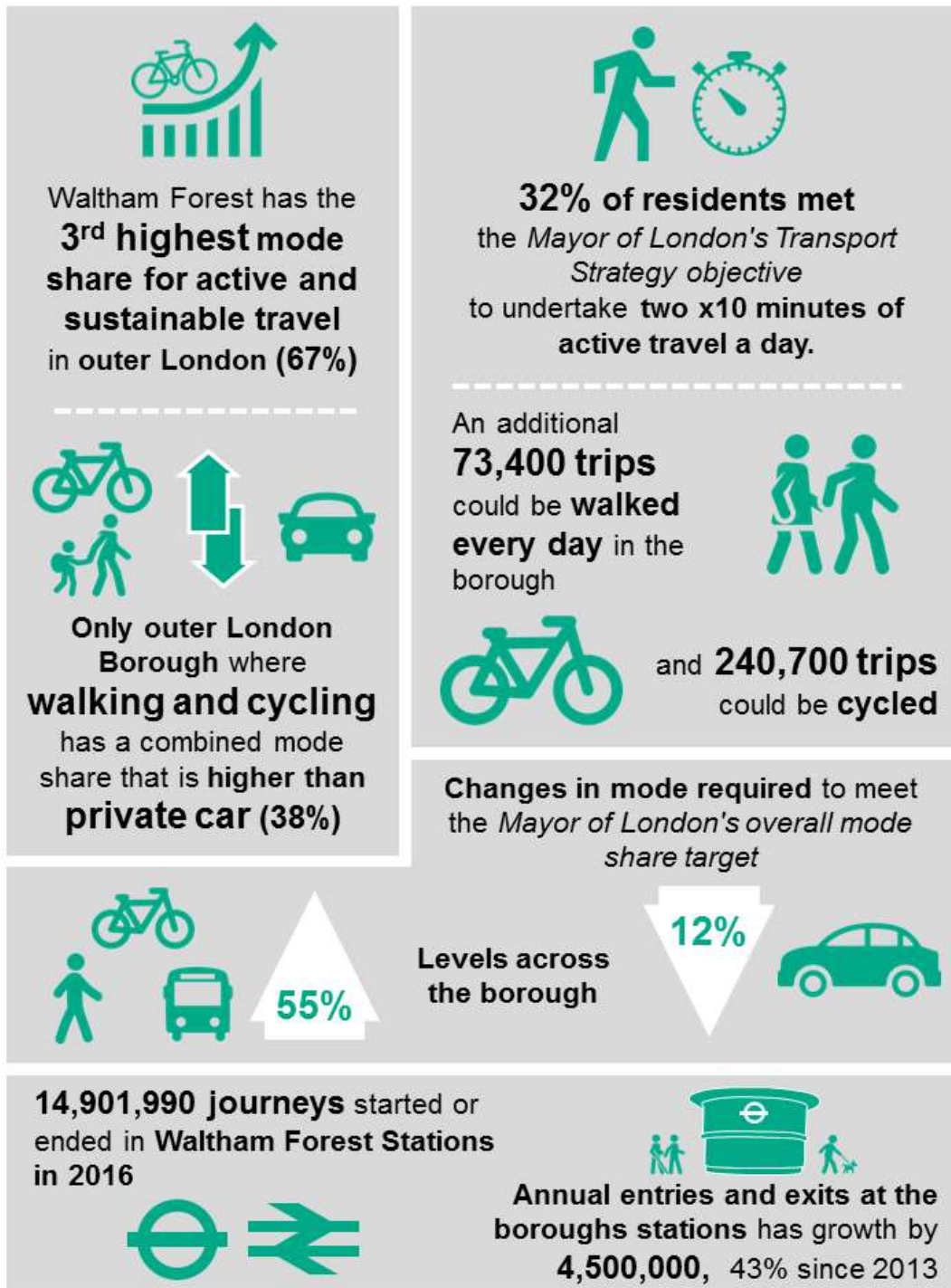# PHYSICAL INFRASTRUCTURE

Waltham Forest Infrastructure Delivery Plan 2020

# Chapter 3 - Transport Infrastructure

**Introduction**

3.1    Sustainable transport infrastructure will play a fundamental role in the economic, social and environmental future of the borough to 2035 and beyond. Our transport network is the backbone of our daily lives, our local economy and our wider place and role in London.

3.2    There are two London Underground lines in Waltham Forest. The Victoria line has two stations, Walthamstow Central and Blackhorse Road, connecting towards the West End, and a further two stations on the Central line connect the south east of the borough to Stratford and the City of London, at Leyton and Leytonstone. In recent years, the Victoria line has benefited from a signalling upgrade and rolling stock replacement, now operating at up to 36 trains per hour in each direction. The Central line has been identified as the next Underground line to receive a significant upgrade although the programme for this is not yet known.

3.3    Waltham Forest is served by two rail lines on the London Overground network. The Chingford to Liverpool Street line is the main radial commuter route with five stations in the borough connecting towards the City of London. The Barking to Gospel Oak line is an outer London orbital route with four stations in the borough. Both lines are soon to benefit from the introduction of new rolling stock. In the case of the Barking to Gospel Oak line, the existing two-car diesel units will be replaced by four-car electric trains providing a 130% increase in passenger capacity.

3.4    The strategic highway network in Waltham Forest consists of the A12 and the A406 North Circular Road. Both roads have full grade separation and consequently have a limited number of access points for borough residents. Although they provide strategic access, they also contribute to the challenges facing Waltham Forest residents due to severance by dividing local neighbourhoods and acting as a barrier for cycle and pedestrian movement. Traffic congestion on these routes has increased and severely affects borough's carbon emissions, resulting in adverse impacts on air quality and quality of life for residents.

Figure 3.1: Transport in Waltham Forest – key statistics



Waltham Forest has the **3rd highest mode share for active and sustainable travel** in outer London (67%)

**Only outer London Borough** where **walking and cycling** has a combined mode share that is **higher than private car (38%)**

**32% of residents met** the *Mayor of London's Transport Strategy objective* to undertake **two x10 minutes of active travel a day.**

An additional **73,400 trips** could be **walked every day** in the borough

and **240,700 trips** could be **cycled**

**Changes in mode required** to meet the *Mayor of London's overall mode share target*

55%

**Levels across the borough**

12%

**14,901,990 journeys** started or ended in **Waltham Forest Stations** in 2016

**Annual entries and exits at the boroughs stations** has growth by **4,500,000,** 43% since 2013

**Recent Transport Investments**

3.5     In 2016, the Council, TfL and London Overground and National Rail successfully reopened Lea Bridge station on the national rail Lea Valley line. The new station is a core element of plans to regenerate the Leyton and Lea Bridge area, and currently supports 572,400 passenger journeys per year (a 29% increase since opening). It is expected that this number will rise follwoing the service increases from two to four

trains per hour in 2019. Looking forward, the Council are also investigating the feasibility of opening another station at Ruckholt Road at the south of the Leyton and Lea Bridge area.

3.6     The Borough is not directly served by stations on the Crossrail 1 (Elizabeth Line) or Crossrail 2 alignments; however stations in close proximity to the Borough include Maryland and Stratford on Crossrail 1[1], and Tottenham Hale, Northumberland Park, and Angel Road on Crossrail 2[2]. It is a priority of the Borough to improve connections to these stations once the service is in operation.

3.7     In 2014, Waltham Forest became one of three Mini Holland[3] outer London boroughs, securing £30m+ of funding to radically transform local cycling and walking facilities. This was supported with further match funding from various sources, resulting in an overall investment of £45m.  The programme was renamed 'Enjoy Waltham Forest' and seeks to make the borough safer for cycling and walking, encourage far more people to cycle and walk (thereby reducing congestion on the roads) and improve the health and fitness of residents through active travel.  Over five years the scheme delivered:

- 22km of segregated cycle lanes
- 40 modal filters to prevent local streets being used as car thoroughfares
- 100 junction improvements
- 700 trees
- 15 'pocket parks'

3.8     The Waltham Forest Mini-Holland network focusses on the busiest cycle routes, and those that are most likely to get busier. The network consists of the following key routes:

- Forest Road
- Lea Bridge Road
- Leyton to Blackhorse Road
- Leyton to Chingford
- Walthamstow Marsh to Walthamstow Village

3.9     On completion of the scheme in 2021, the Council seeks to continue encouraging active travel by implementing Liveable Neighbourhoods schemes.

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[1] https://www.crossrail.co.uk/
[2] https://crossrail2.co.uk/
[3] https://enjoywalthamforest.co.uk/about-mini-holland/

Figure 3.2: Transport geography in Waltham Forest
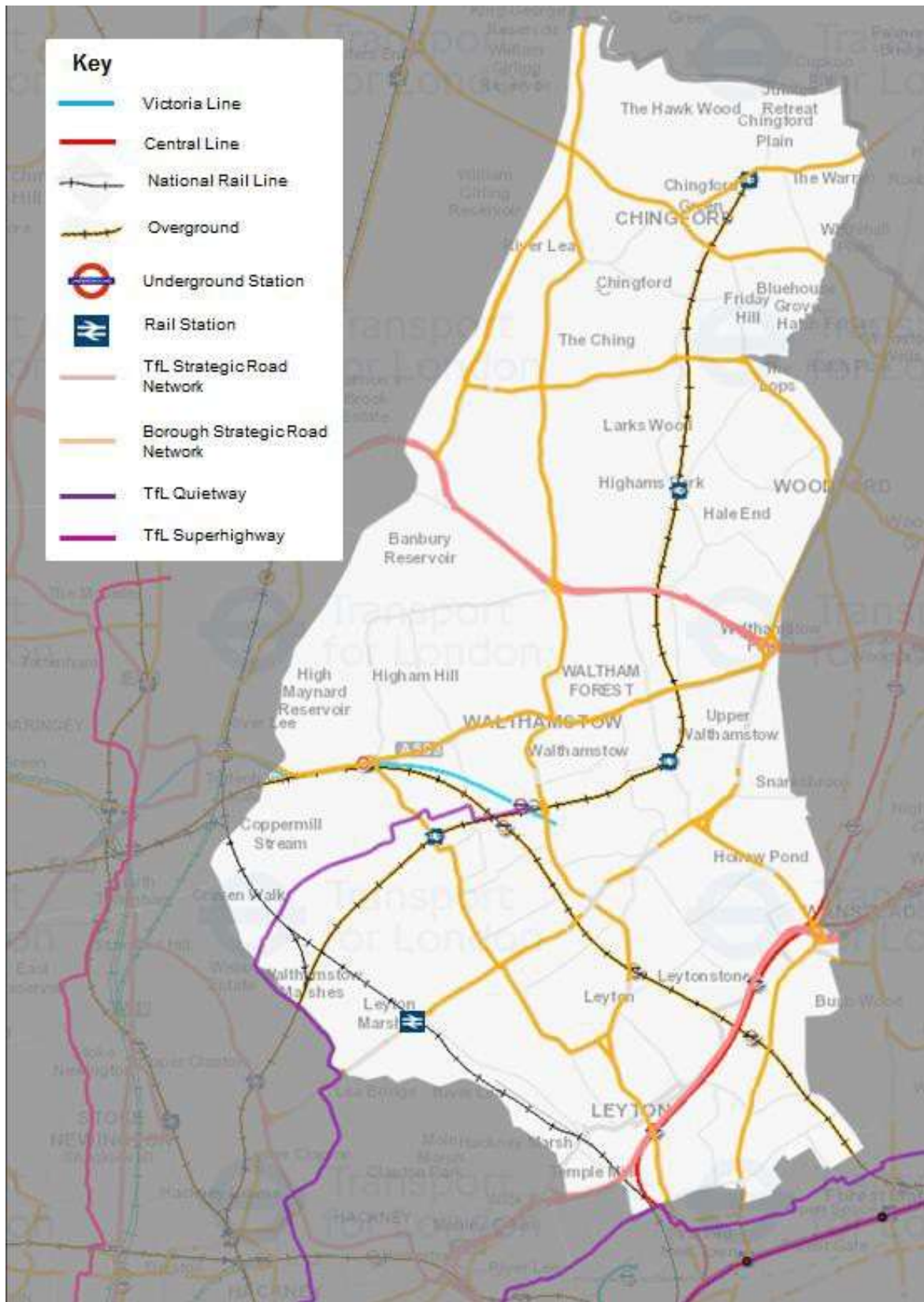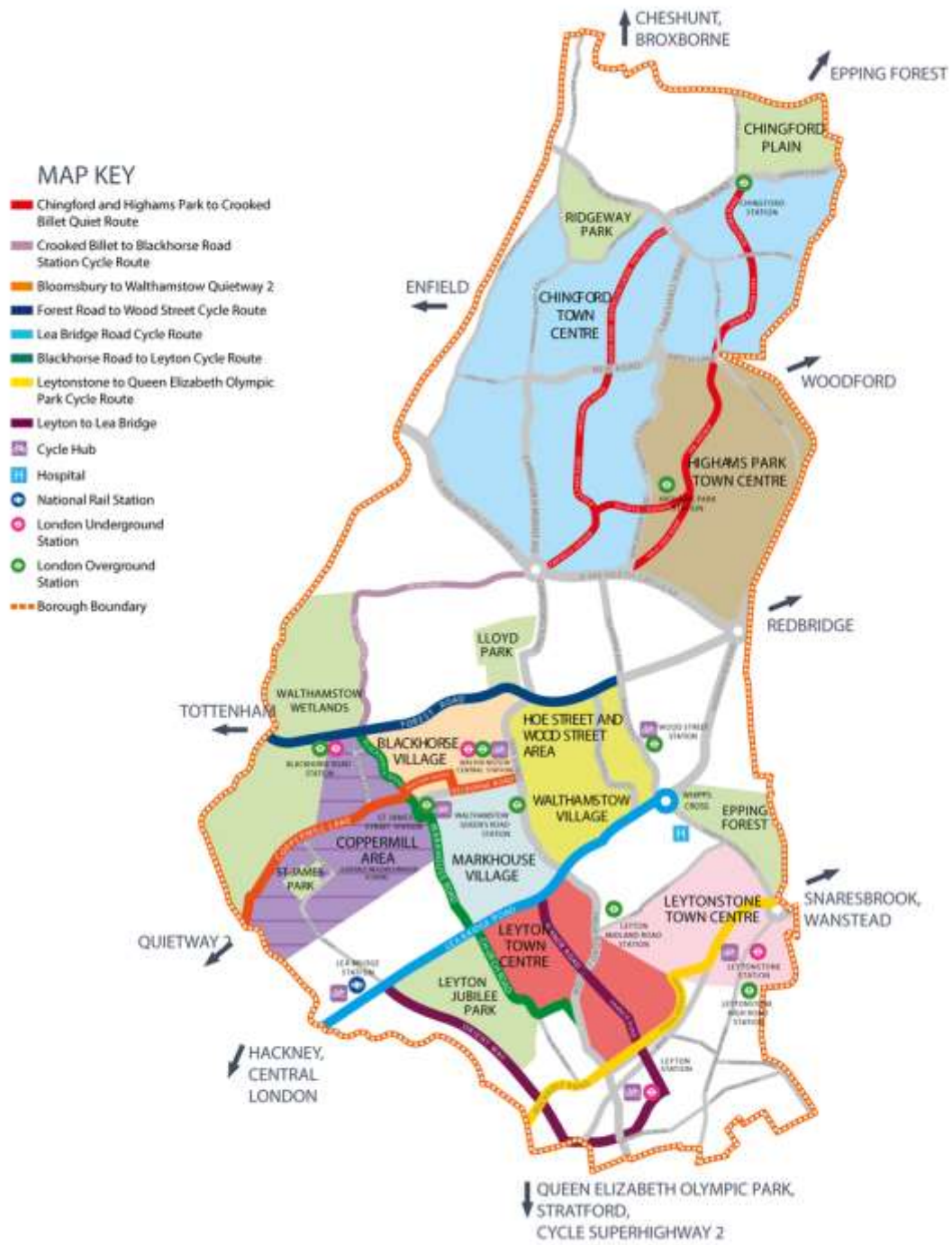
Figure 3.3: Waltham Forest Cycle Network



**North – South Connectivity in the Borough**

3.10     There are number of differences in local character, demographics, and public transport accessibility across wards within the borough, with each presenting different challenges to meeting the Council's transport objectives and wider Mayors Transport Strategy (MTS) outcomes.

3.11 In the north of the borough, public transport options are less prevalent with only two stations located north of the A406 North Circular Road and less frequent and connected bus services than wards in the south and central parts of the Borough. Wards in the north of the Borough are also typically more affluent, with a higher than average population of residents aged over 65, as well as having a much lower density of housing.

3.12 In the south and central parts of the Borough, while public transport accessibility levels are generally greater, wards in this area have higher density of housing, and in many locations are experiencing significant levels of development and population growth. This contributes to increased pressure on the public transport network, and overcrowding on bus, rail and Underground routes.

3.13 Demographics in the south of the Borough also lead to a higher potential for car-free lifestyles, with lower levels of car ownership and a younger population, but also higher levels of deprivation. While this demographic make-up in the south of the borough may result in less private car travel, where there are gaps in the public transport network this can lead to low levels of access to opportunities and services. For example, the wards of Cathall and Cann Hall have the lowest levels of car ownership in the borough, but also low Public Transport Accessibility Levels (PTAL) in many residential areas. Improvements to the public transport and active travel networks are key to improving accessibility in these areas of the borough.

**Transport Roles and Responsibilities in the Borough**

3.14 Transport for London (TfL)[4] are the integrated transport authority responsible for meeting the Mayor's strategy and commitments on transport in London. TfL are responsible for:

- **London Underground[5]** – covering 11 lines, 402km of track and 270 stations.
- **London Overground[6]** – a group of six routes serving inner and outer London. Of note, the Gospel Oak to Barking line directly serves the borough.
- **Buses[7]** – TfL manage a fleet of around 9,300 vehicles operating across 675 routes, 50 bus stations and more than 19,000 bus stops.
- **Docklands Light Rail (DLR)[8]** – stretching from Bank and Tower Gateway to Stratford, Beckton, Greenwich, Lewisham London City Airport and Woolwich Arsenal.
- **London Tram Network[9]** – also operate by TfL.

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[4] https://tfl.gov.uk/
[5] https://tfl.gov.uk/modes/tube/
[6] https://tfl.gov.uk/modes/london-overground/
[7] https://tfl.gov.uk/modes/buses/
[8] https://tfl.gov.uk/modes/dlr/
[9] https://tfl.gov.uk/modes/trams/

- **Road Network** – Responsibility for managing London's road network is shared between TfL, Highways England[10], and the 32 London boroughs, plus the City of London.
  - TfL manage the Transport for London Road Network (the TLRN or London's 'red routes') and are responsible for the maintenance, management and operation of the Capital's 6,000+ sets of traffic lights.
  - Highways England manages the national motorway network, including the M25, M1, M4 and M11.
  - The borough council, as Local Highway Authority (LHA), is responsible for all the remaining roads within their boundaries.

