may no longer be realistic.

3.4.3 The borough also uses its own resources and developer funding to pursue local objectives and ensure that the road network remains in a safe and serviceable condition.

3.4.4 The sum available from developers via Section 106 obligations that meets the relevant NPPF tests for use against schemes in the programme of investment is currently being finalised. Some of the projects, particularly longer-term interventions, may also attract funding from Bexley's Community Infrastructure Levy (CIL) in future.

3.4.5 The Council will continue to explore other appropriate funding sources that may become available, including opportunities through London European Partnership for Transport (LEPT).

Table 3.2 Table showing the Potential Funding for LIP Delivery Plan

Funding source	2019/20 £k	2020/21 £k	2021/22 £k	Total £k
TfL/GLA funding				
Corridors, Neighbourhoods and Supporting Measures (tbc)	1,364	1,364	1,364	4,092
Local Transport Fund (tbc)	100	100	100	300
Discretionary funding	55	1,955	2,055	4,065
Strategic funding	TBC	TBC	TBC	TBC
GLA funding	TBC	4,227	2,641	6,868
Sub total				
Borough funding				
Capital funding	2,921	2,530	2,640	8,091
Revenue funding	860	860	880	2,600
Sub total				
Other sources of funding				
S 106/CIL	TBC	TBC	TBC	TBC
Network Rail	0	2,095	2,205	4,300
European funding	TBC	TBC	TBC	TBC
Sub total				
Total	5,300	13,131	11,885	30,316

3.5 Long-term Interventions to 2041

3.5.1 In the medium to long term the borough believes a number of significant, but currently unfunded, investments will be required to support the management of growth and regeneration of the borough. The Growth Strategy up to 2050 is predicated on the delivery of strategic transport investment. This investment is considered essential to enable the delivery of the Mayor's targets for housing and jobs growth in Bexley as set out in the draft London Plan and Housing Strategy.

3.5.2 A Development Infrastructure Funding study [DIFS] was commissioned by Bexley, TfL and the GLA and reported in March 2017. The study identified the infrastructure needs to support Bexley's higher growth strategy

3.5.3 These strategic transport investments are shown in Table 3.3 below with indicative costs, funding, source of the proposed intervention and timescales where available. The table excludes general indicative costs for cycle routes, walking and public realm and a smarter travel programme.

Table 3.3 Table showing Long-term interventions up to 2041

Project	Approx. date	Indicative cost	Likely funding source	Source of intervention	Comments
DLR extension from Gallions Reach through Thamesmead to Belvedere	2017 - 2030	TBC	TfL, Govt grant, LB Bexley, developer contribution	Growth Strategy and MTS	Development work on DLR extension to Thamesmead included in TfL Business Plan; proposal in draft London Plan; essential to support growth in two OAPF areas. The Council will consider possible complementary measures, such as improving the public realm outside transport interchanges and also improving walking and cycling links to new services, as well as suitable behaviour change elements.

Project	Approx. date	Indicative cost	Likely funding source	Source of intervention	Comments
Extension of Elizabeth line east of Abbey Wood to Ebbsfleet	2020 - 2041	£1,bn-£3.3bn	TfL, Govt grant, LB Bexley, developer contribution, local taxation, private investment	Growth Strategy, DIFS and MTS	Route already safeguarded and included in the MTS and draft London Plan; essential to support growth in two OAPF areas; improves connectivity with London, Kent and Europe. The Council will consider possible complementary measures, such as improving the public realm outside transport interchanges and also improving walking and cycling links to new services, as well as suitable behaviour change elements.
Public transit corridor from North Greenwich to Slade Green	2020 - 2041	£1,300k	TfL, Govt grant, LB Bexley, developer contribution	Growth Strategy, DIFS and MTS	Reference to bus transit included in the MTS. Public transit would be delivered in phases with initial work to deliver segregated bus-based transit on the corridor; essential to support growth in two OAPF areas. Costs exclude buses and operational costs. The Council will consider possible complementary

Project	Approx. date	Indicative cost	Likely funding source	Source of intervention	Comments
					measures such as improving walking and cycling links to new services, as well as suitable behaviour change elements.
Road based river crossings – **Belvedere to Rainham; Thamesmead to Gallions Reach**	2030 - 2041	TBC	TfL, Govt grant	Growth Strategy and London Plan	River crossing at Gallions Reach and/or Belvedere included in draft London Plan, subject to further assessment; proposed crossings would include high quality public transport links and required mitigation on the local road network; essential to support growth in two OAPF areas
River passenger services	2017 - 2030	TBC	TfL, LB Bexley	Growth Strategy and London Plan	River services extensions to the east, subject to further assessment included in draft London Plan; river services could provide an alternative to rail for some commuter journeys
Bus priority measures	2017 - 2037	£28,800k	TfL	DIFS	Cost assessed on the basis of nine routes identified by TfL

3.6 Three-year indicative Programme of Investment

3.6.1 The three-year indicative Programme of Investment has been completed as shown in Table 3.4 below. The table summarises, at a programme level, the borough's proposals for the use of TfL borough funding for the period 2019/20 to 2021/22.

Table 3.4 Table showing the Programme of Investment

PROGRAMMES / SCHEMES		Background		Funding (£000s)		
		Funding source	Ongoing scheme	Allocated 2019/20	Indicative 2020/21	Indicative 2021/22
CORRIDORS, NEIGHBOURHOODS & SUPPORTING MEASURES						
VISION ZERO	School and Local Safety Schemes - Identification and Development	LIP CNSM allocation	✓	34	34	34
	School and Local Safety Schemes - Implementation	LIP CNSM allocation	✓	325	325	325
	LIP Funded Local Safety Scheme Enhancements	LIP CNSM allocation	✓	17	17	17
HEALTHY STREETS & TOWN CENTRE RENEWAL	Crayford Town Centre Active Travel	LIP CNSM allocation	✓	85	85	85
		Section 106		100	TBC	TBC
HEALTHY STREETS & TOWN CENTRE RENEWAL	Bexleyheath Town Centre Traffic Management and Safety Measures	LIP CNSM allocation	✓	110	110	110
VISION ZERO	Pedestrian Safety Campaign	LIP CNSM allocation	New	2	2	2
VISION ZERO	Child Pedestrian Training	LIP CNSM allocation	✓	17	17	17
VISON ZERO	Cyclist Training	LIP CNSM allocation	✓	70	70	70
VISION ZERO	Road Safety Campaigns and Exhibitions	LIP CNSM allocation	✓	17	17	17
		Council Revenue	✓	15	15	15
VISION ZERO & ACCESSIBILITY	Safer School Crossings	Council Revenue	✓	50	50	50
		Local Transport Fund		100	100	100
VISION ZERO	Young Driver & Passenger Safety	LIP CNSM allocation	✓	9	9	9
SMARTER MEASURES	School Travel Plans	Council Revenue	✓	28	28	28
ACCESSIBILITY	On-street parking management (CPZs & RPZs)	LIP CNSM allocation	✓	50	50	50
		Section 106		TBC	TBC	TBC
SMARTER MEASURES	Travel Awareness Campaign for Bexley	LIP CNSM allocation	✓	17	17	17
ACCESSIBILITY	Station Accessibility	LIP CNSM allocation	✓	13	13	13
ACCESSIBILITY	Local Area Accessibility	LIP CNSM allocation	✓	127	127	127
VISION ZERO & ACCESSIBILITY	Traffic Management & On-Street Parking measures	Council Revenue	✓	87	87	87

		Council Capital		0	TBC	TBC
HEALTHY STREETS & ACCESSIBILITY	Yarnton Way Streetscape & Active Travel, Thamesmead	LIP CNSM allocation	✓	13	13	13
		Section 106		TBC	TBC	TBC
HEALTHY STREETS & TOWN CENTRE RENEWALS	Secondary Town Centre Improvements	LIP CNSM allocation	✓	170	170	170
		Section 106		61	TBC	TBC
HEALTHY STREETS & ACCESSIBILITY	Transport and Regeneration Strategy	LIP CNSM allocation	✓	55	55	55
HEALTHY STREETS & TOWN CENTRE RENEWALS	Erith Town Centre	LIP CNSM allocation	✓	233	233	233
BRIDGE STRENGTHENING						
Bridge Inspections		Council Revenue	✓	65	65	65
Bridge Strengthening		TfL	✓	0	1,900	2,000
		Network Rail		0	2,095	2,205
Bridge Research		TfL	✓	55	55	55
BUS PRIORITY PORTFOLIO						
Hail & Ride Stop Conversions		TfL	✓	TBC	TBC	TBC
Bus Reliability Schemes		TfL	✓	TBC	TBC	TBC
Bus Growth Schemes		TfL	✓	TBC	TBC	TBC
MAJOR SCHEMES						
Erith Links		TfL / GLA Funding	✓	0	4,227	2,641
		Council Capital		501k	TBC	TBC
BEXLEY MAINTENANCE						
Street Lighting Programme		Council Revenue	✓	545	545	565
		Council Capital		420	430	440
Carriageway Maintenance		Council Capital	✓	2,000	2,100	2,100
Reactive Highway Maintenance		Council Capital	✓	1,800	1,800	1,800
Street Trees		Council Revenue	✓	70	70	70