3.15 TfL also work with freight operators and other commercial drivers to encourage more efficient deliveries in London.

### Red routes

3.16 London's red routes are a network of key routes such as the A40 or A406 (North Circular Road). TfL's responsibilities include responding quickly to incidents such as floods and road traffic collisions; repairing defects such as potholes, damaged signs or street lighting; and gritting the roads during the winter. TfL also operate London's Network Management Control Centre (NMCC) and monitor the road network 24 hours a day, seven days a week. Thousands of CCTV cameras continually monitor how traffic is flowing around the Capital.

### Delivering Sustainable Transport for the Future

3.17 The Council is committed to working with TfL and other stakeholders towards achieving the London Mayor's Transport Investment Strategy (MTS) goals of 'healthy streets and healthy people', 'a good public transport experience' and 'new homes and jobs'. Waltham Forest Council supports the overarching aim of the MTS to ensure that at least 80% of all trips in London are made on foot, by cycle or using public transport by 2041, compared to the figure of 63% today (recognising that there are different targets set for central, inner and outer London).

3.18 Further information on Enjoy Waltham Forest can be found at: https://enjoywalthamforest.co.uk/about-mini-holland/

3.19 Further information on transport plans and investments in the borough can be found on TfL's website at: https://tfl.gov.uk/info-for-boroughs-and-communities/waltham-forest#on-this-page-3

### Transport Strategy and Implementation

3.20 Strategic and local transport investment in the borough is set out in a range of strategy and planning related studies. These are summarised below:

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[10] https://www.gov.uk/government/organisations/highways-england

**Local Implementation Plan 3 (2019)**

3.21    The Local Implementation Plan (LIP) (2019)[11] sets out how the Borough proposes to deliver the MTS in Waltham Forest. The LIP takes into account relevant planning documents including, the Draft London Plan, the Council's Draft Local Plan, Transport Infrastructure Growth and Investment Strategy. The LIP also sets out how Waltham Forest will deliver transport investments in the Borough. The LIP (2019) sets out five key transport objectives which are included below:

        1. Shift to a culture of sustainable travel;

        2. Liveable neighbourhoods for everyone;

        3. Place-making and access for all at stations;

        4. Planning a smarter, greener bus network; and

        5. Delivering a public transport network to meet future demand.

3.22    The LIP also provides a Delivery Plan outlining possible funding sources and timeframes for delivery of 31 transport projects and three Major/Liveable Neighbourhoods schemes in addition to how these align with the MTS. These interventions are included in the [Infrastructure Delivery Schedule](#) in Appendix 1.

**Waltham Forest Economic Recovery Action Plan 2020**

3.23    The Economic Recovery Action Plan[12] sets out how this Council will invest in the recovery and future prosperity of Waltham Forest. This Plan focuses on three key themes:
- Business and Economic Recovery – Supporting our High Streets and Businesses to re-open, recover and thrive.
- Home Building – Restarting our housebuilding, increasing the pace of delivery and ensuring our new homes have access to open space and local amenities.
- Living Well – Supporting climate change and investing in sustainable transport.

3.24    The strategy reinforces the Council's commitment to investing in infrastructure – see Figure 3.4 below.

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[11] [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.walthamforest.gov.uk/sites/default/files/2021-11/Waltham%20Forest%20Local%20Implementation%20Plan%203%20%281%29.pdf](chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.walthamforest.gov.uk/sites/default/files/2021-11/Waltham%20Forest%20Local%20Implementation%20Plan%203%20%281%29.pdf)

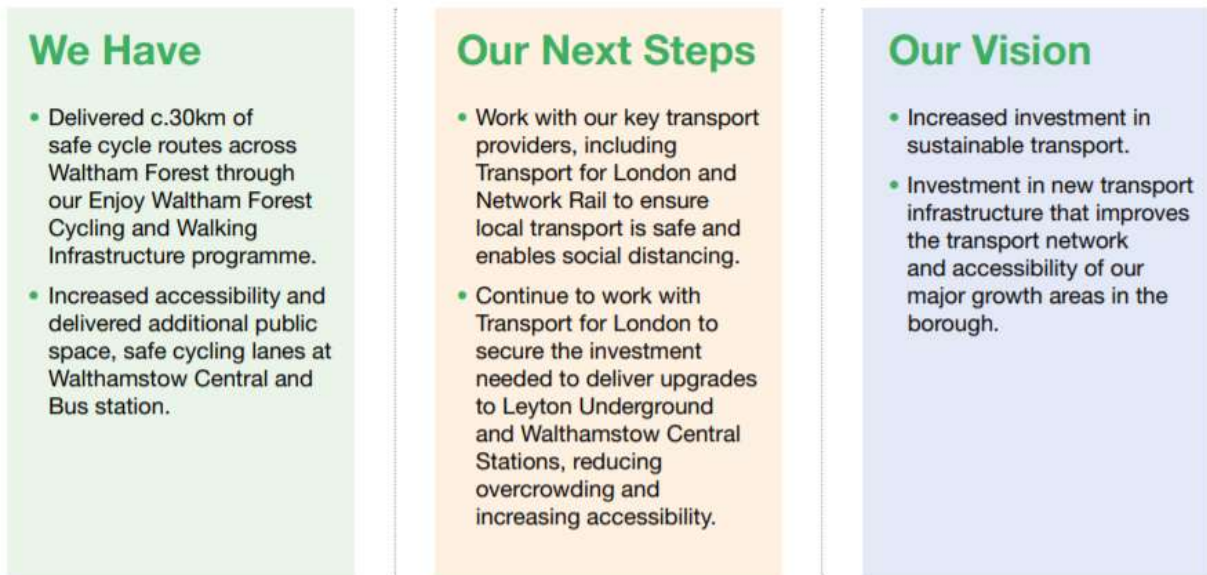[12] [https://www.walthamforest.gov.uk/sites/default/files/Economic%20Recovery%20Action%20Plan%20fPRESS.pdf](https://www.walthamforest.gov.uk/sites/default/files/Economic%20Recovery%20Action%20Plan%20fPRESS.pdf)

**We Have**

- Delivered c.30km of safe cycle routes across Waltham Forest through our Enjoy Waltham Forest Cycling and Walking Infrastructure programme.
- Increased accessibility and delivered additional public space, safe cycling lanes at Walthamstow Central and Bus station.

**Our Next Steps**

- Work with our key transport providers, including Transport for London and Network Rail to ensure local transport is safe and enables social distancing.
- Continue to work with Transport for London to secure the investment needed to deliver upgrades to Leyton Underground and Walthamstow Central Stations, reducing overcrowding and increasing accessibility.

**Our Vision**

- Increased investment in sustainable transport.
- Investment in new transport infrastructure that improves the transport network and accessibility of our major growth areas in the borough.

Figure 3.4: extract Waltham Forest Economic Recovery Action Plan 2020

**London Borough of Waltham Forest Strategic Transport Strategy 2018**

3.25   The Waltham Forest Strategic Transport Strategy 2018 [13]identifies five priority projects and two complementary workstreams that support the proposed regeneration and growth in the Borough, the five priority projects are outlined below:

1) Walthamstow Central: Transport Interchange for a Major Centre in London
2) Redeveloping Leyton Underground Station: Meeting Growing Demand
3) A new Ruckholt Road Station: Unlocking the Leyton Growth Area
4) Station Gateways: Investment in Place-Making and Access for All
5) Planning a Smarter, Greener Bus Network

3.26   The two work streams are included below:

- Making Liveable Neighbourhoods for Everyone
- Culture Change: Shift to Sustainable Travel and Green Vehicles

3.27   Further details are included in below.

**Vision 2020, Cycling in the London Borough of Waltham Forest (2015 – 2020)**

3.28   The Waltham Forest 2020 Cycling Vision [14]reviews the work done so far in improving Waltham Forest's cycling conditions as well as the plans for the forthcoming years. With 2020 in mind, it sets the main target of achieving a 10% cycling mode share across all trips by all residents.  Following on from the Mini-Hollands programme, the borough aims to maintain the same objectives around:

- Cycling: To substantially increase cycling in the borough and to make it an attractive and mainstream mode of transport;

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[13] https://democracy.walthamforest.gov.uk/documents/s60599/appendix%20A%20-%20transport%20strategy%20050318.pdf
[14] https://www.enjoywalthamforest.co.uk/wp-content/uploads/2015/01/018978-Mini-Holland-Cycling-Strategy-v2-FINAL.pdf

- Modal shift: To shift a significant proportion of short local car trips to the bike;
- Better public spaces: To improve the look and feel of public spaces;
- Economic regeneration: To support the growth of our local economy by encouraging people to walk and cycle to their local town centres;
- Safety: Improve actual and perceived safety for cyclists on our streets;
- Health: To reduce the burden of preventable disease in the borough by increasing the number of adults and children incorporating physical activity into their daily routines; and
- Developments: Encourage developers to build upon this infrastructure by developing sustainably and putting cycling first in their transport proposals.

3.28    The 2020 Vision focuses primarily on cycling. An expanded version is currently being developed and due for publication in 2020, which will focus on not just cycling but also walking up to 2025.

**Chingford to Stratford Appraisal – Re-Introducing a Train Service (2010)**

3.29    This document[15] examines the operational and economic feasibility of reintroducing a train service between Chingford and Stratford, and also of reopening Lea Bridge Station, which would be served by this re-instated service. The report concludes that a regular 15-minute interval service between Chingford and Stratford is operationally feasibly and would be primarily used by passengers accessing Stratford and the Docklands area. Regarding development of a station at Lea Bridge Road it was concluded this would be pursued separately as part of broader regeneration plans in this area.

Figure 3.5: Proposed Hall Farm Curve



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[15] Chingford to Stratford Rail Line - Railfuture

**Regional Transport Policy**

**London Electric Vehicle Infrastructure Delivery Plan (2019)**

3.30    The Mayor of London developed the Electric Vehicle Infrastructure Delivery Plan[16] to support Transport and Environment Strategies commitment to delivering zero emission road transport, and a zero-carbon city by 2050. The delivery plan acknowledges the primary existing barrier to uptake is availability – or perceived availability - of charging infrastructure, increasing capacity of EV charging is key to facilitating planned growth. The primary aims and recommendations are that public charge points should be open to all allowing increased public confidence in charging infrastructure, a mix of rapid and slower chargers are needed to support different user groups, the streetscape impact of these should be reduced where possible.

**The London Plan – Intend to Publish (2019)**

3.31    The Intend to Publish London Plan (2019)[17] sets out the overall spatial development strategy for London, including a vision of an integrated economic, environmental, transport and social framework for the development of London over the next 20– 25 years. The London Plan focuses on good growth, defined as 'growth that is socially and economically inclusive and environmentally sustainable'. The plan emphasises the role of good growth in improving the health and quality of life of all Londoners and reducing inequalities. As such, transport plays a key role in ensuring that communities are well connected to goods, services and opportunities to fulfil their full potential. Six 'Good Growth' objectives are identified, which are outlined below:
- GG1 Building strong and inclusive communities;
- GG2 Making the best use of land;
- GG3 Creating a healthy city;
- GG4 Delivering the homes Londoners need;
- GG5 Growing a good economy; and
- GG6 Increasing efficiency and resilience.

3.32    The need for 'good growth' is reflected in Policy 4 'Ensuring Good Growth' of the Draft Local Plan for Waltham Forest and also enforces the key thread of supporting sustainable infrastructure. The Intend to Publish London Plans set the target for developing 1,800 homes each year in Waltham Forest, which is reflected in the Draft Local Plan growth proposals. The new London Plan designates Walthamstow and Wood Street as Strategic Areas for Regeneration. Chapter four of the Intend to Publish Plan sets out more detailed transport policies for the city. These largely relate to encouraging modal shift, ensuring transport infrastructure taking a strategic approach

[16] http://lruc.content.tfl.gov.uk/london-electric-vehicle-infrastructure-taskforce-delivery-plan.pdf
[17] https://www.london.gov.uk/sites/default/files/intend_to_publish_-_clean.pdf

and gives due consideration to the Mayor's Transport Strategy and Healthy Streets approach.

**Mayor's Transport Strategy (2018)**

3.33    The Mayor's Transport Strategy 2018[18] recognises the 'cornerstone' role transport plays in delivering London's broader objectives. To do so, the main target it sets is for: '80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041'.  Another key focus is on improving health through active travel, improving road safety, reducing traffic congestion and overall emissions whilst shifting towards zero-emission vehicles. Alongside improvements to public transport including projects focussing on accessibility improvements such as providing step-free access.

3.34    The Mayor's Transport Strategy enforces the Draft London Plan approach to new developments, focussing on good growth whilst setting transport-specific principles. Given the expected high rate of growth in Waltham Forest it is key that any new developments in the borough comply with the following, as set out in the Strategy: [19]
  - 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; and
  - Efficient freight.

3.35    The Mayor's Transport Strategy also outlines a spatial approach for transforming the transport system. In terms of Outer London, the Strategy highlights the 'huge untapped potential' of cycling to replace shorter car trips. As such, the Strategy encourages improvements to the walking and cycling environment, implementation of measures to reduce car dependency and improvements to public transport services.

3.36    The Strategy acknowledges the significance of rail for longer distance journeys and need to improve bus services to replace existing car journeys. Additionally, it encourages the implementation of demand-responsive bus services where traditional routes are not appropriate.

3.37    Four supporting action plans were also developed to detail how the MTS proposals will be achieved. The action plans include:
  - **Walking action plan**, which aims to make London the most walkable city in the world, by enabling people to walk part or all of their journey by improving walking experiences.

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[18] https://www.london.gov.uk/sites/default/files/mayors-transport-strategy-2018.pdf

- **Vision Zero action plan**, aims to eliminate all deaths and serious injuries on London's transport system, with a primary focus on London's streets.
- **Freight and servicing action plan**, to support safe, clean and efficient freight movement.
- **Cycling action plan**, focussing on enabling Londoners to make cycling part of their everyday travel.

**Healthy Streets for London (2017)**

3.38    The Healthy Streets[20] approach is defined as 'the system of policies and strategies to help Londoners use cars less and walk, cycle and use public transport more'. In order to tackle levels of inactivity, congestion and noise and air pollution in the city and enable Londoners to love healthy lives which incorporate active travel. Healthy Streets focuses on ten indicators to make streets more pleasant, safe and attractive which are shown in Figure 3.6.



Figure 3.6: 10 Healthy Streets indicators

3.39    The Healthy Streets document emphasis the need to deliver the Healthy Streets
        Approach at three main levels: street level through character and use of city streets;
        network level with planning and management of the transport network; and strategic
        level through policy and planning for growth.

3.40    The Healthy Streets document emphasis the need to deliver the Healthy Streets
        Approach at three levels to have an impact: street level through character and use of
        city streets; network level with planning and management of the transport network;
        and strategic level through policy and planning for growth.


**The Role of Transport in Public Health in Waltham Forest**

3.41    The Borough population is roughly evenly split between males and females with
        approximately 50.3% of the population being male compared with 49.7% female based
        on GLA (2017) estimates for 2020.

3.42    The Greater London Authority (GLA) Population Projections (2017) outline that
        Waltham Forest currently (2020) has a younger average population than other London
        Boroughs, with 22% of residents between ages 0-15 years old. Having a younger than
        average population provides an opportunity to develop active travel habits at a young
        age through interventions targeting schools, which are then more likely to be
        maintained into adulthood. The GLA (2017) also outlines anticipated growth in the
        Borough's population aged 65+, growing to 13.1% of the population in 2033, compared
        to 10.6% in 2020.

3.43    The existing spatial distribution of 0-15 year olds and 65+ is shown in Figure 3.7 below.
        This shows that that there is a significant difference in age profile between the north
        and south of the Borough, with a greater proportion of young people living in the south
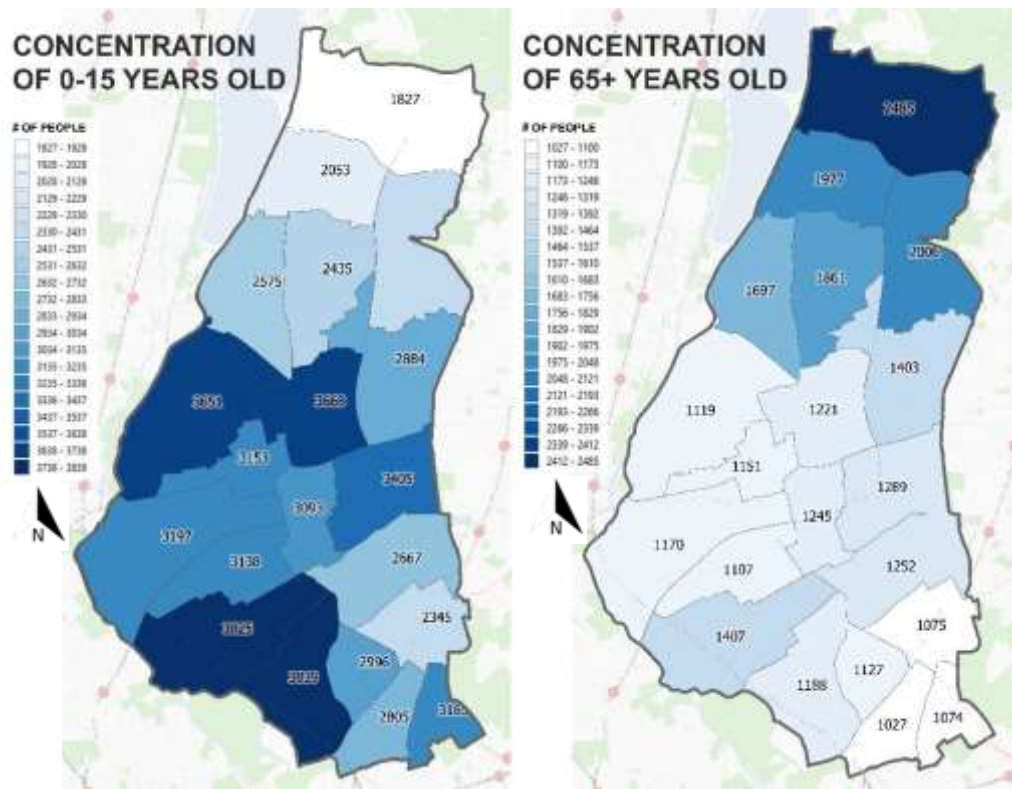        of Waltham Forest and the converse true in the north.

Figure 3.7: Age Distribution (Office of National Statistics, 2015)

3.44   A disparity also exists in the levels of physical activity between social groups within the Borough. With lower levels of physical activity recorded among those in unemployment, with disabilities, people within the six most deprived areas within the Borough, aged over 55 and from Asian and Black ethnic groups (Public Health England). Projects looking to increase uptake of sustainable travel will therefore consider differences in travel patterns, needs and preference to provide inclusive interventions which are also able to target specific socio-demographic groups.