Corridors, Neighbourhoods and Supporting Measures

Healthy Streets programme

3.6.2 Yarnton Way has the third highest level of road user casualties in the borough where the Council is the highway authority. Reducing road danger and encouraging more cycling are key elements of the Healthy Streets programme. Yarnton Way was also included as a “spoke” in developing its proposals for the Mini-Holland bid in 2013 as it provides a key link between

Abbey Wood with its new Elizabeth line connections and the growth and regeneration area of Erith. Feasibility studies are being undertaken. The project is linked to the Council's aspiration for a bus transit route which could be funded through other mechanisms. LIP funding would form part of an overall funding package which, along with developer contributions, could deliver specific elements of the project.

3.6.3 Routes to railway stations – improvements to cycle and pedestrian access to important local railway stations at Bexley, Sidcup and Belvedere are planned. This will assist integration with rail services and encourage a switch from car. It would be complemented by the separate programme to introduce CPZs around railway stations.

3.6.4 Local cycle routes and cycle parking - the provision of high-quality cycle route infrastructure and cycle parking at destinations are key components to support more cycling. The lack of safe cycle routes is often cited by existing and potential cyclists as a deterrent to taking up cycling or to cycle more. The local cycle routes will complement strategic cycle route Quietway 1 and form links to local town centres and growth areas.

Vision Zero programme

3.6.5 Local safety schemes – as detailed in the Borough Transport Objectives chapter, progress has been made in reducing road user casualties. However, more needs to be done to meet the Vision Zero targets for killed and seriously injured casualties. The locations with the highest number of casualties have been identified and this analysis will form the basis for developing programmes to reduce casualties. Further detailed analysis will be undertaken as part of the annual spending submissions over the next three years.

3.6.6 Road danger reduction – A key focus for the Mayor's Vision Zero is for a reduction in vehicle speeds. The Council will consider extending the number of streets within 20mph zones with physical measures to deter speeding, subject to funding availability and the result of public consultation. The blanket approach without enforcement has issues with compliance and in future reduced speed limits are likely to be considered as part of larger safety schemes for all modes that include other measures such as new crossing facilities, public realm improvements and parking management. This could include roads in the vicinity of primary schools linked to encouraging more children to walk or cycle to school through school travel plans or, areas with higher pedestrian footfall.

3.6.7 Education, training and publicity – the Council will continue programmes to reduce road user casualties with a particular focus on reducing pedestrian casualties. Bexley runs an award-winning child pedestrian skills training programme called 'Walkability'. This programme provides practical 'on-road' training for Year 3 children per year. The programme is supported by the provision of pre and post transition Theatre-in-Education productions that focus on pedestrian safety. Bexley also provides Bikeability Training for children. Bikeability is proven to significantly increase a child's ability to spot and deal with road hazards, so improving their

safety capability however they are using roads. Pedestrian casualties feature disproportionately in road casualty data.

3.6.8 Motorcycle education – powered two-wheeler killed and seriously injured casualty figures are disproportionate in relation to the amount of motorcycle usage in the borough. The Council will continue to support TfL motorcycle training opportunities and promote safety messages through the London Road Safety Council.

3.6.9 Pedestrian safety to/from school – this element of the programme delivers the school crossing patrols which can encourage more walking to schools as well as reducing road danger.

Smarter Measures

3.6.10 School travel plans – progress has been made in reducing the number of car journeys on the school run with a corresponding increase in walking, cycling and scooter use. Details are provided in Table 2.11 and para 2.4.22. The table below summarises recent progress:

Table 3.5 Table showing the Progress on School Travel Plan Modal Split

Mode	2015/16 %	2016/17 %
Car	28	26
Car share	3	4
Park and stride	7	7
Train	0	1
Bus	22	19
Cycle	3	4
Scooter	3	4
Walk	31	33

However, much more work needs to be done to reduce car mode share particularly given the impact of car travel on congestion in the morning peak period. The Council will continue to encourage modal shift through travel plans for new developments through Local Plan policies and in area-wide initiatives in conjunction with town centre regeneration schemes where appropriate, to reduce traffic generally.

3.6.11 Cycle training for children and adults – there has been a consistent increase in the number of children and adults receiving cycle training over the last 5 years. The table below details this increase:

Table 2 Table showing the Increase in Cycle Training for Children and Adults

Year	Child level 1 & 2	Child level 3	All child	Adult	Total
2013/14	821	68	889	17	906
2014/15	912	90	1002	54	1056
2015/16	935	72	1007	65	1072
2016/17	1101	93	1194	346	1540
2017/18	1149	112	1261	451	1712

The Council will continue these programmes which will complement the development of the cycle route network in the borough.

3.6.12 Travel awareness – the Council will continue with a programme of campaigns and events to support the take up of sustainable transport.

Town centre renewal

3.6.13 Erith – this will include public realm and sustainable transport enhancements to complement the Erith Links project [see reference to Growth-Related funding bids in 3.6.19 below].

3.6.14 Crayford – this will include public realm and sustainable transport enhancements within a Healthy Streets approach.

3.6.15 Secondary and local Centres - the Healthy Streets approach is also being applied to local centres by improving the environment through more space for walking and cycling, and minimising road dangers

On-Street Parking Management [CPZs &RPZs]

3.6.16 There are currently 16 Controlled Parking Zones (CPZs) in the borough of which 7 are around railway stations [Abbey Wood, Sidcup, Welling, Crayford, Falconwood, Bexleyheath and New Eltham]. With the commencement of Elizabeth line services, it is likely that Abbey Wood railway station and railway stations which have connecting services will become attractive options for rail heading. The railway station CPZs will be reviewed and potentially extended to manage this risk and deter car commuting to local railway stations.

Accessibility

3.6.17 Bus stops – over 95% of existing bus stops in Bexley offer step free access. However, opportunities will be taken to extend bus stop accessibility wherever possible.

3.6.18 Railway Stations - many of Bexley's railway stations are step free. Bexley railway station was due to be made step free through the Department for Transport's Access for All programme,

however to date a scheme acceptable to the Council has yet to be submitted. Key railway stations at Erith, serving one the borough's regeneration locations, Albany Park, Falconwood and Sidcup railway stations are among 22 railway stations to have been nominated by Southeastern for Government funding under the Access for All programme during 2019 and 2024. Measures to assist access to railway stations such as dropped kerbs and tactile paving would be carried out as well as measures to assist pedestrians and cyclists, including provision of cycle parking. This programme would encourage more sustainable transport to access rail services and complement the CPZ programme around railway stations.

3.6.19 Local area - accessibility measures such as dropped kerbs and tactile paving can encourage more sustainable transport and the creation of Healthy Streets.

Discretionary Funding

The projects and proposals detailed below are subject to funding submissions to TfL.

GLA & TfL Growth-Related Funding – Erith Links

3.6.20 Erith is a key growth area within the borough with plans for up to 6,000 new homes and up to 3,500 jobs. It falls within Bexley Riverside OAPF area. The Erith Links project would seek to address transport and environmental issues and support the sustainable regeneration of the town centre. The issues identified include:

- the strategic road network causes major severance for pedestrians and cyclists
- severance between the local residential areas and the town centre through major roads and the rail line
- traffic congestion in the town centre and on its approaches and on the A206/A2016 corridor, impacting on bus service speed and reliability
- rat running traffic in and around the town centre, linked to the one-way traffic system
- poor public realm and poor pedestrian and cyclist environment, confusing street layout and poor legibility for pedestrians

3.6.21 Initial development work for the Growth Fund bid has included a placemaking and movement strategy developed by consultants. This strategy proposes a wide-range of ambitious measures to transform the town centre and its approaches. Plans include removing the one-way traffic system to enhance permeability, accessibility and bus speeds and reliability; a bus-only street and changes to bus routes; better pedestrian crossings within the town centre and on its approaches; improved cycle paths and facilities, measures to reduce congestion at the access points into the town centre, public realm improvements and better pedestrian waymarking between the railway station and the town centre. The objectives include enabling more walking, cycling and use of the bus for journeys into Erith; support sustainable residential

development close to the town centre with minimal car parking provision; and support more footfall and regeneration.