**North London Sub-Regional Transport Plan, 2016 Update (2016)**

3.45   The North London Sub-Regional Transport Plan[21] was first developed by TfL in 2010 to translate the MTS goals, challenges and outcomes to a sub-regional level, enabling TfL to work with Boroughs to address strategic issues, progress medium and longer term priorities and also respond to changing circumstances. The 2016 update responds to the 2016 Mayors Transport Strategy. The major challenges identified are the need for significant housing growth and access to sustainable transport which can support this and unlock growth opportunities, in addition to increasing employment at transport nodes. Alongside this, the increase in populations 65+, with Blackhorse Road seeing one of the greatest increases in North London and a need for an accessible transport network to cater for this ageing section of the community. Public transport mode share has potential to increase, but only if this is supported by an increase in capacity, this is required to prevent worsening traffic congestion.

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[21] http://content.tfl.gov.uk/north-story-of-growth-2016.pdf

**Active Travel Network**

3.46    The Mayor's Transport Strategy (MTS, 2018) highlights the potential for walking and cycling to replace short car-trips in Outer London. Considering Figure 3.8, which shows key destinations and the existing active travel network, and Figure 3.9 which shows population density, it is clear the concentration of centres of activity correlates with population density, particularly in the south of the Borough.

3.47    Higher population densities around centres of activity enable short trips to key services to be made by sustainable modes.

3.48    Walkable distances to key services are identified as approximately 800 metres or 10 minutes' walk by the Department for Transport, maximum cycling distances however vary more significantly dependent on user and local conditions. In London, developments that create a significant transport impact must include an Active Travel Zones assessment, considering the quality and accessibility of active travel routes towards key locations within walking or cycling distance of the development.

## Health, Physical Activity and Active Travel

The Mayor's Healthy Streets for London report (2017) outlines the importance of increasing levels of physical activity of Londoners to tackle major health challenges. This is particularly relevant to Waltham Forest as a greater proportion of adults in the Borough (26.6%) are physically inactive compared to the London average (22%).

Clear links have been drawn between physical activity and health and wellbeing outcomes and subsequent treatment costs. For example, the Department of Health (2011) estimated that if every Londoner walked or cycled for 20 minutes each day, it would save the NHS £1.7 bn in treatment costs over 25 years. The Harvard Medical School (2019) found that participating in daily physical activity can reduce the risk of depression and dementia by 20-30%.

The current health and well-being challenges Waltham Forest faces which could be addressed by increasing physical activity are summarised below:

- **Mental health**: high prevalence of mental health disorders, affecting 22.5% of the population aged 16+, compared to a 16.9% average for England (data accounting to 2017). 6.8% of people over 18 have recorded prevalence of depression in the Borough (2017/2018)16;

- **Cardiovascular disease**: most common cause of death in Waltham Forest (24% of premature deaths);

- **Hypertension**: 11% of the patients in the NHS Waltham Forest Clinical Commissioning Group has recorded hypertension, similar to the London average (data accounting to 2018/2019)17;

- **Obesity:** 10.5% of children in Reception and 23.4% of children in Year 6 are overweight, higher than the 10.2% and 23.2% London averages (data from 2018/2019)18. For adults, the Borough performs better than London, still, 52.9% of residents 18+ are classified as overweight/obese (2018/2019)19; and

- **Diabetes:** high prevalence of diabetes (diagnosed and undiagnosed) accounting for 10.1% of the population, compared to an 8.5% average for England (2017)20.


Sources:

Public Health England - Mental Health and Wellbeing JSNA, available here.

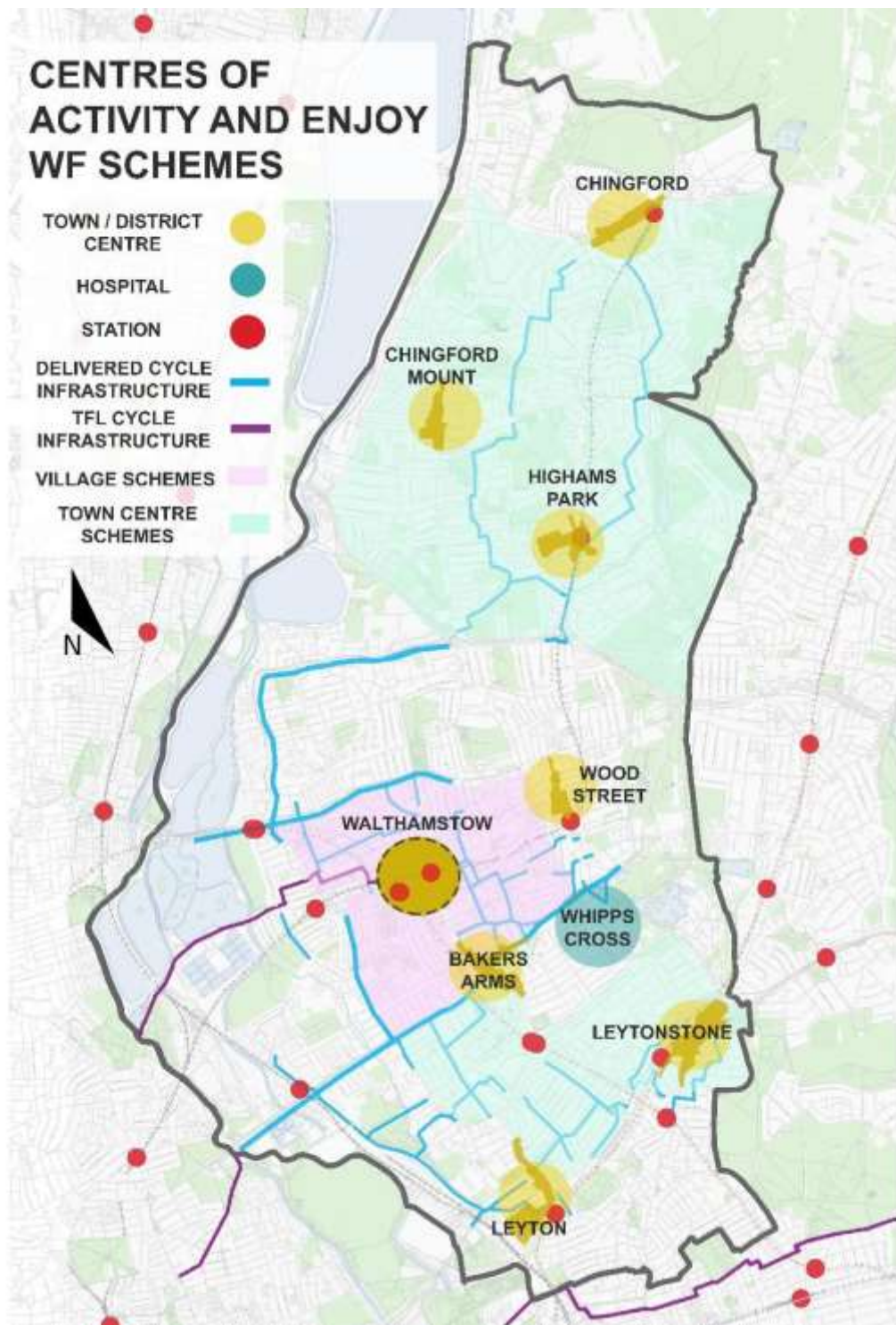Public Health England - Cardiovascular disease, available here.

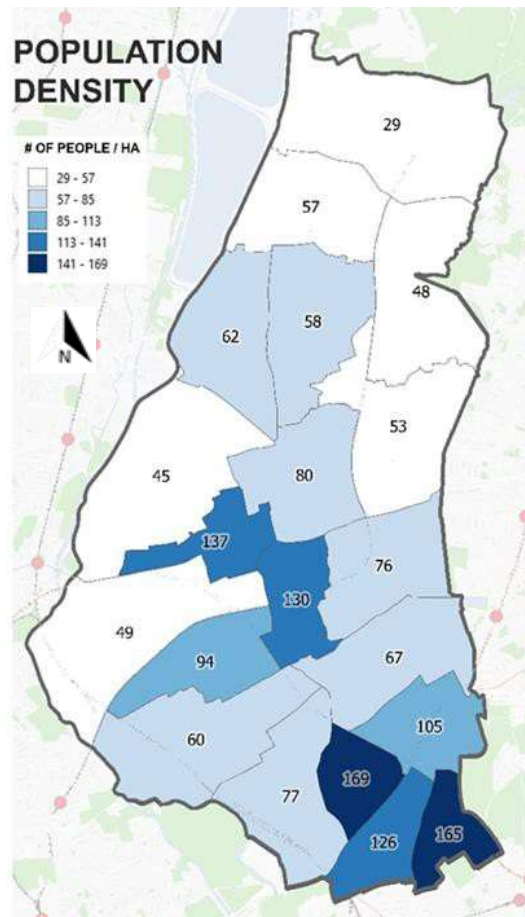Figure 3.8: Key destinations and existing active travel network in Waltham Forest

Figure 3.9: Population density in Waltham Forest

3.49    Residential densities in the north of the Borough are generally lower than those in the south reflecting the suburban character north of the A406. In line with this, there are fewer centres of activity, which are generally located adjacent to stations. Only two cycle routes are provided through the north of the Borough and only one of these provides a continuous connection south of the A406 towards larger Town and District centres. The existing cycle routes in the north do not provide good links to residential areas and the distances to most of these exceed a reasonable walking distance, which contributes to higher car dependence in the north of the Borough compared to the south. This demonstrates the importance of ensuring a joined-up cycle network linking to local centres and the strategic transport network.

3.50    Residents in the north of the Borough could be better connected to the centres of activity and stations in the south of the Borough. However, there are significant north-south permeability issues around the A406, which can only be crossed at six points. This can create bottlenecks during busy periods. Additionally, as these connections are made via underpasses or pedestrian footbridges, both of which are not well overlooked, this leads to intimidation and discourages further walking and cycling. In addition, cycle hire services are available in the south of the Borough, which enables casual cycling.

However, in the north of the Borough, casual cycling is much less attractive as there are no cycle hire services and fewer formal cycle routes.

3.51    Connections north from the Borough towards Epping Forest also require significant consideration as concerns have been raised regarding the impacts of increasing leisure cycling on the Special Area of Conservation (SAC).

3.52    Demographic and topographic differences also contribute to differing travel patterns in the north and south of the Borough. The north concentrates most of the 65+ population in Waltham Forest as well as many families with young children. There is also a steep topography which makes walking and cycling more challenging to these groups.

3.53    In some occasions cycling can also replace longer-distance trips, relieving pressure from overcapacity parts of the transport system. It is expected that when complete, the existing network in conjunction with the extension of Cycleway 2 (expected to run between Stratford and Aldgate via Bow, Mile End, Stepney Green and Whitechapel) and the East to West Cycleway (from Paddington to Acton) will connect several key destinations by fully segregated lanes, improving journey times and safety for cyclists.

3.54    Figure 3.10 shows destinations which will be accessible from Walthamstow Central via routes with over 90% segregated cycle lanes.
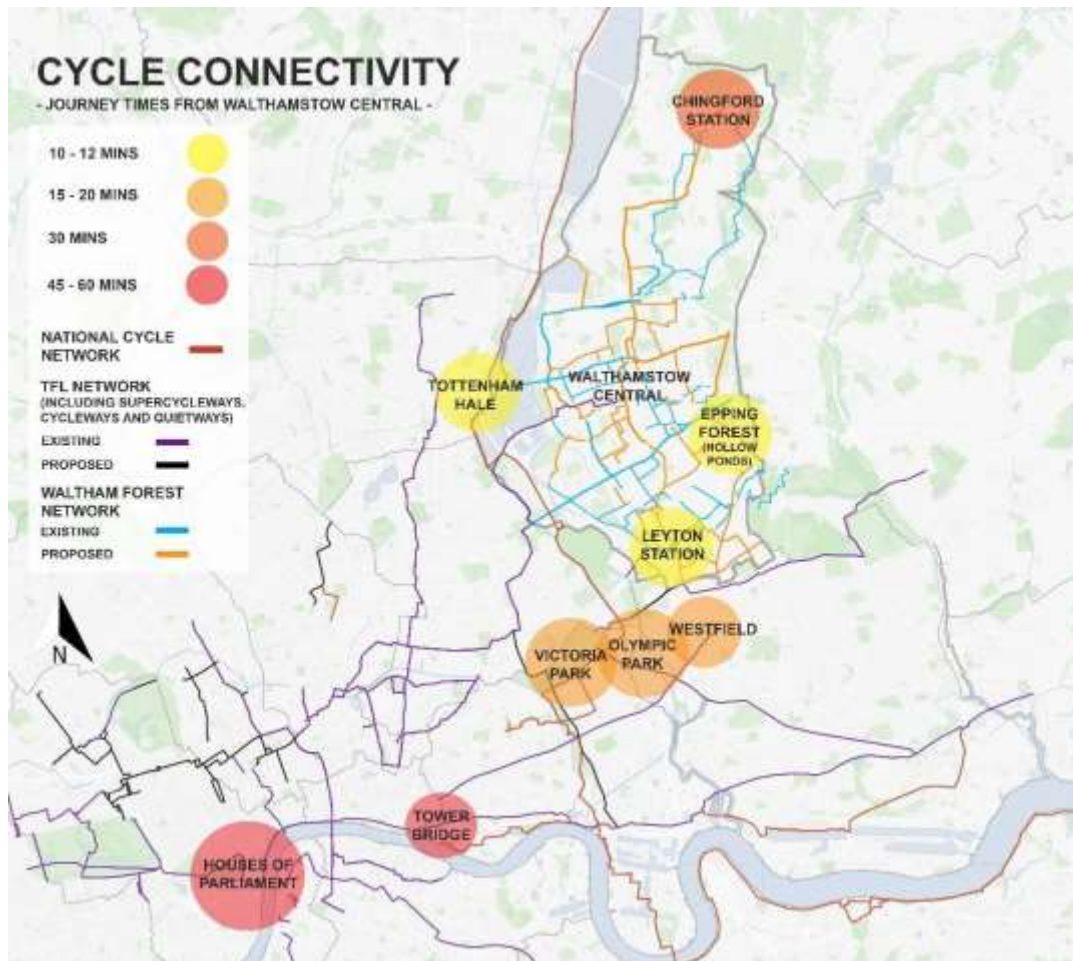
Figure 3.10: Cycle connectivity from Walthamstow Central[22]

3.55 Figure 3.10 shows that cycling from Walthamstow to Westfield will take between 15-20 minutes through a network of segregated cycle lanes, once the expected works are completed. Future cycling proposals within the Borough should look to complement or feed into this network from other parts of the Borough.

**Enjoy Waltham Forest**

3.56 The 'Enjoy Waltham Forest' programme[23] combines a series of transport and public realm improvements, as well as complementary culture change initiatives, to promote active travel and increase liveability within the Borough. These improvements also supported delivery of events as part of the London Borough of culture in 2019.[24]

3.57 As part of this, walking and cycling infrastructure has received major investment over the past five years. As shown in Figure 3.10, the cycle network is denser in the south of the Borough where the majority of the Enjoy Waltham Forest projects have been concentrated. Segregated cycle routes have been delivered along some of the Borough's main roads towards town centres to provide safety, convenience and high-

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[22] Some the proposed network has since been completed e.g cycle lane across Walthamstow Wetlands is now complete

[23] https://enjoywalthamforest.co.uk/

[24] https://www.walthamforest.gov.uk/libraries-arts-parks-and-leisure/arts-and-culture/london-borough-culture

mobility to cyclists. However, as outlined, cycling infrastructure north of the A406 is much more sparse contributing to increased car dependency.

3.58    Within residential areas, the Enjoy Waltham Forest programme has focussed on liveability - improving the overall environmental conditions to make cycling and walking, safer and more enjoyable. This included introducing modal filters, one-way systems, timed road closures, improved pedestrian infrastructure, SUDS and other public realm improvements slowing down motorised traffic by reinforcing pedestrian/cyclist priority. So far, these have been implemented in the residential areas between Forest Road and Lea Bridge Road, where some of the Borough's housing growth is planned. These holistic schemes have a multitude of benefits beyond transport including reducing flood risk, enhancing local community and improving overall wellbeing. The potential for further expansion of the Enjoy Waltham Forest programme to support sustainable housing growth will need to be considered.

3.59    The 'Town Centres' schemes shown in Figure 3.10 cover large areas with specific schemes around the Borough's main shopping districts, introducing measures to reduce motorised traffic, improving key crossings and pedestrian routes, and delivering public realm improvements. Connectivity towards these centres was also sought through segregated cycle routes. These Town Centre schemes have been implemented around Leyton, Leytonstone, Chingford and Highams Park.

3.60    Major investment in walking and cycling infrastructure in addition to complementary programmes during the past few years have already shown success. For example, in one year, the number of residents that said they cycle increased from 12% to 17% by 2016 – that translates into approximately 13,600 more people cycling in one year. Frequency also improved with 73% of those who cycle reporting they do it at least once a week compared to 62% the year before.

3.61    Figure 3.11 below shows the roads within the Borough which have experiences the greatest increase in cycling usage over the surveyed period 2017-2019. Along these routes these is some variation in vehicular traffic and increases in cycling by over 200% on Church Road, Forest Road, Blackhorse Road and Boundary Road all of which were part of the Enjoy Waltham Forest programme.