Principal Road Renewal

3.6.22 TfL has advised that funding for proactive principal road renewal is paused for 2018/19 and 2019/20 for both borough roads and TLRN. An allocation has been retained by TfL for continuing condition surveys and to deal with high priority sites on a pan-London basis. No information has been provided to boroughs on the likely funding for 2020/21 or 2021/22. The Council will continue to work with TfL on assessing road condition and developing funding proposals.

3.6.23 The Council also spends circa £1,800k pa on reactive maintenance which includes footways and carriageways. The pause in funding from TfL has left the Council with the prospect of having to fund principal road maintenance from its own funds. Where practical the planned maintenance capital programme for borough roads will be coordinated with other highway capital schemes, local safety schemes and developer/utility company-led works.

3.6.24 Road surfaces that are level and even also aid in the mechanical cleaning process and leaves less detritus, which if not removed can aid weed growth and cause further damage to the infrastructure. Uneven road surfaces can also lead to an increase in air borne pollution from vehicles.

Bridge strengthening

3.6.25 Bridges on Bridge Road and Church Road over the rail line near Bexleyheath railway station are planned to be strengthened during the Delivery Plan period. The timescale for the works is not yet finalised as it partly relates to the timing of track possessions on the railway as well as a financial contribution from Network Rail. The overall cost is estimated at £8,300k comprising £3,900k from TfL and £4,300k from Network Rail between 2020/21 and 2021/22.

3.6.26 Bridge inspections are carried out using the Council's revenue funds, while TfL are also providing approximately £55k per annum for the Council to administer the Bridge Research Project for Enhancements.

Traffic signal modernisation

3.6.27 This is a TfL-led programme which identifies locations where signals need to be modernised to provide capacity for sustainable transport whilst also minimising congestion on the road network.

Strategic Funding

Bus priority

3.6.28 The bus priority programme delivers schemes which are aimed at improving bus service reliability as well as supporting growth in housing and jobs. The Council is working with TfL to deliver a number of bus priority schemes in 2018/19. Details of funding for 2019/20 to 2021/22 have yet to be confirmed. The Council will continue to work with TfL to develop bus priority schemes.

Borough Cycling programme

3.6.29 This funding is targeted at supporting delivery of Central London Cycling Grid, Mini-Holland and Quietways. The Council is seeking to deliver the section of Quietway route 1 from Greenwich to Bexleyheath which is within the borough boundary. Funding for 2019/20 to 2021/22 has yet to be confirmed.

Risks to the delivery of the 3-year Programme

3.6.30 Table 3.7 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/programme

Table 3.7 Table showing the Risk Assessment for the three-year programme of investment 2019/20-2021/22

Type of Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
Financial					
TfL allocation of LIP funding is less than the expected allocations		√		Seek to identify alternative sources of funding such as S106 or CIL and assign available funding to highest priority schemes.	Reduction in Programme of Investment potentially adversely affecting the achievement of LIP targets
Cost increases / budget reductions		√		Project costs are reviewed monthly and variance identified. Permission sought to transfer funds from a lower priority scheme whilst keeping in line with overall budget	Project delay or no longer taken forward
No strategic transport funding is allocated to Bexley			√	Seek alternative sources of funding	Could potentially adversely affect the achievement of LIP targets
Statutory/Legal					
A LIP is prepared which is not in line with LIP guidance			√	Officers have followed TfL LIP guidance in preparing the LIP	TfL/Mayor does not approve the LIP and could prepare it on behalf of the Council with subsequent delay to approval and funding

Type of Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
A draft LIP is not prepared within the timescale set by TfL			√	Officers have developed a project plan and programme to be in line with TfL LIP guidance timescale	LIP funding allocations could be affected. TfL/Mayor could prepare the LIP on behalf of the Council with subsequent delay to approval and funding.
Third Party					
Council contractors unable to deliver the PoI		√		Additional external resources to deliver highway works would be sought. Review the programme and revise schedule if necessary to best tie in with available resources.	There could be a delay in delivering the PoI which could impact on the achievement of LIP targets
Public/political					
The LIP PoI is not approved by Cabinet Members			√	Draft LIP developed with involvement of Cabinet members	Failure to submit the draft LIP and PoI could lead to TfL/Mayor preparing the LIP on behalf of the Council with subsequent delay to approval and funding