3.62    More information and continuous updates on the Enjoy Waltham Forest programme can be found at: https://www.enjoywalthamforest.co.uk/

Figure 3.11: Roads showing greatest increase in cycle usage
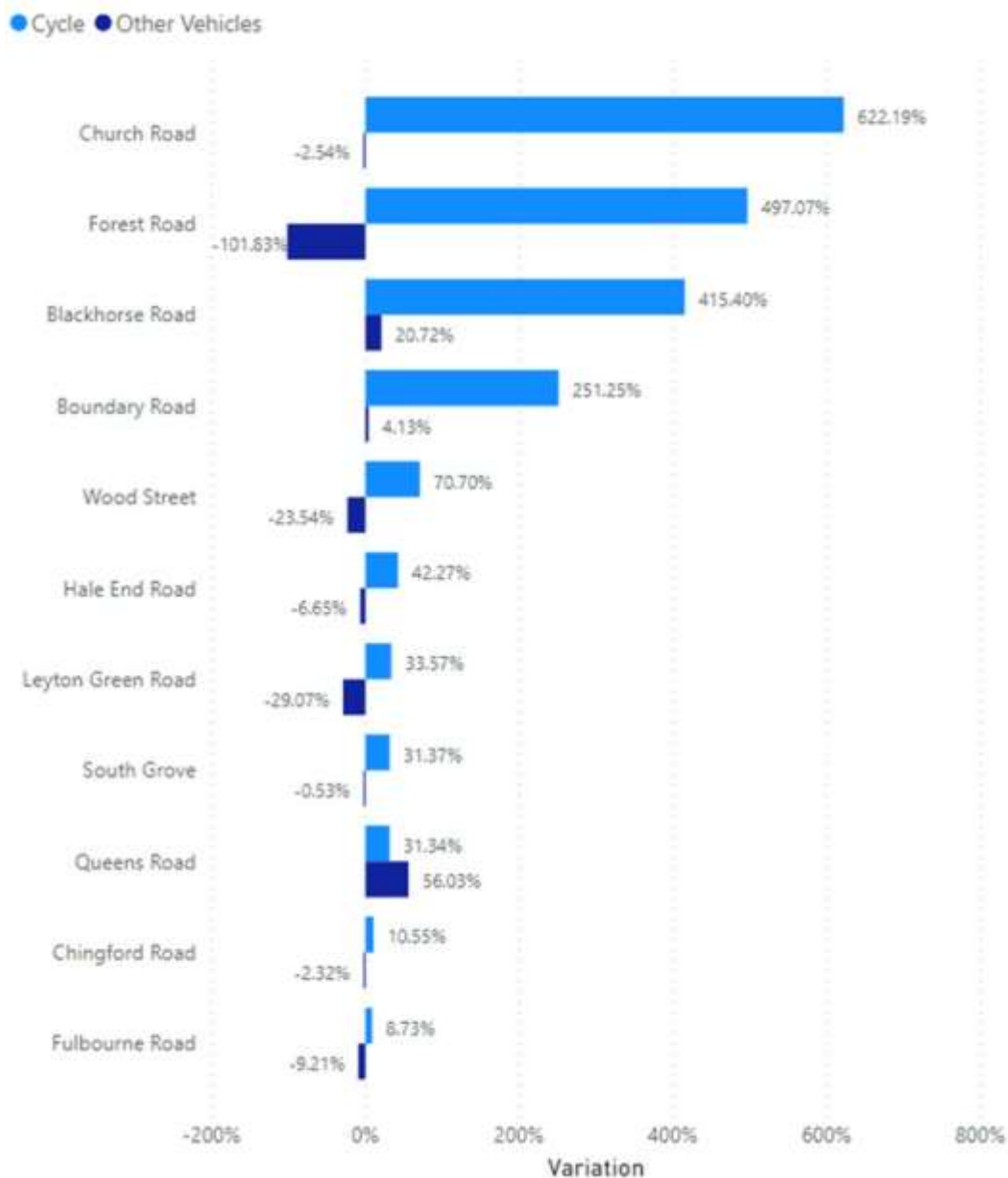


**Schools and Active Travel**

3.63    Active travel to school represents a significant opportunity to encourage the development of sustainable and healthy travel habits from an early age and across all groups. Increasing travel to school by active modes presents an opportunity to reduce congestion and air pollution on the Boroughs road network and around stations at peak times.

3.64    Figure 3.12 shows the results of a survey of 57 schools in Waltham Forest which are taking part in the 2018/2019 TFL STARS programme (Sustainable Travel: Active, Responsible, Safe) measuring how pupils and staff travel to schools. This shows, walking

is the predominant form of travel to primary/secondary schools and academies, used by more than half of the surveyed population. However, one in five trips to these are still made by car/motorbike, representing an opportunity for modal-shift.
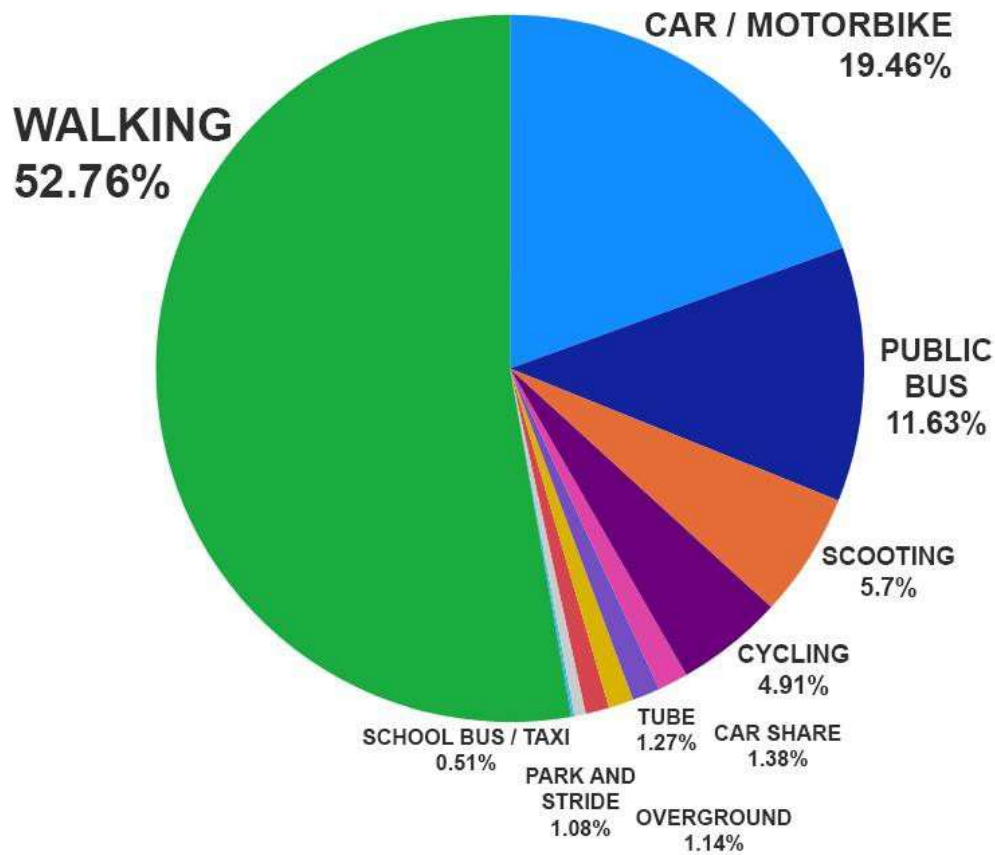


Figure 3.12:  Mode share to STARS Schools 2018/2019

3.65   Active travel to schools can also be encouraged by implementing 'School Streets'[25], which involves the temporary closure of streets around schools during drop-off and pick-up times to motorised vehicles. This aims to make other modes of travel more convenient as well to provide a more pleasant, safe and less polluted environment outside school gates.

3.66   Phase 1 of a School Streets programme has been implemented in Waltham Forest through 2 schemes covering four schools in September 2019 with plans to be extended to April 2020 (timetables still to be revised due to Covid-19 restrictions). With a 12% reduction in in pupils arriving to school by car in one of the trial schools. Consultation is ongoing for further implementation within the Borough.

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[25] http://schoolstreets.org.uk/

**Buses**

3.67   Bus services play an important role in communities where there isn't access to Underground/Overground stations, and where journey lengths mean active travel is not feasible to reach local services or transport hubs. Currently there are 34 bus routes and five night routes operating in Waltham Forest.

3.68   The Borough has an extensive bus network with a total of 33 routes which predominantly serve the main town and local centres, transport hubs and connect to locations outside the borough, such as Stratford and central London.

3.69   The majority of the southern wards of the borough are well served by buses, with frequent services connecting to major destinations and transport interchanges in Hackney, Central London, Stratford, Tottenham Hale, and East London.

3.70   In contrast, the bus networks in the north of the borough, and Cann Hall, in the south are characterised by poor east-west connectivity, requirements to change buses to reach major destinations, and less frequent services. Combined with limited rail connections, this contributes to low PTAL in these areas of the borough, presenting a less attractive option to private car use.

3.71   Figure 3.13 shows that the number of kilometres operated by bus in Waltham Forest was increasing until 2018, after which there was a slight drop for the period 2018/2019. Correlating with the reduction in km operated, there was a reduction in trips during the same period. This suggests that greater services and km operated may attract a subsequent increase in bus trips, which could be drawn from more constrained or polluting modes of transport.



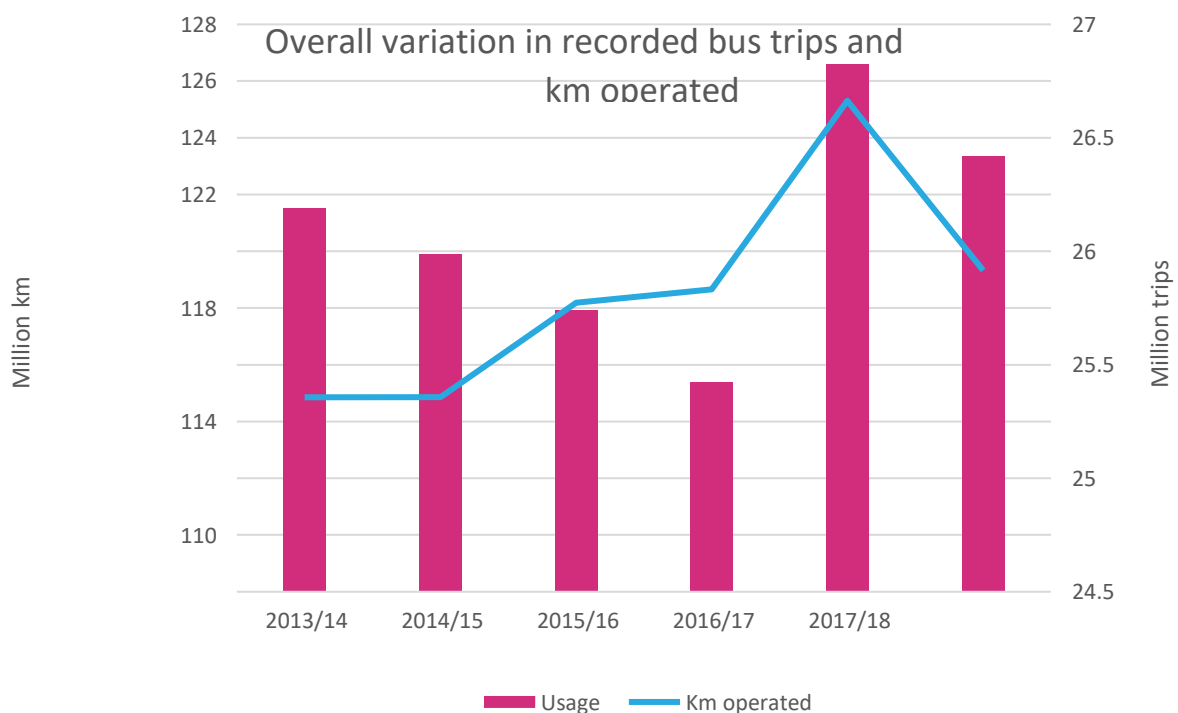Overall variation in recorded bus trips and km operated

Figure 3.13: Variation in recorded bus usage and km operated

3.72    Table 3.14 shows services with the highest increase and the three with the highest decrease in trips for the period 2013-2019. In all cases, the increase or decrease in trips was accompanied by a similar increase or decrease in kilometres recorded by the service. As shown, the rate of usage increase over the five-year period is greater than the rates of decrease. Overall, there is a rising demand for most of the bus services in the Borough.

| | Route | | Change in | Change in km recorded |
|---|---|---|---|---|
| | 308 | Wanstead - Lower Clapton | 28% | 24% |
| | 339 | Leytonstone – Shadwell | 28% | 23% |
| | W19 | Walthamstow – Ilford | 27% | 29% |
| | W12 | Wanstead – Walthamstow | -12% | -7% |
| | W15 | Higham Hill – Hackney | -13% | -7% |
| | 48 | London Bridge – Walthamstow | -15% | -4% |

Figure 3.14: Bus services with the greatest increase/decrease in trips between 2013-2019

3.73    Alongside managing an increasing demand for bus services, managing the efficiency of the system must be a priority to ensure that bus services are competitive compared to private car travel.  Figure 3.15 shows that average bus speeds in Waltham Forest have decreased between 2013-2019. This is likely to be caused by a number of factors including:

- Increased boarding times associated with increase in usage;

- Newly introduced speed limits on some roads; and

- Improved pedestrian/cycle priority.

3.74    But also, it may indicate rising levels of congestion. Given these challenges it is key to ensure that, where possible, buses are prioritised over other forms of motorised traffic in order to avoid an increase in journey times for users.
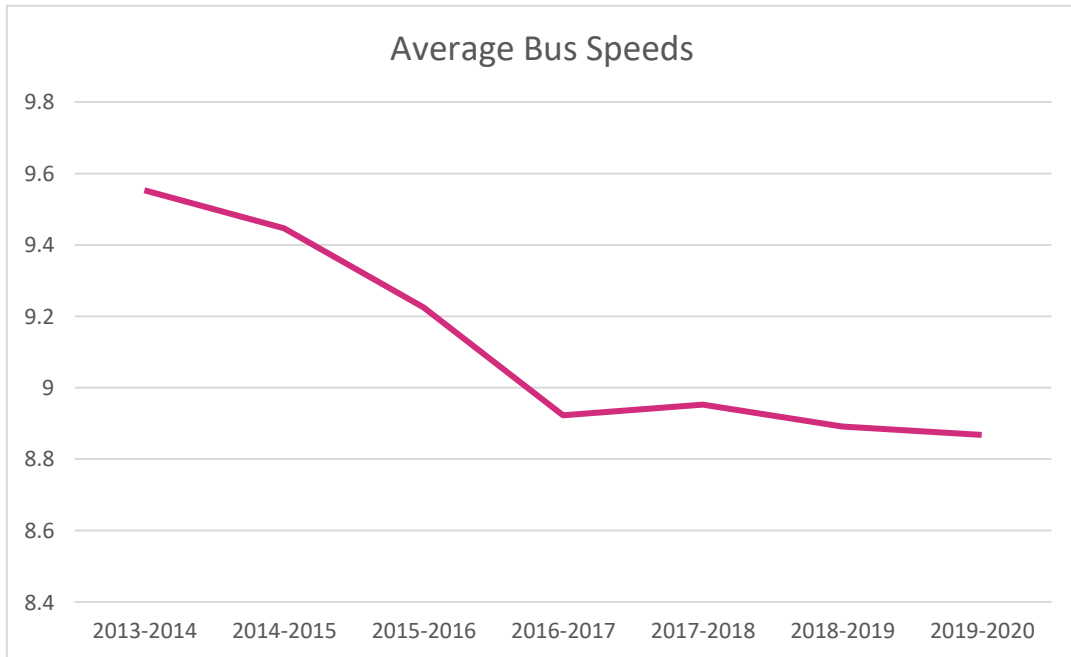
Figure 3.15: Average bus speeds in Waltham Forest (2013/2014 – 2019/2020) [26]

3.75   Figure 3.16 shows bus speeds across the Borough in 2016/2017 based on the LIP (2019). Lower speeds are concentrated through the centre and south of the Borough and at junctions. The generally low speeds indicate that bus priority measures at junctions could have a significant impact in improving bus speeds and therefore journey times to make bus a more appealing option for travel within and outside of the Borough.

Figure 3.16: Monday - Friday am bus speeds (2016/2017) [27]

**Underground and Overground**

3.76 The majority of the Underground and Overground stations in Waltham Forest are concentrated in the south of the Borough. The busiest stations being Walthamstow Central (generating 27,000 trips per regular weekday), Leyton (20,730), Leytonstone (17,320), and Blackhorse Road (16,040).

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[27] TfL (2019) *Buses performance data*. Borough All (to P12 2019-2020) [Excel Spreadsheet]. Available from: https://tfl.gov.uk/corporate/publications-and-reports/buses-performance-data

3.77    All of which have had an increase in entries and exits between 2013-2016, with Walthamstow Central and Blackhorse Road, which provide access to the Victoria Line, experiencing an average 39% increase in entries and exits between 2013 and 2016. The increase for Central Line stations (Leyton and Leytonstone) has been 11% over the same period.

3.78    It is expected that demand will continue to increase due to the population growth planned for the areas around these stations. Overcrowding at stations and along the Victoria and Central Lines is already a significant issue during weekdays at peak hours. On weekdays, approximately 40% of all trips departing from Waltham Forest are to Central London during the morning peak, with the same proportion returning during the evening peak, showing a clear commuting pattern.

3.79    The main stations to which people travel on weekdays are Liverpool Street, Oxford Circus and Kings Cross St Pancras. At weekends, travel patterns are more distributed and other locations such as Stratford and Seven Sisters gain more popularity. The primary destinations from Underground/Overground stations in Waltham Forest for a combination of weekdays and weekends are shown in Figure 3.17.
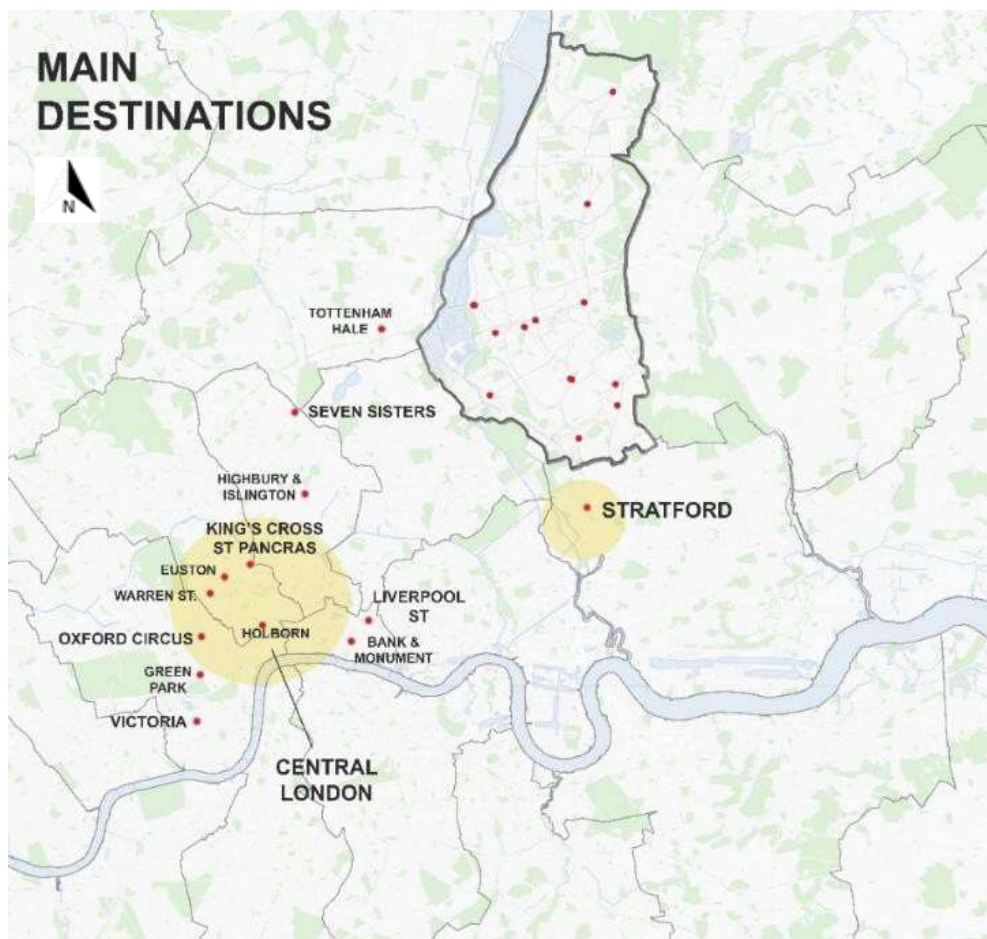
Figure 3.17: Main Underground and Overground rail destinations[28]

3.80    There are planned improvements to the Central Line, which expect to deliver a 25% increase in capacity. Additionally, the delivery of the Elizabeth Line will also help mitigate some of the demand towards Central London, by providing a new link between Stratford, Liverpool Street and other Central London stations. There is still some uncertainty around the exact delivery dates for these improvements. The stations within Waltham Forest will need to be able to cope with the expected capacity increases associated with these improvements as well as the expected increase in transport demand associated with population growth and the development of economic activity hubs around town centres. Plans for station improvements identified by Waltham Forest are set out in the Infrastructure Delivery Schedule in Appendix 1.