Type of Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
Objections are received to the draft LIP PoI during consultation process		√		PoI would be amended at the detailed development stage	Identified projects and programmes may not be able to be delivered which could impact on the achievement of LIP targets
Programme and delivery					
There are insufficient borough staff to develop and deliver the PoI			√	Temporary staff would be employed to manage peak work periods	Identified projects and programmes may not be able to be delivered which could impact on the achievement of LIP targets
Statutory undertakers works affecting the delivery of specific projects			√	Ongoing liaison with statutory undertakers will be maintained and work programmes developed to take account of planned works	Specific projects may not be able to be delivered which could impact on the achievement of LIP targets
Objections are received during consultation on detailed projects			√	LIP delivery programme to be developed which identifies alternative schemes	Specific projects may not be able to be delivered which could impact on the achievement of LIP targets

Annual programme of schemes and programmes

3.6.31 The annual programme of schemes for 2019/20 has been completes and submitted to TfL using Proforma A.

3.6.32 This programme is based on the Delivery Plan that seeks to achieve the Council's local transport objectives, which are linked to the Mayor's Transport Strategy (MTS) priorities, against which the LIP funding received from TfL is allocated. The programme includes schemes that are funded by a range of sources as shown in Table 3.2 including Council revenue and capital funding, other TfL/GLA transport budgets, developer contributions and other third-party monies. The availability of adequate funding is therefore vital, and reductions in current predications may result in a revision to the programme and also achievable targets.

3.6.33 This is an extensive programme of schemes, often requiring feasibility studies, consultation exercises and detailed designs to be carried out prior to implementation. This means that the larger schemes can take a number of years to fully implement, and that priorities may change during the pre-implementation stages that may mean the scheme is altered or the delivery re-scheduled.

3.6.34 Schemes are prioritised on the basis of their strategic fit with the Council's local priorities alongside other projects, as well as the MTS objectives, especially where there is synergy with (or they are complementary to) these projects to maximise the benefit likely to be accrued from the available funding.

Risk Assessment for the Annual Programme

3.6.35 Table 3.6 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/initiative

Table 3.8 Table showing the Risk Assessment for the annual programme of investment 2019/20

Type of Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
Financial					
TfL allocation of LIP funding is less than expected allocated funding		√		Seek to identify alternative sources of funding such as S106 or CIL	Reduction in Programme of Investment potentially adversely affecting the achievement of LIP targets
Cost increases Budget Reductions		√		Project costs are reviewed on a monthly basis and any variants identified. Permission sought to transfer funds from one budget to another ensuring the highest priority projects are completed while staying within the overall budget	Project delay or no longer taken forward
No strategic transport funding is allocated to Bexley			√	Seek alternative sources of funding	Could potentially adversely affect the achievement of LIP targets
Statutory/Legal					
An annual PoI is prepared which is not in line with LIP guidance			√	Officers have followed TfL LIP guidance in preparing the LIP	TfL/Mayor does not provide funding support to deliver transport projects and programmes which would impact on the delivery of LIP targets and funding

Type of Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
The annual spending submission is not submitted within the required timescale			√	Officers have developed a project plan detailing the milestones and arrangement for approving and submitting Proforma A	TfL may not allocate funding for 2019/20 which would impact on the delivery of LIP targets
Third Party					
Council contractors unable to deliver the PoI		√		Additional external resources to deliver highway works would be sought and/or programme schedule reviewed to match delivery with available resources.	There could be a delay in delivering the PoI which could impact on the achievement of LIP targets
Public/political					
The annual PoI is not approved by Cabinet Members			√	Draft LIP and annual PoI developed with involvement of Cabinet members	Failure to submit the annual PoI would adversely impact on the delivery of LIP targets
Programme and delivery					
There are insufficient borough staff to develop and deliver the PoI			√	Temporary staff and/or consultants support would be employed to manage peak work periods	Identified projects and programmes may not be able to be delivered which could impact on the achievement of LIP targets

Type of Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
Statutory undertakers works affecting the delivery of specific projects			√	Ongoing liaison with statutory undertakers will be maintained and work programmes developed to take account of planned works	Specific projects may not be able to be delivered which could impact on the achievement of LIP targets
Objections are received during consultation on detailed projects			√	Alternative projects would be developed in agreement with TfL	Specific projects may not be able to be delivered which could impact on the achievement of LIP targets

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

Overarching mode share aim and outcome indicators

3.7.1 Table 3.8 sets out the Council's outcome indicator targets for the overarching mode share and for the nine MTS outcomes. These targets reflect the core reference case and the MTS scenario insofar as these may impact on Bexley, as shown in Table 3.7 which is based on the MTS Supporting Evidence: Outcomes Summary Report and its addendum [TfL 2017 and 2018].

Table 3.9 Table showing MTS schemes and timescales

Scheme	Scenario	Timescale	Comments
Elizabeth line to Abbey Wood	Core reference case	2019 (tbc)	
TfL Business Plan 2017 bus service improvements including changes to bus routes to improve reliability and reduce congestion and additional services to support residential growth	Core reference case	2017-2022	
Healthy streets portfolio in TfL Business Plan 2017	Core reference case	2017-2022	
Elizabeth line 30 trains per hour	MTS scenario	By 2041	
Bus priority network	MTS scenario	2017-2030	
Healthy Streets approach	MTS scenario	2017-2041	
London Suburban metro	MTS scenario	2020-2030	Could include Southeastern services on North Kent line through Bexleyheath and Slade Green
Elizabeth line extension east of Abbey Wood	MTS scenario	2020-2041	

Scheme	Scenario	Timescale	Comments
DLR extension from Gallions Reach to Thamesmead	MTS scenario	2017-2030	
Other new public transport river crossings in East London	MTS scenario	2030-2041	
Develop bus network to meet existing and future demand	MTS scenario	2017-2041	
Reduce, re-time and re-mode deliveries and encourage more freight consolidation	MTS scenario	2017-2041	
Healthy Streets Approach – further measures	MTS scenario	2017-2041	No details provided in MTS
Traffic reduction measures including workplace parking levy, increasing parking charges and limits on free commuter parking	MTS scenario	2017-2030	A workplace parking levy is unlikely to be effective for Bexley
Longer term changes to the way road use is paid for, assuming a London-wide distance-based road charge	MTS scenario	By 2041	

3.7.2 The targets within Table 3.8 reflect the Council's view on the likelihood and timescale for the delivery of schemes within the MTS. In the absence of transport modelling at the borough level it is unclear what would be the impact on Bexley of the MTS measures and schemes on its overarching aim and the nine outcomes. It is the Council's view that setting long term targets such as for 2041 is surrounded by too much uncertainty on the delivery of major transport infrastructure [as assumed in the MTS scenario] which the Council cannot directly influence. In addition, for projects such as the Healthy Streets approach, which are delivered over the period of the MTS, it is not possible to assess the impact of these at specific times in the future.

Delivery Indicators

3.7.3 The Council will monitor and record the delivery indicators and report to TfL once a year using Proforma C.

Table 3.10 Table showing Borough outcome indicator targets

Objective	Metric	Borough target	Target year	Additional commentary
Overarching mode share aim – changing the transport mix				
Londoners' trips to be on foot, by cycle or by public transport	Active, efficient and sustainable (walking, cycling and public transport) mode share (by borough resident) based on average daily trips. Base period 2013/14 - 2015/16.	46% 63%	2021 2041	Borough 2021 target of an increase of 4% reflects the timescale for delivery of Elizabeth line, bus priority and bus service changes, strategic cycle route [Quietway route 1], healthy streets approach and any parking policy for Opportunity Areas which could be delivered by 2021
Healthy Streets and healthy people				
Outcome 1: London's streets will be healthy, and more Londoners will travel actively				
Londoners to do at least the 20 minutes of active travel they need to stay healthy each day	Proportion of London residents doing at least 2x10 minutes of active travel a day (or a single block of 20 minutes or more).	35% 70%	2021 2041	The 2021 target is an increase of % from the baseline and takes account of the lack of committed investment in the strategic cycle network and uncertainties on the impact of the Healthy Streets approach on active travel
Londoners have access to a safe and pleasant cycle network	Proportion of Londoners living within 400m of the London-wide strategic cycle network.	7% 38%	2021 2041	The 2021 target reflects that only the committed Quietway route 1 between Bexleyheath and Greenwich would be delivered by 2021