3.81    Efficiency of travel can also be improved by adding step-free access. TfL estimates that on average, journeys take 15-minutes longer if using the step-free public network in Waltham Forest. Currently only four of the stations in Waltham Forest have step free access. Given the high proportion of younger people and increasing proportion of over 65s living in the Borough, making stations accessible should be a priority for the Borough.

**Highways**

3.82    Waltham Forest contains a number of strategic roads which provide vehicular access across the Borough. The two key strategic routes are the A406 (North Circular), which runs through Waltham Forest in an east-west direction and acts as an inner ring road, and the A12, which bisects the south east corner of the Borough providing a link to Stratford and Canary Wharf in the south and towards outer London heading east.

3.83    Both roads are designated red routes in the Transport for London Road Network (TLRN) and as such carry the greatest volumes of traffic, as shown in Figure 3.18.  Both routes create severance due to a lack of permeability (grade separated roads). Of particular concern is the North Circular which contributes to a north-south divide in the Borough.

3.84    Another key route through the Borough is the A104 (Lea Bridge Road), providing north-south connectivity from Whipps Cross south towards Central London, or north through Epping Forest towards the M25 and M11.

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[28] (Made using TfL Crowding Data) using TfL (2018) *Crowding Data*. 2018FRI_Link_Load [Excel spreadsheet] Available at: http://crowding.data.tfl.gov.uk/ (Link Broken)

**Average counts per hour (motorised vehicles)**

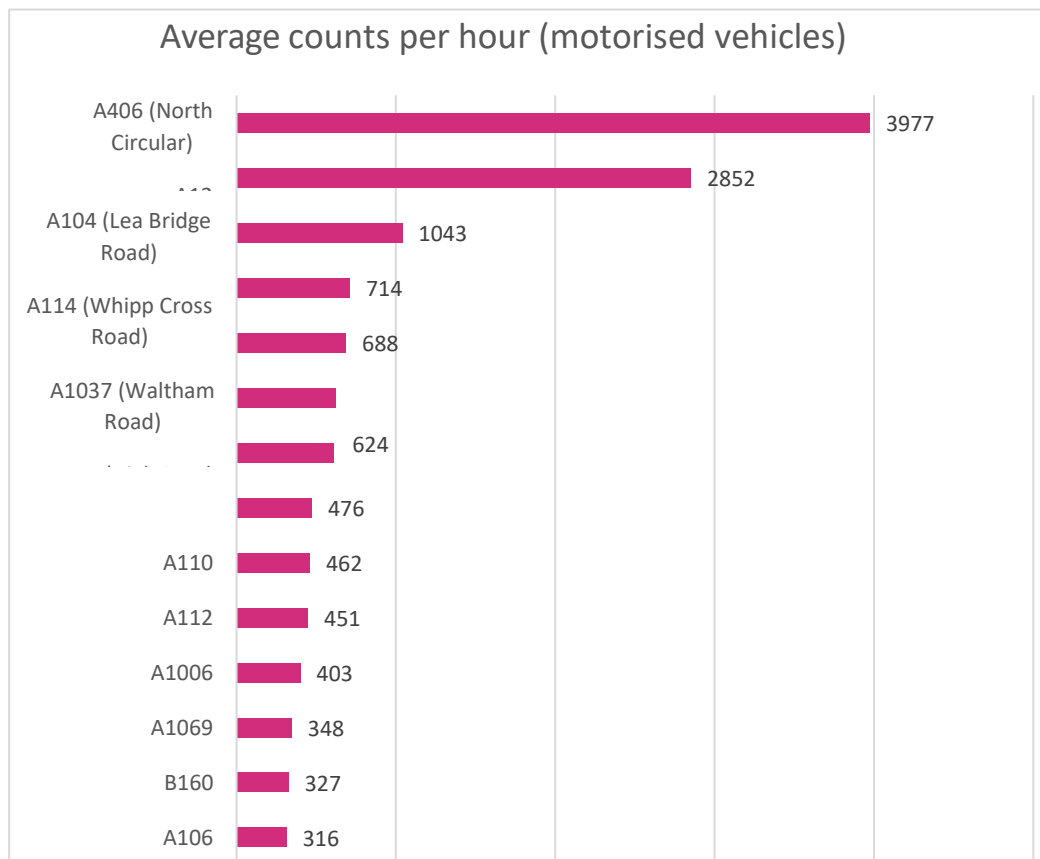| Road | Count |
|------|------|
| A406 (North Circular) | 3977 |
| | 2852 |
| A104 (Lea Bridge Road) | 1043 |
| A114 (Whipp Cross Road) | 714 |
| | 688 |
| A1037 (Waltham Road) | 624 |
| | 476 |
| A110 | 462 |
| A112 | 451 |
| A1006 | 403 |
| A1069 | 348 |
| B160 | 327 |
| A106 | 316 |

Figure 3.18: Average traffic flows per hour 2015-2018[29]

3.85 Commuting patterns by mode vary significantly between the north and south of the Borough, with up to 40% of commuting journeys from locations in the north of the Borough being made by car and the same figure being less than 10% in parts of the south (Census, 2011).

3.86 Figure 3.18 shows that commuting from the north to the south of the Borough represent a large proportion of driven trips into Walthamstow for work, which have potential to be converted to more sustainable modes of transport.

**Electric Vehicle Charing Infrastructure**

3.87 Electric vehicles (EVs) have the potential to offer great benefits to London's residents, businesses and visitors in terms of health, the environment and reduced running costs over the lifetime of the vehicle. Electric vehicles are part of the tool kit for decarbonising transport emissions and are an important component of improving local air quality and reducing premature deaths and health risks associated with exposure to toxic air.

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[29] (DfT Raw Counts 2015-2018) based on Department for Transport (2018) Raw Count Data – Major and Minor Roads. Available from: https://roadtraffic.dft.gov.uk/downloads

**Waltham Forest Electric Vehicle (EV) Charging Strategy, 2018-2022**

3.88    London Borough of Waltham Forest recognise their role in supporting the uptake of electric vehicles and the EV Strategy[30] provides guidance on identifying and delivering the appropriate charging infrastructure, located in the right places, to support electric vehicle uptake by the growing population and meet future demand for charging facilities across the borough.

3.89    Six key objectives of the EV Charging Strategy are to:

1) Deliver an electric vehicle charging network that meets the demands of residents, businesses and visitors;
2) Designing sites that take into consideration other road users, particularly pedestrians;
3) Ensure full coverage of the borough by 2022;
4) Ensure the charging network has capacity for further expansion;
5) Encourage the uptake of electric vehicles through initiatives and public engagement;
6) Identify income opportunities that will lead to the provision and maintenance of charging points becoming cost neutral to the borough

3.90    The borough has to date installed 101 Electric Vehicle Charging points on the adopted highway – this does not include sites on private land, such as at retail parks or supermarkets.

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[30] https://www.walthamforest.gov.uk/parking-roads-and-travel/roads-and-pavements/electric-vehicle-charging-points
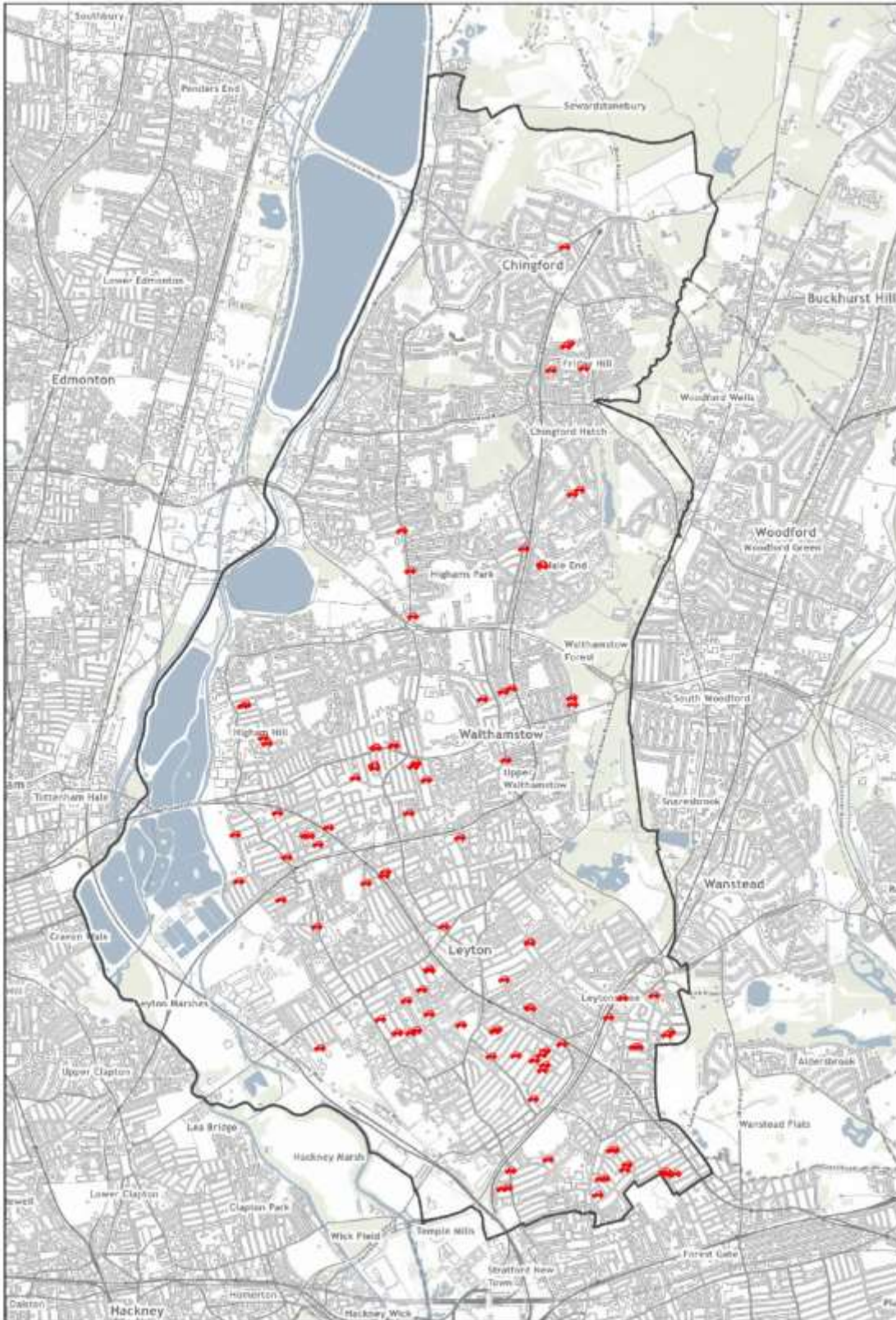
Figure 3.19: Council installed EV Charging infrastructure, as of summer 2020

**Collisions, Deaths and Serious Injuries**

3.91    The road collisions reported within Waltham Forest between 2017-2018 are included in Figure 3.20. The collisions are generally concentrated along the key routes through the Borough which were identified as having heavy traffic flows and at junctions where these routes converge. Specifically, there is a concentration of collisions along the A104 (Lea Bridge Road), which has recently undergone significant works to install a segregated cycleway. Further monitoring will be required to establish whether these works have had an impact on the rate of collisions.

3.92    Further locations with a significant concentration of collisions are along the A112, which provides an important north-south link for both motorists and cyclists.

3.93    Specifically, improvements should be investigated at the junctions with the North Circular, Forest Road and Lea Bridge Road.

3.94    The high rate of collisions along key routes for vehicles and cyclists is a key challenge in encouraging mode shift. Measures to address this have already been taken through the designation of 20mph speed limits across some streets in the Borough and the delivery of infrastructure that prioritises cyclists and pedestrians. Further hard and soft measures will be key to increase cycling uptake especially within groups such as children, the elderly and less experienced cyclists, who cite safety concerns related to cycling and to make walking safer and more enjoyable, improving the experience people have when accessing public transport.
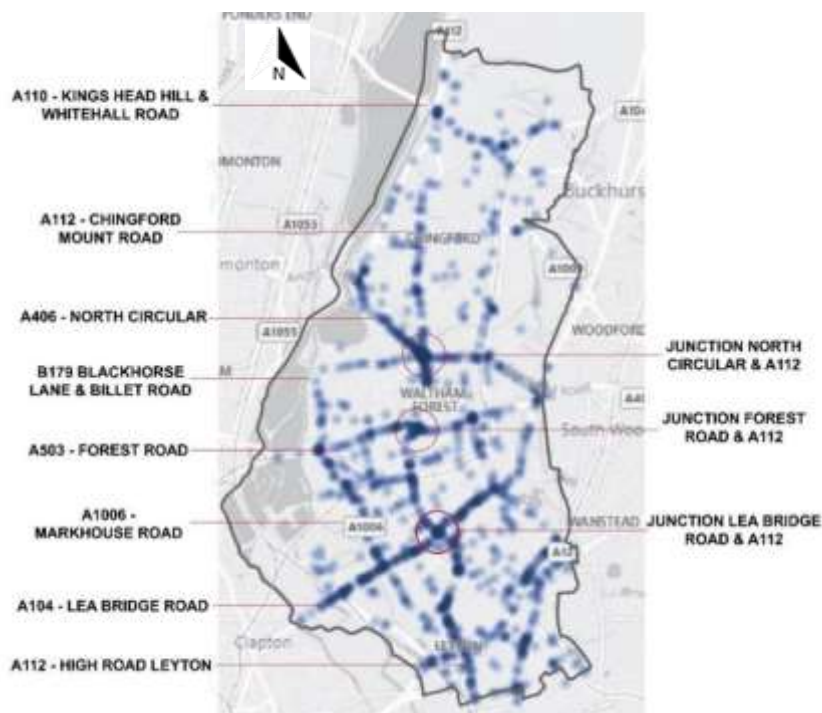
Figure 3.20: All registered road accidents between 2017-2018[31]

**Freight and Servicing**

**Servicing**

3.95 Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs) are key to moving goods around the city, and they also account for a significant amount of road traffic. The LIP (2019) identifies that between 2013 and 2016 there was an increase of 23% in LGVs and HGVs on the Borough's road network based on DfT counts at 47 locations. Overall these vehicles make up 20% of traffic on these roads. This can be associated with a rise in online shopping and construction works, which are likely to put additional strain on an the already congested road network as well as having an impact on air and noise pollution.

3.96 Currently the primary industrial sites, which are likely to be associated with high LGV and HGV movements, are concentrated south of the A406 at the Argall Industrial Estate, the Forest Trading Estate and north of the A406 adjacent to the Borough's western boundary. Commercial activity in these areas are likely to be further intensified as they are identified as Strategic Industrial Locations (SILs) in the Draft Local Plan.

3.97 The area south of the A406 is due to become part of the expanded ULEZ area in 2021 in order to improve air quality. Industries and businesses operating in this area will need to be supported in preparations for the ULEZ regulations ahead of implementation to maximise the benefits without effecting operation. Similarly, attention must be given to the housing and employment growth areas concentrated south of the A406, as these will also be part of the expanded ULEZ and will likely generate a significant number of construction related vehicle trips including delivery of supplies, servicing and construction staff.

3.98 Waltham Forest has already started tackling the increasing demand for deliveries in a sustainable way, by implementing a Zero Emission Delivery (ZED) programme. In March 2016, Waltham Forest secured £400,000 from the Mayor's Air Quality Fund for the launch and operation of the ZED scheme, which is a last mile cargo bike delivery service between local businesses and their customers. To date 53 businesses have participated in the scheme, achieving a total of 52,241 deliveries and saving over 5,000kg CO2e emissions as shown in Figure 3.21.

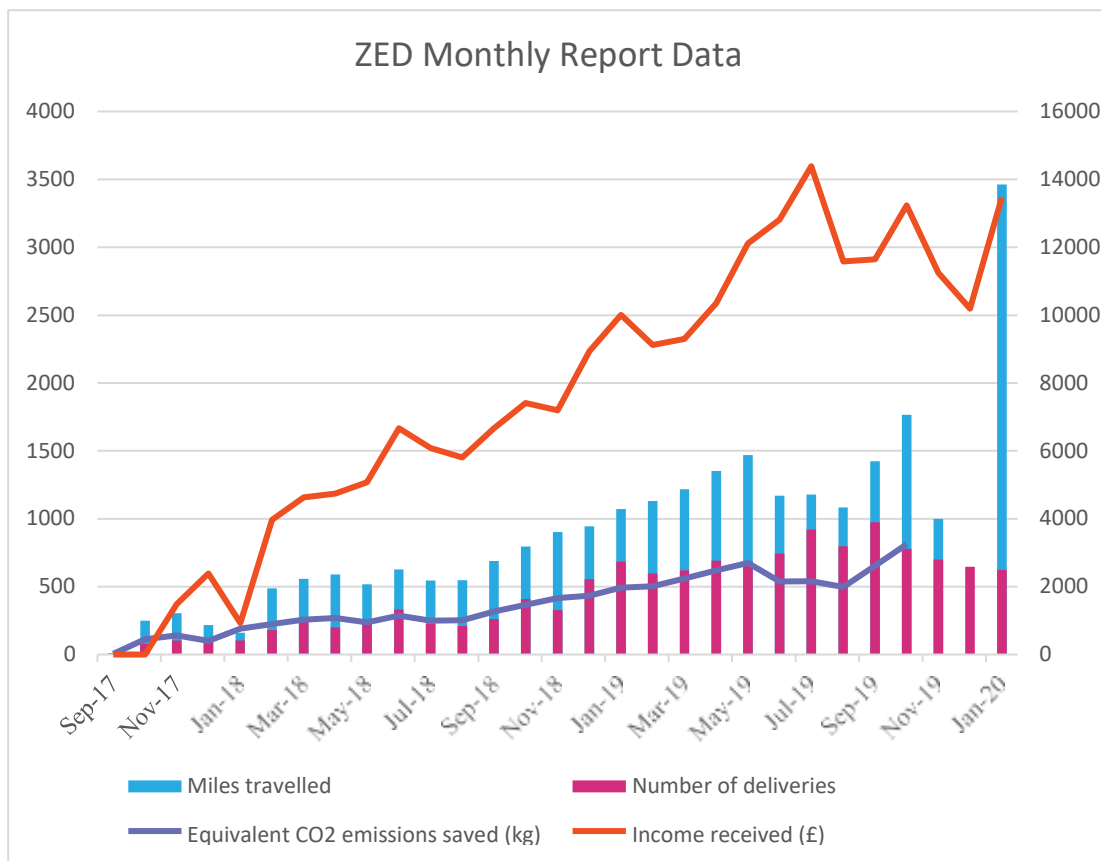[31] Source: Waltham Forest (2018) *Road Safety – Accidents* (Excel spreadsheet)

**ZED Monthly Report Data**

Legend:
- Miles travelled
- Number of deliveries
- Equivalent CO2 emissions saved (kg)
- Income received (£)

Figure 3.21: ZED monthly report data

**Growth and Wider Drivers of Change to 2035**

**Crossrail1 - The Elizabeth Line (2021)[32]**

3.99    As mentioned in Section 2.72, the planned improvements to the Central Line and the expected delivery of the Crossrail Elizabeth Line will help mitigate some of the demand towards Central London. The latest update on the project indicates that the central section of the Line is expected to come into operation between Paddington and Abbey Wood by summer 2021. This would help relieve pressure from the tube network by providing an alternative route linking Stratford, Liverpool Street and other Central London stations.