Objective	Metric	Borough target	Target year	Additional commentary
Outcome 2: London's streets will be safe and secure				
Deaths and serious injuries from all road collisions to be eliminated from our streets (Data based on the new COPA method of data collection and revised trajectories)	Deaths and serious injuries (KSIs) from road collisions, base year 2005/09 (for 2022 target)	52 0	2022 2041	The 2022 borough target reflects the trajectory from TfL in the absence of a robust methodology for predicting changes in road collision casualties
	Deaths and serious injuries (KSIs) from road collisions base year 2010/14 (for 2030 target).	25	2030	The borough target reflects the trajectory from TfL in the absence of a robust methodology for predicting changes in road collision casualties
Outcome 3: London's streets will be used more efficiently and have less traffic on them				
Reduce the volume of traffic in London.	Vehicle kilometres in given year. Base year 2015. Reduce overall traffic levels by 10-15 per cent.	917m veh/kms 871 (-5%) 825 (-10%)	2021 2041	It is assumed there would be no reduction in traffic volume from base year by 2021 on the basis that with predicted growth in housing and employment traffic levels would remain constant even with more restrictive parking policies for Opportunity Areas and areas well served by public transport and only modest enhancements to public transport
Reduce the number of freight trips in the central London morning peak.	10 per cent reduction in number of freight vehicles crossing into central London in the morning peak period (07:00am - 10:00am) by 2026.	N/A	N/A	N/A

Objective	Metric	Borough target	Target year	Additional commentary
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 year 2015.	112,000	2021	Data from TfL assumes a 4% decrease by 2021 from 2015 baseline on the basis of a trajectory to meet MTS target. However, recent data for Bexley shows the number of cars/light vehicles owned is increasing. The adoption of policies to reduce car parking requirements and a focus on additional housing in Opportunity Areas and areas well served by public transport and relatively modest enhancements to public transport is unlikely to have such an impact in the short term which would more than mitigate the predicted increase in population [a 6% increase between 2015 and 2021, GLA data]. The borough target therefore is for only a slight increase in household car ownership from the base [+0.7%] as even if car ownership reduces proportionately when alternative modes are available the increased number of residential units may compensate for this with actual vehicle numbers still increasing. Trajectory set by TfL based on TfL strategic models consistent with work for the MTS Evidence Base

Objective	Metric	Borough target	Target year	Additional commentary
		94,300	2041	
Outcome 4: London's streets will be clean and green				
Reduced CO_2 emissions.	CO_2 emissions (in tonnes) from road transport within the borough. Base year 2013.	169,000 52,200	2021 2041	The 2021 borough target reflects the trajectory from TfL which is based on modelling by TfL and Kings College
Reduced NO_x emissions.	NO_X emissions (in tonnes) from road transport within the borough. Base year 2013.	270 30	2021 2041	The 2021 borough target reflects the trajectory from TfL which is based on modelling by TfL and Kings College
Reduced particulate emissions.	PM_{10} and $PM_{2.5}$ emissions (in tonnes) from road transport within borough. Base year 2013.	55 PM_{10} 27 $PM_{2.5}$ 38 PM_{10} 18 PM	2021 2041	The 2021 borough targets reflect the trajectories from TfL which are based on modelling by TfL and Kings College
A good public transport experience				

Objective	Metric	Borough target	Target year	Additional commentary
Outcome 5: The public transport network will meet the needs of a growing London				
More trips by public transport - 14-15 million trips made by public transport every day by 2041.	Trips per day by trip origin. Reported as 3yr moving average. Base year average 2014/15 - 2016/17.	124,000 196,000	2021 2041	The targets represent an increase on base year average in line with TfL modelling of18% (2021) and 87% (2041). The targets take into account predicted increases in population and jobs, new public transport infrastructure such as Crossrail and additional bus services and capacity as well as planning policy to focus sustainable growth in two Opportunity Areas and locations which are well served by public transport.
Outcome 6: Public transport will be safe, affordable and accessible to all				
Everyone will be able to travel spontaneously and independently.	Reduce the difference between total public transport network journey time and total step-free public transport network. Base year 2015.	-49%	2041	The target reflects the TfL trajectory which is from modelling by TfL.
Outcome 7: Journeys by public transport will be pleasant, fast and reliable				
Bus journeys will be quick and reliable, an attractive alternative to the car	Annualised average bus speeds. Base year 2015	12.5mph 13.0mph	2021 2041	The target is a 1% increase in bus speed from base year. This is in line with TfL trajectory until 2041. The increase in bus speed takes into consideration proposed investment in bus priority measures, likely slight increase in car ownership, anticipated constant volume of traffic in the borough and delivery of the Healthy Streets approach.

Objective	Metric	Borough target	Target year	Additional commentary
New homes and jobs				
Outcome 8: Active, efficient and sustainable travel will be the best options in new developments **Outcome 9: Transport investment will unlock the delivery of new homes and jobs**				
N/A	N/A	N/A	N/A	No borough targets are required to be set