3.100   To maximise these benefits, it will be key to ensure that there are good connections towards the stations that are on the Elizabeth Line outside of the Borough. Connections towards these stations including by active travel, by bus, and by means of Underground/Overground services. Attention should be given to ensuring smooth and accessible interchanges, the provision of good public realm and retail services along key routes for pass-by trips. This could not only make trips more attractive but also reduce the need to do further trips by placing activity centres along commuting routes.

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[32] https://tfl.gov.uk/travel-information/improvements-and-projects/elizabeth-line

### Ultra-Low Emission Zone (ULEZ) expansion (2021)

3.101 The Mayor of London launched the ULEZ[33] in central London in 2019 to reduce air pollution in order to improve the health of Londoners. The ULEZ imposes emissions standards on all vehicles entering the zone and requires payment to enter for those that don't. The ULEZ is expected to be extended by October 2021, to include the area south of the North Circular[34].

3.102 There are likely to be numerous positive impacts from the ULEZ in Waltham Forest including improved air quality, potential reduction in congestion and road traffic collisions. However, to maximise the benefit and minimise possible disruption. Concerns relate to commuters aiming to park outside the ULEZ in the north of the Borough and then taking public transport to their final destinations, if this does occur there could be significant pressure on parking in the north and a further strain on the public transport system. This would exacerbate the existing differences in travel patterns between the north and the south of the Borough.

### Meridian Water (2019)

3.103 Meridian Water[35] is a regeneration project taking place in Enfield, expected to provide a significant number of houses, employment opportunities, retail and cultural spaces, community facilities, health facilities, schools, and public spaces. As such, it is expected to become an important destination in close proximity to Waltham Forest.

3.104 A new Meridian Water Railway Station has been delivered already, which provides an opportunity to relieve congestion in some Waltham Forest stations, as it provides services to Stratford every half an hour (calling at Northumberland Park, Tottenham Hale and Lea Bridge), a once a day service in each direction to Liverpool Street Station and trains to Hertford East and Bishop's Stortford during peak hours. The Station also provides step-free access.

3.105 From the latter, users can connect to other destinations such as Cambridge and Stanstead Airport. Upgrades to the station are on their way including a new track to enable two more trains per hour to run between Stratford and Meridian Water from September 2020.

3.106 Improving connectivity to Enfield will be key to catalyse the benefits from these developments. Currently, there are constraints in terms of active travel connections which are partly due to natural physical barriers (eg the River Lea, Metropolitan Open

[33] https://tfl.gov.uk/modes/driving/ultra-low-emission-zone
[34] https://tfl.gov.uk/modes/driving/ultra-low-emission-zone/ulez-where-and-when
[35] https://www.meridianwater.co.uk/

Land in the Lee Valley, Walthamstow Wetlands and reservoirs, alongside a lack of wayfinding and safe and convenient cycle routes.

**Crossrail 2**

3.107 Crossrail 2[36] is still in the early planning stages, however, if delivered, the project is expected to improve connectivity between out-of-London areas, Meridian Water and Central London locations. The specifics of the route are still under discussion, but it in general terms, it will connect Surrey with Hertfordshire, delivering a number of step-free access stations along the route - see section 2.72.

**Addressing Connectivity Gaps and Growth to 2035**

3.108 The Waltham Forest Strategic Transport Review, ARUP, 2020, identifies a number of connectivity gaps in the borough.
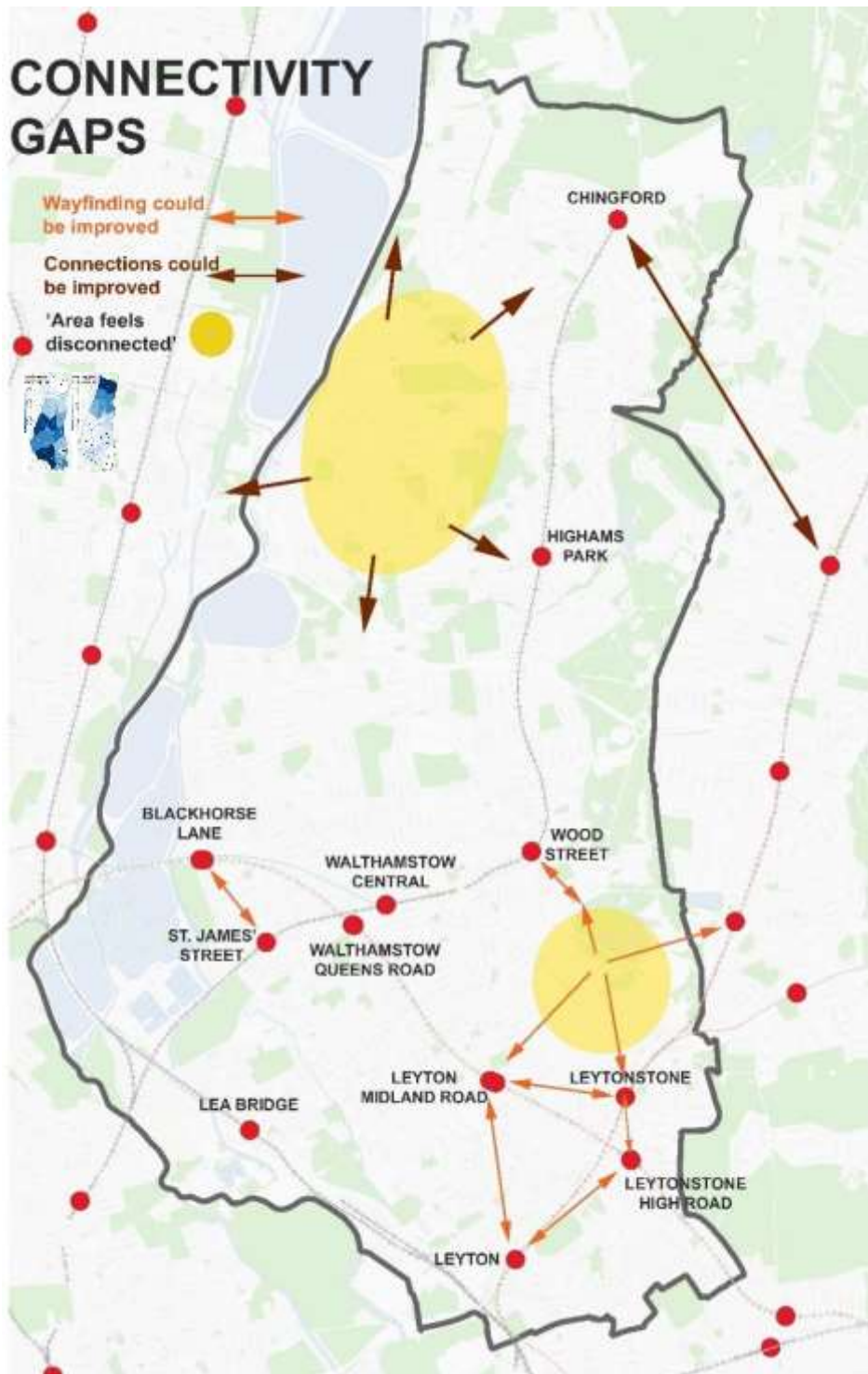
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[36] https://crossrail2.co.uk/

Figure 3.22: Connectivity Gaps in the Borough[37]

**Transport Strengths and Opportunities**

**North south differences**

3.109   A key area to address is the divide in existing travel patterns and level of proposals being targeted at the north and the south of the Borough. The individual proposals go

some way to meeting the key objectives identified, however, it is important to consider the total impact these will have and where this will be concentrated. Historical investment over the past ten years has been concentrated in the south of the Borough to unlock land for development in areas with sustainable infrastructure. This maximises benefit from the existing infrastructure. However, going forward the Council will seek to identify and prioritise public transport improvements that can take place in the north of the Borough, including connections towards higher frequency rail services, broadening the benefit of station capacity proposals. This has potential to create a significant mode shift and achieve progress towards the MTS target of 80% travel being by sustainable modes. It will also support the delivery of key regeneration sites in the north of the borough.

### Cross Borough collaboration

3.110 Cross Borough collaboration is essential to creating a strategic sustainable transport network. This is particularly notable as there is significant growth planned in the Upper Lea Valley, with the delivery of Crossrail 2, possible connections east towards the Central line from the north of the Borough and north of the Borough towards Essex through Epping Forest SAC. The impact of transport along these routes needs to be considered in order to maximise benefits to those living in the Borough and deter increases in vehicle traffic along these routes.

### Growth areas sustainability

3.111 A key priority of the Draft Local Plan is unlocking and providing sustainable growth, but there is a need to consider existing communities in the north and the Strategic Growth areas expected to come forward north of the A406. The Stewardstone Road (450 homes) and North Circular Road (900 homes) Strategic Growth Areas have been identified but are a considerable distance from existing stations and existing and proposed cycle infrastructure.

3.112 The Sewardstone Road (450 new homes) and North Circular Road (900 homes) Strategic Growth Areas have been identified but are a considerable distance from existing stations and existing and proposed cycling infrastructure. To help address the concerns of residents raised during Regulation 18 Local Plan consultation events, the Council will seek to ensure that high quality public transport, walking and cycling links comparable to those being planned for Strategic Growth areas in the south are delivered in the north of the borough, ensuring healthy travel patterns when new residents move in. This will include links to the Meridian Water development and wider Upper Lea Valley OAPF (see below).

**Linking growth areas in the Upper Lea Valley**

3.113   Connections north east along A110, linking to Meridian Water and Crossrail 2 in the future are currently at capacity as identified in the Stakeholder engagement exercise and Draft Local Plan consultation responses. Improving sustainable transport links or increased services along this corridor should be considered to relieve congestion and accommodate planned growth.

3.114   The Council is currently working with TfL and colleagues in Enfield on a number of related studies, including bus and public transport studies to support the future delivery of CR2 and the wider OAPF.

**ULEZ and parking**

3.115   The extension of the ULEZ presents an opportunity to improve air quality, reduce congestion and encourage a mode shift away from private car usage. However, the Borough will need to accompany this with appropriate support and information to businesses and residents in the Borough and deliver complimentary measures which will harness this opportunity.

3.116   Parking is an important demand management tool that can regulate car use. The Proposed Submission Local Plan Part 1 (LP1) has updated the current Borough Parking Policy (2008) and its Parking Standards, with new parking restrictions, which will be key to keep promoting active and sustainable transport modes. The policy encourages a mode shift in the areas with TfL's PTALs and existing CPZs in place, understanding that some areas have lower accessibility level to public transport than others; and preventing potential negative impacts (opportunistic commuter parking) relating to the extended ULEZ by 2021.

3.117   Specific attention needs to be given to the existing higher car dependency in the north of the Borough, how this impacts current parking conditions and what the impact will be of future interventions. This includes the possible environmental impacts related to increased applications for dropped kerbs which may be caused if CPZs are introduced.

**Bus review and investigate potential for demand-responsive bus services**

3.118   To increase opportunities for active travel in the Borough a review of existing bus service use should be undertaken to identify where excess demand could be accommodated and the routes which should be prioritised. This would help ensure S106 achievement is in line with Regulation 122 of the CIL Regulations. Alongside increasing the number of routes and their frequency, the Council will continue to support improvements to accessibility of bus stops to ensure this mode of transport is accessible for all. This is particularly important in the north of the Borough where a

significant number of residents do not live within walking distance of an Overground Station.

3.119   Implementation of demand-responsive services could also supplement the primary bus network in the north of the borough where the population is generally older and therefore may require a more localised service. Demand-responsive bus services are encouraged in the MTS (Proposal 126) in order to make travel by public transport more competitive in areas with lower housing densities and with complex journey patterns. However, how these services are operated needs careful consideration to ensure they complement the existing transport infrastructure and don't reduce bus ridership or active travel journeys. The Council is in discussion with TfL about how these services could be introduced in the borough.

3.120   Expansion of existing dockless-cycle[38] hire and electric-cycle hire schemes into the north of the Borough will improve flexibility for cycle trips within the Borough, particularly those used to access stations. Providing electric hire bikes will also improve inclusivity and harness the cycle potential in the north where the steep/hilly environment poses an additional challenge for cycle users and therefore cycle uptake.

### Develop a freight strategy

3.121   The Borough has made good progress in progressing ZED to reduce the congestion and environmental impact of freight services, saving 9.5 tonnes of $CO^2$ emissions to date. However, there is a need for a more strategic and co-ordinated approach to this to ensure the continued effective running of businesses and minimal impact on the road network. Deliveries, Freight and Servicing (policy 66) seeks to minimise the adverse impacts of these by promoting sustainable initiatives, reducing trips and waste collection.

### Reducing road traffic accidents

3.122   Improving road safety in the Borough for all users is essential to meeting the Mayor's Vision Zero target and reducing barriers to active travel for all users. Reduced accident figures also support the Borough's existing and proposed work relating to Liveable Neighbourhoods. Further consideration will be required of existing accident hot spots and both localised and Borough-wide measures that could tackle this.

### Transport Interventions to 2035 and beyond

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[38] Dockless Bike: https://www.walthamforest.gov.uk/parking-roads-and-travel/cycling-and-walking/access-cycles

3.123    The transport proposals for the Borough are set out within the Waltham Forest Transport Infrastructure: Growth & Investment Strategy (2018) and Local Implementation Plan (2019). These set out the case for the proposals, how and when they aim to be financed and delivered, and how the schemes align to the Borough's objectives.

3.124    The Growth & Investment Strategy sets out five priority projects and two workstreams that aim to unlock growth opportunities through transport improvements across the Borough. In addition, the LIP outlines the same schemes alongside long-term proposals up to 2041, including development of the Borough's primary cycle network.

3.125    The Strategic Locations for growth identified in the Draft Local Plan and the existing and proposed cycle network are included in Figure 3.23. The locations of the proposals identified in the Growth & Investment Strategy alongside the existing and proposed cycle network are shown in Figure 3.24.

3.126    From Figure 3.23 it is clear that the majority (11 out of 16) of the Strategic Locations in the Borough are concentrated south of the A406. Alongside the concentration of existing and proposed infrastructure, which is planned to support this, meaning that there is less of a focus on the north of the Borough where fewer growth areas are located.
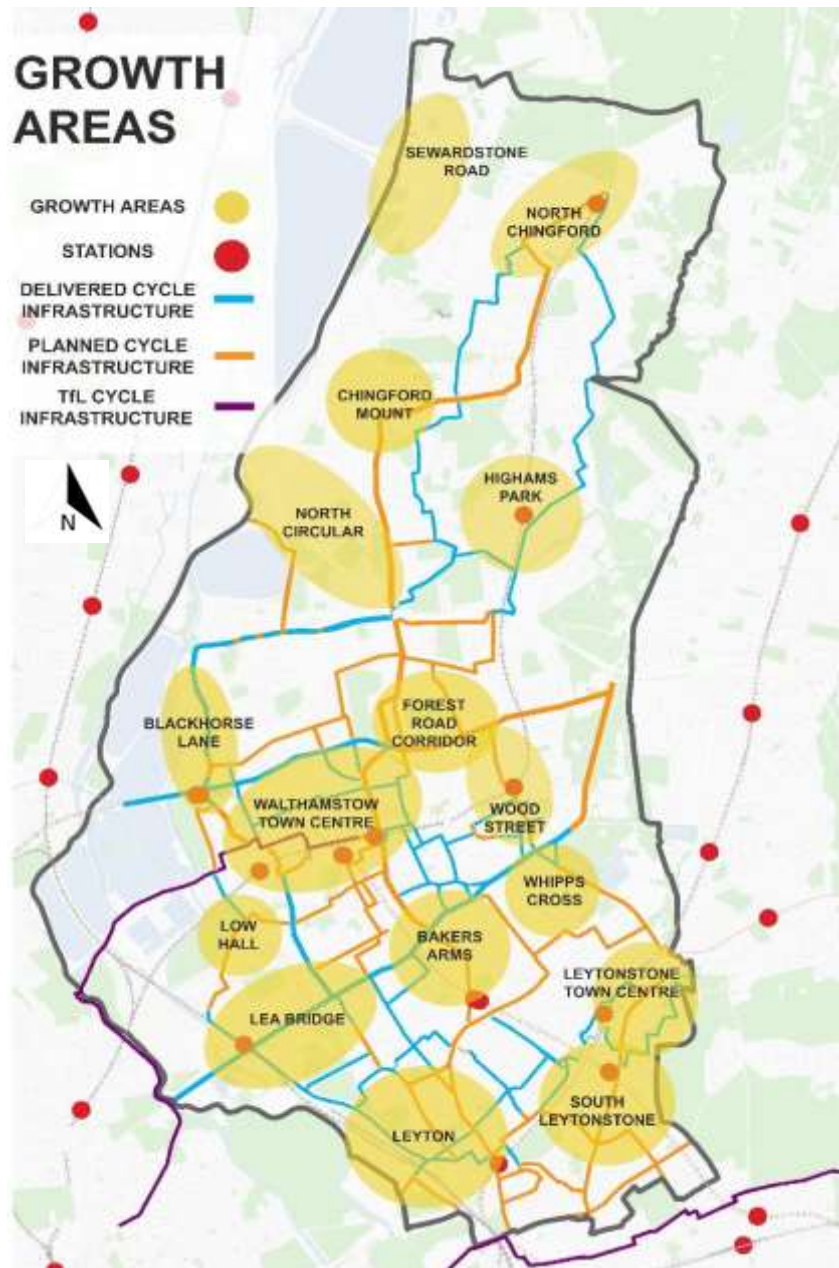
Figure 3.23: Growth areas and proposed and existing cycle network
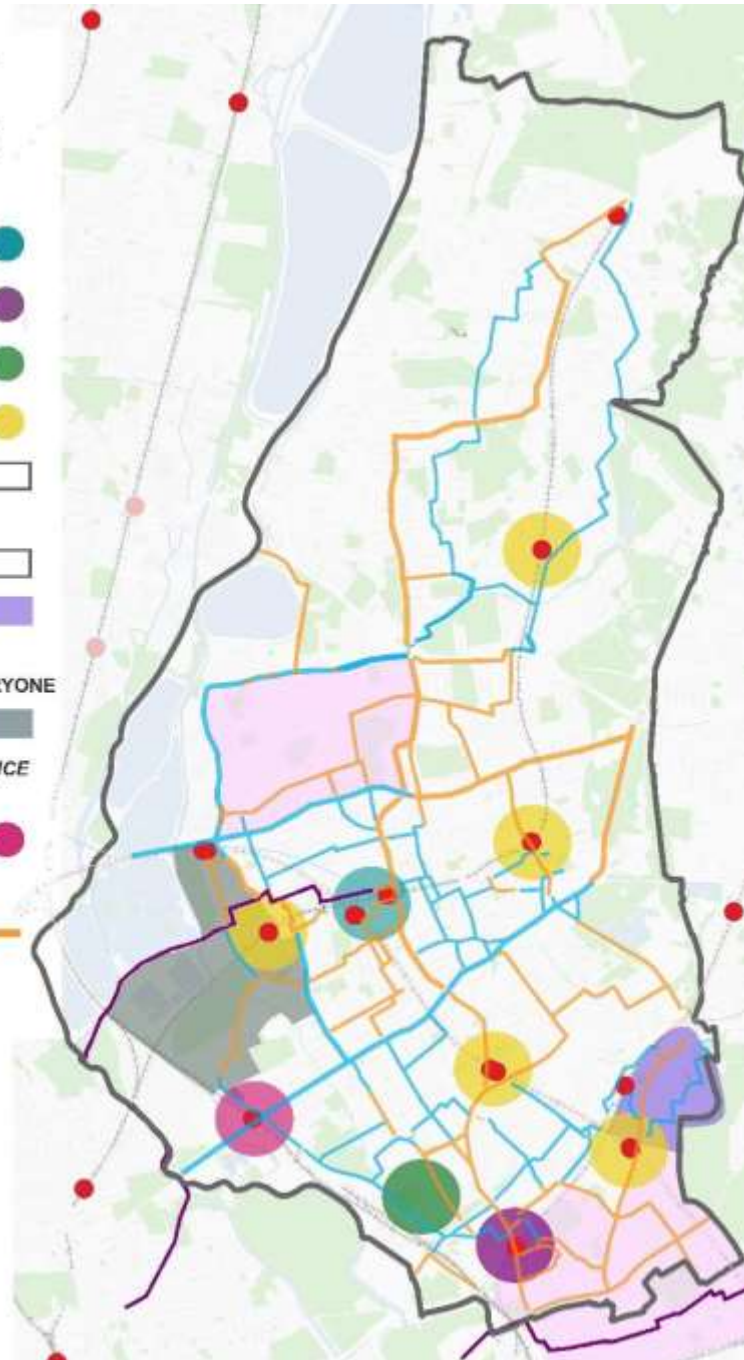
Figure 3.24: Local Implementation Plan 3 and Growth and Investment Strategy proposals

3.127    The five long-term priority projects, two workstreams and strategic cycle infrastructure plans are outlined below alongside anticipated funding source and approximate delivery dates (based on the LIP).

**Walthamstow Central**

3.128    Walthamstow Central is the boroughs main town centre providing Underground, Overground and bus links for the borough.  Local Plan aspirations for the area include a minimum of 2,000 new homes and an extension to the Mall shopping centre.

3.129    Proposals include enhancements to Walthamstow Central Station and bus station, Town Square, street market and creation of a new civic neighbourhood at the Town Hall and Assembly Halls. Alongside investment in space for creative businesses and growth in the cultural and evening economy

**Cost:** £40m

**Funding:** TfL Growth Fund, Step Free Access Fund or developer contributions

**Delivery:** 2022-2025

### Redeveloping Leyton Underground Station

3.130    The station will be redeveloped in order to support the regeneration of Leyton, including Leyton Mills, supporting the development of over 5,000 new homes.

3.131    The proposals include providing step free access at the station, a larger ticket hall, new footbridge over the tracks. Wider improvements are also planned to the public realm around the station, which is a gateway for both Leyton town centre and the key growth area of Leyton Mills.

**Cost:** £18m

**Funding:** TfL Growth Fund, Developer contributions (Community Infrastructure Levy (CIL), TfL Step Free Programme

**Timescales:** 2022 -2025

### A New Ruckholt Road Station

3.132    This station in the Leyton Mills area would provide direct access to Stratford, relieving local bus routes and the Central Line. It would also enable regeneration plans in the south of the borough and development sites around Leyton Mills, providing potential for up to 5,000-6,000 new homes.
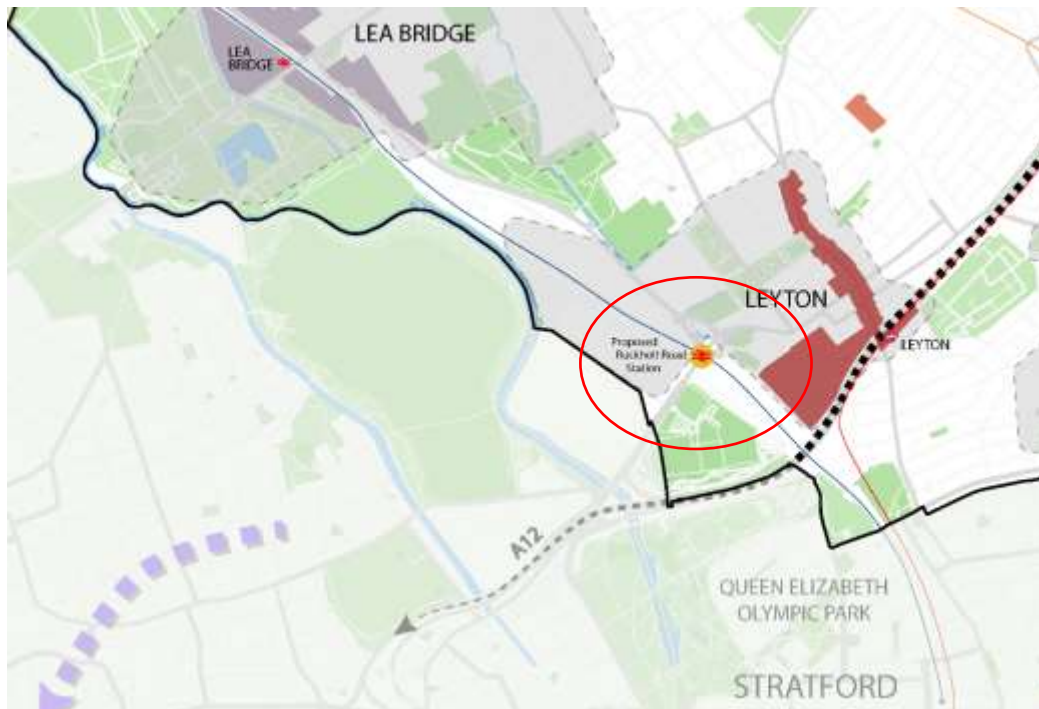
Figure 3.25: Proposed Ruckholt Road Station

3.133    In connection with this proposal, the Council is also considering reinstatement of the **Hall Farm Curve**, connecting to the Chingford-St James Street Overground and the Lea Valley Line to Lea Bridge and Stratford. This would improve connectivity and access from the north of the borough into central London via Stratford.

3.134    However, significant constraints to delivery exist including providing for additional platforms at Stratford. The proposals would also significantly restrict Highams Park level crossing capacity. The Hall Farm Curve proposals are not supported by the Department of Transport or TfL and therefore funding would have to be provided almost entirely by the Council. This would represent an unaffordable investment when considered alongside other transport infrastructure requirements or other infrastructure needs as set out in this document.

**Cost:** £60-£80m

**Funding:** TfL Growth Fund, Developer Contributions

**Delivery:** 2030-2041 (including Hall Farm Curve)

**Lea Bridge Station Improvements**

3.135    Improvement works are planned at Lea Bridge Station to support significant planned housing growth in the area. Services on this route have recently risen from two to four trains per hour to cater for increasing demand, improving accessibility to Stratford.

Figure 3.26: Artist's impression of proposed Lea Bridge Station entrance improvements

**Cost:** £6m

**Funding:** Developer contributions

**Timescale:** 2021

### Stations Gateways and Step Free Access

3.136 None of the Overground stations at Wood Street, St James, Leyton Midland Road and Leytonstone High Road have step-free access, and most have poor environmental quality, with underused assets.

3.137 The proposals include investment in step free access at Highams Park, Wood Street, St James, Leyton Midland Road and Leytonstone High Road.

3.138 Additional opportunities for place-making, improving walking and cycling links and helping revitalise the business and retail areas at some of the stations is being pursued.

**Cost:** £TBC

**Funding:** TfL Step-Free programme, DfT Access for All, developer contributions

**Timescale:** 2020-2041

### Planning a Smarter, Greener Bus Network

3.139 Bus services can connect communities without access to Underground or Overground stations to rail services and can also play a role in unlocking regeneration sites.

3.140 The key proposals are:
- Realignment of Whipps Cross roundabout, completed 2019
- Re-design of Walthamstow Bus Station
- Improved North-South provision at Blackhorse Lane
- Higher frequency services for Chingford Mount and neighbourhoods without Overground services
- Improved North South routes between Leyton and Lea Bridge
- Improved links eastwards towards Meridian Water and future Crossrail 2 stations

**Cost:** £TBC

**Funding:** TfL and Developer contributions

**Delivery:** 2018-2041

**Primary Road Cycle Network**

3.141 This proposal aims to deliver the borough's aspirational cycle network through high-quality, segregated cycle facilities across a number of main roads, expanding on the enjoy Waltham Forest network.

3.142 In parallel with this the borough is also planning to install Cycle Hubs across all stations, adding to the seven currently installed. Cycle Hubs enable multi-stage trips (cycle to station before onward journey) and therefore provide public health benefits as well as congestion and parking benefits.

**Cost:** £TBC

**Funding**: LIP funding and Developer contributions – further funding will need to be identified

**Timescale:** 2020 – 2035

**Making Livable Neighbourhoods for Everyone**

3.143 The Council is seeking to expand the Enjoy Waltham Forest programme based on previous success so that more neighbourhoods can benefit from these interventions through projects such as the TfL funded Liveable Neighbourhoods[39]. These projects are outlined below:

**Coppermills Liveable Neighbourhood plans**

3.144 The aim of the scheme is to encourage residents, businesses and visitors to use more sustainable modes of transport in their day-to-day lives, in order to reduce congestion, tackle air pollution and improve the health and wellbeing of local people.

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[39] https://tfl.gov.uk/info-for/boroughs-and-communities/liveable-neighbourhoods

3.145　The proposals build on the Mini Hollands with model filters, improved cycle routes, crossing for pedestrians, resurfacing, improved lighting, public realm, landscaping and bus gate. The behavior-change team is also implementing activities in the Coppermills area to support the physical infrastructure. This includes activities to enable walking and cycling, such as an all-ability cycle hub, cycle loans, Dr Bike and Second-Jane Bike Markets.

3.146　The Council has submitted funding bids for a number of further schemes:
- **Higham Hill Lloyd Park Liveable Neighbourhood bid**
- **Newham / Waltham Forest Liveable Neighborhood bid**
- **Leyton Green Liveable Neigbourhood**

**Cost:** various

**Funding:** TfL Liveable Neighbourhoods

**Timescale:** 2019-2041


**Culture Change: Shift to Sustainable Travel and Green Vehicles**

3.147　To support modal shift, the Council intends to deliver sustainable travel initiatives that support housing development, business growth and improve local environmental quality.

3.148　The primary proposals are to increase the number of electric charge points, encourage car clubs, implement CPZ's and continue to use ZED. The Council also secured TfL funding in early 2020 for a Business Low Emission Neighborhood (BLEN), outlined below.

**Leytonstone Business Low Emissions Neighborhood (secured 2020)**

3.149　Plans include improving cycle connectivity between residential developments and the town centre, increased parking, and pedestrian improvements at key junctions. Increase of green infrastructure including parklets, cleaner air maps and live air quality reporting.

3.150　Alongside scoping studies into kerbside activity, virtual loading bay system, ULEZ and ULEV priority parking controls to inform future proposals. New EV charging points and EV car share for businesses are also planned alongside improvements to Leytonstone gyratory.

**Cost:** £TBC

**Funding:** LEN bid via the Mayors Air Quality Fun, TfL Liveable Neighbourhoods, Streetspace for London

**Timescales:** 2020-2030

**Step Free Access**

3.151   TfL estimates that there is a 15 minute difference between the average journey time using the full public transport network in the borough (78 minutes), and average journey time using the step-free network (93 minutes). This is 4th longest time difference of London boroughs[40].

3.152   Of the 14 Overground and Underground stations within the Borough, only four are truly wheelchair accessible. This presents a significant barrier to enabling disabled and older people, as well as those travelling with children in buggies, to accessing the London-wide public transport network.

3.153   While significant investment will be required to meet the MTS target to reduce the average travel time difference between the full public transport network and the free network by 50% by 2041, growth and development around stations represent opportunities to fund Step Free Access (SFA)[41].

3.154   To date, the Council and TfL have progressed opportunities to deliver SFA at Walthamstow Central, as part of the Mall development, and Leyton Underground Stations to meet current and expected levels of demand, with funding for delivery already allocated from TfL Growth Fund, and developer contributions.

3.155   Table 3.27 below outlines the SFA status of all stations within the Borough, as well as proposals for upgrades and funding sources. The borough is committed to delivering a comprehensive step-free public transport network across the borough, and further work is needed by the Council and TfL to identify future sources of funding to deliver SFA in the south east of the borough, at Leytonstone and Leytonstone High Road, and the centre of the borough  at Wood Street and Highams Park.

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[40] https://data.london.gov.uk/dataset/londoners-reduced-mobility
[41] https://tfl.gov.uk/travel-information/improvements-and-projects/step-free-access

| Station | Current Step Free Provision | Proposals | Funding Sources | Indicative Delivery Programme |
|---|---|---|---|---|
| **Underground Central Line (Surface Level)** | | | | |
| Leyton | None | Scheme for capacity improvement and lifts at design stage | TfL Growth Fund TfL SFA Programme LBWF CIL | May 2021 |
| Leytonstone | None | None at present | Future TfL SFA Programme Future LBWF CIL | Mid 2020s |
| **Underground Victoria Line (Deep Tube)** | | | | |
| Walthamstow Central | None | Study work for second entrance and SFA commissioned | TfL Growth Fund Developer led funding | Mid 2020s |
| Blackhorse Road | None | None at present | Potential over-station development | Long-term 2030s |
| **Overground Barking to Gospel Oak Line (Surface Level)** | | | | |
| Blackhorse Road | Full SFA - Lifts to platforms | - | - | - |
| Walthamstow Queens Road | Full SFA - Ramps to platforms | - | - | - |
| Leyton Midland Road | None | None at present | Developer LBWF CIL | Mid 2020s |
| Leytonstone High Road | None | Working in partnership with developers of nearby sites | Developer LBWF CIL | Mid 2020s |

Figure 3.27: TfL Planned Upgrades to Underground Central Line, Underground Victoria Line and Overground Barking to Gospel Oak

| Station | Current Step Free Provision | Proposals | Funding Sources | Indicative Delivery Programme |
|---|---|---|---|---|
| **Overground Chingford to Liverpool Street Line (Surface level)** | | | | |
| Chingford | Full SFA | - | - | - |
| Highams Park | SFA to platforms - but 400 metres distance between entrances | Future partnership to improve footbridge and install lifts | None identified | Late 2020s |
| Wood Street | None | Future partnership with developers of nearby sites | Developer LBWF CIL | Late 2020s |
| Walthamstow Central | SFA to platforms - but 150 metres distance between entrances | - | - | - |
| St. James Street | None (but passive provision in place for lifts) | Reasonably inexpensive to install lifts - but no proposals at present | Developer LBWF CIL | Mid 2020s |
| **National Rail Lea Valley Line (Surface Level)** | | | | |
| Lea Bridge | Full SFA - Lifts to platforms | - | - | - |

Figure 3.28: TfL Planned Upgrades to Overground Chingford to Liverpool Street Line and National Rail Lea Valley Line

**Streetspace funding – Transport Funding Changes as a result of COVID19**

3.156   The Streetspace for London programme is supported by a £45 million fund to allow councils to create new segregated cycles lanes, extend pavements and close roads to traffic in response to the COVID19 pandemic. This will make it safer for people to walk and cycle. To find out more about Streetspace for London, please click here. Streetspace Funding Guidance is available here.

3.157   The Streetspace funding available to the Council is expected to be slightly higher than the funding that would have come from other funding streams, for example Local Implementation Plans, in the same period. These streams are currently paused and it is unclear when they may return.

**Department for Transport Statutory guidance**

**Traffic Management Act 2004: network management in response to COVID-19 - May 2020**

3.158    The updated Traffic Management Act guidance[42] sets out high-level principles to help local authorities to manage their roads and what actions they should take.

3.159    It does not replace the original Network Management Duty Guidance published in November 2004, but provides additional advice on techniques for managing roads to deal with COVID-19 response related issues.

3.160    The coronavirus (COVID-19) crisis has had a terrible impact on the lives and health of many UK citizens, as well as severe economic consequences. It has however also resulted in cleaner air and quieter streets, transforming the environment in many parts of the borough. Many residents have discovered, or rediscovered, cycling and walking. In parts of London, there's been a 70% rise in the number of people on bikes - for exercise, or for safe, socially distanced travel.

3.161    When the Borough fully gets back to work, we need residents to carry on cycling, and to be joined by many more. With public transport capacity reduced in the short term, the boroughs roads, in particular, may not be able to cope without it.

3.162    We also know that in the new world, pedestrians will need more space. Indications are that there is a significant link between COVID-19 recovery and fitness. Active travel can therefore help us become more resilient.

3.163    The Council recognises that this presents a once in a generation opportunity to deliver a lasting transformative change in how we make short journeys in our towns and cities. Active travel is affordable, delivers significant health benefits, has been shown to improve wellbeing, mitigates congestion, improves air quality and has no carbon emissions at the point of use. Neighbourhoods based around active travel will have happier and healthier citizens as well as lasting local economic benefits.

3.164    The government has made clear that it expects local authorities to make significant changes to their road layouts to give more space to cyclists and pedestrians. Such changes will help embed altered behaviours and demonstrate the positive effects of active travel.

**Reallocating road space: measures**

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[42] https://www.gov.uk/government/publications/reallocating-road-space-in-response-to-covid-19-statutory-guidance-for-local-authorities/traffic-management-act-2004-network-management-in-response-to-covid-19

3.165 Government guidance states that local authorities in areas with high levels of public transport use should take measures to reallocate road space to people walking and cycling, both to encourage active travel and to enable social distancing. Measures are expected to be implemented as swiftly as possible.

3.166 None of these measures are new; they are interventions that are a standard part of the traffic management toolkit. A step-change in their roll-out is needed to ensure sustainable economic recovery. They include:

- Installing pop-up cycle facilities with a minimum level of physical separation from volume traffic; for example, mandatory cycle lanes, using light segregation features such as flexible plastic wands; or quickly converting traffic lanes into temporary cycle lanes (suspending parking bays where necessary); widening existing cycle lanes to enable cyclists to maintain distancing. Facilities should be segregated as far as possible, ie with physical measures separating cyclists and other traffic. Lanes indicated by road markings only are very unlikely to be sufficient to deliver the level of change needed, especially in the longer term.

- Using cones and barriers: to widen footways along lengths of road, particularly outside shops and transport hubs; to provide more space at bus stops to allow people to queue and socially distance; to widen pedestrian refuges and crossings (both formal and informal) to enable people to cross roads safely and at a distance.

- Encouraging walking and cycling to school, for example through the introduction of more 'school streets'. Pioneered in London, these are areas around schools where motor traffic is restricted at pick-up and drop-off times, during term-time. They can be effective in encouraging more walking and cycling, particularly where good facilities exist on routes to the school and where the parents, children and school are involved as part of the scheme development.

- Reducing speed limits: 20mph speed limits are being more widely adopted as an appropriate speed limit for residential roads, and many through streets in built-up areas. 20mph limits alone will not be sufficient to meet the needs of active travel, but in association with other measures, reducing the speed limit can provide a more attractive and safer environment for walking and cycling.

- Introducing pedestrian and cycle zones: restricting access for motor vehicles at certain times (or at all times) to specific streets, or networks of streets, particularly town centres and high streets. This will enable active travel but also social distancing in places where people are likely to gather.

- Modal filters (also known as filtered permeability); closing roads to motor traffic, for example by using planters or large barriers. Often used in residential areas, this can create neighbourhoods that are low-traffic or traffic free, creating a more pleasant environment that encourages people to walk and cycle, and improving safety.

- Providing additional cycle parking facilities at key locations, such as outside stations and in high streets, to accommodate an increase in cycling, for example by repurposing parking bays to accommodate cycle racks.

- Changes to junction design to accommodate more cyclists – for example, extending Advanced Stop Lines at traffic lights to the maximum permitted depth of 7.5 metres where possible.

- 'Whole-route' approaches to create corridors for buses, cycles and access only on key routes into town and city centres.

- Identifying and bringing forward permanent schemes already planned, for example under Local Cycling and Walking Infrastructure Plans, and that can be constructed relatively quickly.

### Other Considerations

3.172   All these measures can be introduced temporarily, either in isolation or as a combined package of measures. Some interventions, including new lightly segregated cycle lanes, will not require Traffic Regulation Orders (TROs). Others will require TROs, of which there are different types. The main ones are:

- **Permanent**: this process includes prior consultation on the proposed scheme design, a 21-day notice period for statutory consultees and others who can log objections; there can be a public inquiry in some circumstances.

- **Experimental**: these are used to trial schemes that may then be made permanent. Authorities may put in place monitoring arrangements and carry out ongoing consultation once the measure is built. Although the initial implementation period can be quick, the need for extra monitoring and consultation afterwards makes them a more onerous process overall.

- **Temporary**: these can be in place for up to 18 months. There is a seven-day notice period prior to making the TRO and a 14-day notification requirement after it is made, plus publicity requirements. These are most suitable for putting in place temporary measures and road closures.

3.167   Emergency legislation came into force on 23 May 2020 to amend, temporarily, the:
- The Road Traffic (Temporary Restrictions) Procedure Regulations 1992
- The Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996
- The Secretary of State's Traffic Order (Procedure) (England and Wales) Regulations 1990

3.168   The amendments speed up emergency Traffic Orders that may be needed to, for example, widen pavements or install cycle lanes. The main change is to the means of advertising the order, which can be via digital means. A second order still needs to be

published for information 14 days later in a newspaper, where these are available, or via digital media.

3.169   The amendments also allow, for non-emergency Orders, alternative publicity arrangements to help deal with some practical difficulties that have arisen as a result of restrictions that are in place. For example, these might be where local newspapers have closed or have moved publications online or local authority offices are closed to the public, and there are concerns about the safety of staff posting site notices in some circumstances. The amendments will cease to have effect as of 30 April 2021.

3.170   Traffic signs may be needed to inform pedestrians, cyclists and drivers of changes to road layouts, particularly where temporary widening is in place. These are covered by the provisions of the Traffic Signs Regulations and General Directions 2016 and as such do not need special signs authorisation.

3.171   The Council monitor and evaluate any temporary measures they install, with a view to making them permanent, and embedding a long-term shift to active travel as we support sustainable economic recovery.

3.172   Access will still be required for other activities in the road, particularly street works, maintenance and other highway works, which will need to be balanced with work to reallocate road space to active travel. Street works and maintenance activity should carry on, as they will be essential to support economic recovery.

3.173   The public sector equality duty still applies, and in making any changes to the road network, the Council closely considers the needs of disabled people and those with other protected characteristics. Accessibility requirements apply to temporary measures as they do to permanent ones. The Council also considers deliveries and other essential services as appropriate.

**London Streetspace Plan**

3.174   As tiers of lockdown lift, demand for travel will increase. This is likely to be phased and incremental and will pose a series of challenges:
- TfL will need to run public transport at much lower levels of capacity than preCOVID-19 in order to continue to provide space for social distancing
- Travel by car is likely to become more attractive (initially when congestion levels are low but this may continue if people are anxious about using public transport)

3.175   A car-based recovery has significant risks to:
- o  safety (and meeting our Vision Zero aim);
- o  public health (COVID-19 related, physical activity, poor air quality etc);
- o  economic recovery (delayed journey times for eg);
- o  the environment (due to increased carbon emissions); and
- o  contradicting the Mayor's Transport Strategy.

3.181 London's Streetspace Plan aims to make it easy and safe for Londoners to choose to walk or cycle as an alternative to public transport use. It has been developed in order to help respond to the immediate Public Health imperatives around:

- enabling social distancing on street;
- encouraging Londoners to avoid unnecessary use of public transport; and
- focusing on strategic movement to prioritise walking and cycling.

3.182 However, if devised well, the strategy should also have benefits into the medium-term recovery phase and for the longer term benefits of London. This includes:

- Support the health and wellbeing of residents by providing space for active travel, good air quality and safe roads, to reduce susceptibility to severe COVID-19 and relieve pressure on the NHS from other conditions and injuries.
- Seek to improve the public transport offer in ways that last beyond the early recovery stage so the public transport offer remains necessarily strong into the longer term, as capacity can be increased and people become ready to use the bus network again.
- Enable the boroughs economic regeneration by facilitating more walking and cycling to local high streets and town centres, while providing sufficient space for social distancing and supporting local businesses by maintaining freight access and encouraging clean 'last-mile' freight solutions.

3.183 In order to achieve the objectives set out in the LSP, the borough will need to be ambitious and make change on a significant scale. It is estimated there will need to be around an 80% reduction in public transport capacity in order to support social distancing for those who need to use it.

**Benefits of the Streetspace Plan**

3.184 Realising London's COVID-19 recovery ambitions will have a range of benefits for Waltham Forest residents:

- Restored confidence in public transport, by providing sufficient space for social distancing, prioritising use for the groups who need to travel (eg key workers who cannot work from home) and those who are unable to travel by alternative modes (eg those with reduced mobility).
- Economic regeneration of local high streets and town centres, by supporting residents to shop locally (evidence shows those who walk to a high street spend 40% more than those who drive, and that high street walking, cycling and public realm improvements can increase retail sales by up to 30%).
- Improved health and wellbeing, by enabling all residents to achieve the 20 minutes of walking or cycling each day recommended for good health and wellbeing (to reduce risks of diabetes and heart disease, both of which are risk factors for severe COVID-19 disease) as well as by reducing exposure to air pollution (which is also thought to be associated with increased deaths from COVID-19).

- Opportunity for residents to experience the benefits of reduced car use (TfL's Active People Research and Car-Free Households Research both show once Londoners experience travelling by modes other than car they are often pleasantly surprised by the benefits / lack of dis-benefits).

3.185 Locking in this behaviour change and associated benefits in the short-term 'restart' phase will set us up in the right way for the more significant strategic policies that may be needed in the longer term 'recovery' phase, in response to a range of future scenarios.

3.186 Residents can find out more information on local Streetspace schemes on the London Streetspace Programme page. TfL have also produced a map of Streetspace schemes across London in conjunction with Sustrans. Residents can also use the map to give your feedback on the schemes

**Transport & Highways Schemes to support Growth to 2035**

3.187 As stated previously, a total of 25 strategic schemes have been identified to support the borough's long term growth to 2035.  These are set out in the supporting Infrastructure Delivery Schedule in Appendix 1.

# 4. Digital & Communications Infrastructure

**Introduction**

4.1     The provision of digital infrastructure is as important for the proper functioning of the borough as energy and water supply and should be treated with the same importance.

4.2     Fast, reliable digital connectivity is essential in today's economy and especially for digital technology and creative companies. It supports every aspect of how people work and take part in modern society, helps smart innovation and facilitates regeneration.

4.3     The NPPF, Paragraph 112 notes that '*advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being*' and that '*planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G) and full fibre broadband connections*'.

4.4     London's capability in this area is currently limited by a range of issues, including the availability of fibre and the speeds delivered – these are discussed below along with the measures the Council is putting in place to ensure the borough, its residents and businesses, have access to the best digital service and speeds available.

4.5     Better digital connectivity with a focus on affordability, security, resilience and the provision of appropriate electrical power supply should be promoted across the capital. The specific requirements of business clusters, such as a symmetrical service with the same upload and download speeds, should also be met.

4.6     Digital connectivity supports smart technologies in terms of the collection, analysis and sharing of data on the performance of the built and natural environment, including for example, water and energy consumption, air quality, noise and congestion. Future delivery of Council and other infrastructure services such as healthcare (see para 9.47 & 9.48) will also rely heavily on digital technologies. It is therefore essential that the core infrastructure is in place to facilitate efficient service delivery to residents.

**Waltham Forest Digital Connectivity Strategy, 2018**

4.7     The Waltham Forest Digital Strategy, 2018[43] seeks to enable delivery of fibre gigabit broadband at affordable prices to every resident and business in the Borough (Fibre To

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https://democracy.walthamforest.gov.uk/documents/s63159/Digital%20and%20Technology%20Strategy%20Appendix%20A%20-%20Digital%20and%20Technology%20Strategy.pdf

The Premises - FTTP).  The Council sees this as the foundation for a digital borough that will prepare us for 2030 and beyond.

4.8    Expected benefits include:

- – Increase in local productivity and employment
- – Uplift in the borough's attractiveness for inward investment by highly skilled digital intensive industries
- – Enhanced ability to deliver local services, notably education, health and transport
- – Environmental benefits through the facilitation of teleworking and enhanced traffic management
- – Delivery of 5G mobile

4.9    The Digital Strategy notes that if FTTP were available across London with a 30% take up, this would increase London's Gross Value Added by up to £5bn a year for the next 20 years. London GVA in 2016 was £396bn (ONS, 2017).

**Broadband Availability in Waltham Forest**

4.10    Although Waltham Forest is above average from a London perspective, it falls short of the aspirations of the borough for full fibre to every premises. It also falls beneath that experienced in some Gigabit-centric cities such as Aberdeen, Hull and York. Internationally, the comparisons are much worse, with Japan having 97% and Sweden 44% full-fibre availability.

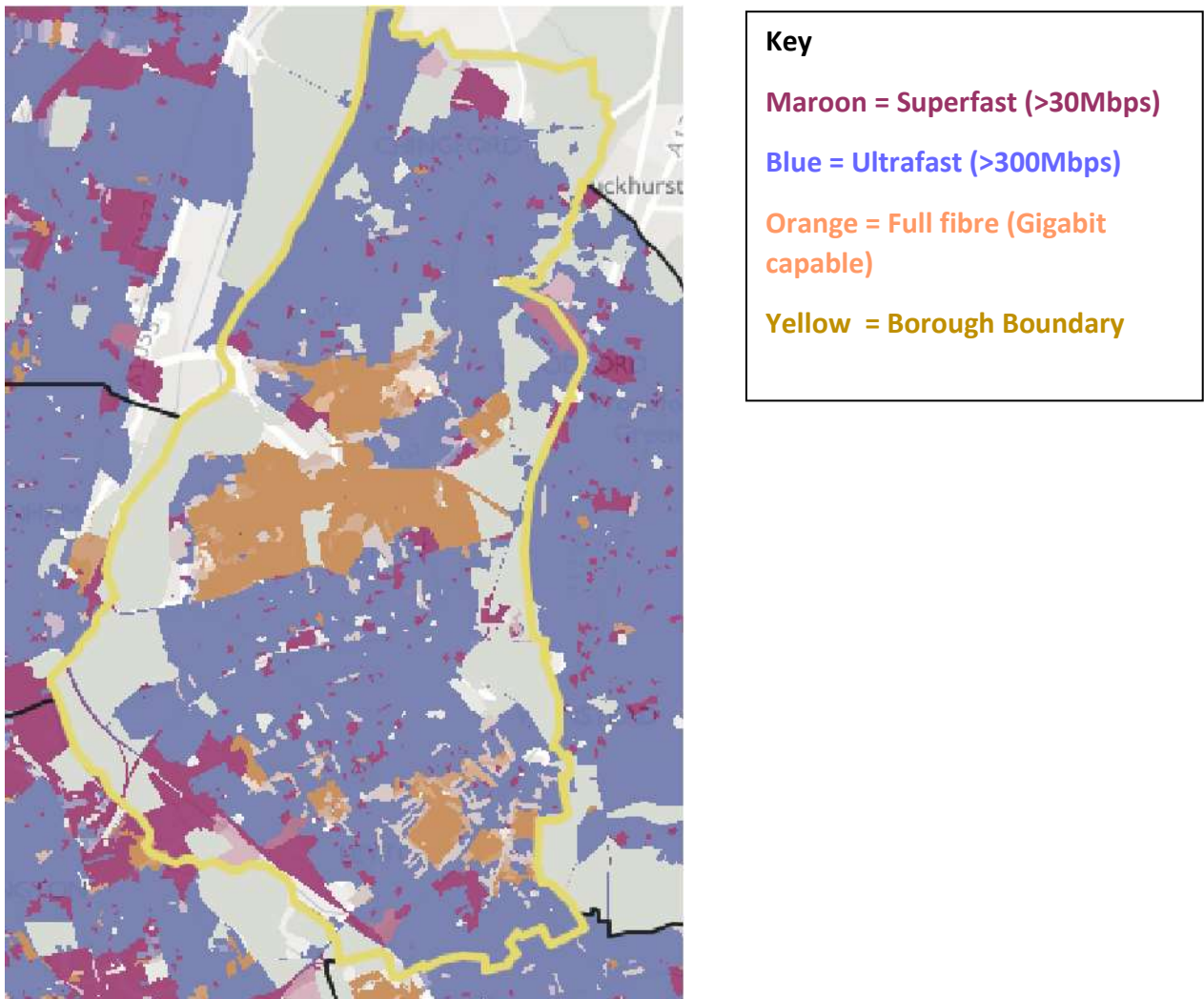4.11    Current fibre/broadband availability in the borough is as follows:

- • There are 109,435 premises in the Borough
- • 21,000 have access to Full Fibre
- • 3,830 do not have access to a superfast service and of these it is estimated that 1422 receive <10 Mbps
- • Anecdotally we know that many local businesses struggle to get broadband connectivity at affordable prices, delivered in a timely manner even in areas that are officially well serviced.

| | Superfast | Ultrafast | Full Fibre (Gigabit) |
|---|---|---|---|
| % of premises London | 94.82% | 73.76% | 15.33% |
| % of premises Waltham Forest | 96.50% | 87.10% | 18.9% |

Table 4.1: digital connectivity in Waltham Forest (Source, Ofcom, Spring 2020)

4.12    Figure 4.2 below presents a mapping of digital service availability in the Borough by speed at end 2018[44].

Figure 4.2: Digital service availability in Waltham Forest by speed



**Key**

**Maroon = Superfast (>30Mbps)**

**Blue = Ultrafast (>300Mbps)**

**Orange = Full fibre (Gigabit capable)**

**Yellow  = Borough Boundary**

4.12    Some areas of the borough suffer from particularly poor connectivity, notably in the south west, which is also the location of key development zones – this is large part due to its industrial nature.

**Identified Gaps in Provision**

4.13    An analysis was undertaken of the locations where superfast coverage is not available. This is in the following postcodes and streets:
- E10 5SH where no properties can receive superfast and 89% of properties cannot get a 10MBps service. This postcode area covers Ruckholt Road, Sherrin Road and Spitalfields.
- E10 5SJ where no properties can receive superfast and 88% of properties cannot get a 10MBps service. Neighbours are Ruckholt Road and Sherrin Road.

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- E10 5SL where no properties can receive superfast and 87% of properties cannot get a 10MBps service. Neighbours include Spitalfields.
- E10 5SG where no properties can receive superfast 13% of properties cannot get a 10MBps service. Neighbours include Spitalfields.
- E10 5SQ where no properties can receive superfast and 7% of properties cannot get a 10MBps. Neighbours include Spiltalfields.
- E10 5PJ where 5% of premises are unable to receive superfast. Marshall Road, Oliver Road, Ruckholt Close, temple Mills Lane, Thant Close.
- E10 5DP where 33% of premises are unable to receive superfast. Beaumont Road, Hopkins Road, Keats Road, Skeltons Lane.
- E10 5FF where 3% of premises are unable to receive superfast. Beaumont Road, Capworth Street, Hopkins Road, Lake Road, Pardoe Road, Skeltons Lane.
- E10 5NH where 22% of premises are unable to receive superfast. Marshall Road, Temple Mills Lane.
- E10 5NR where 17% premises are unable to receive suprfast. Maud Road, Westdown Road.
- E10 5TU where 87% premises are unable to receive superfast. Carlisle Road, Church Road, Grange Road, Leyton Grange, Shaftesbury Road.
- E10 5TX where no premises can receive a superfast service. Carlisle Road, Ivy Farm Close, Ivy Farm Lane, Leyton Grange, Simonds Road, Villiers Close.
- E10 6AB where no premises can receive superfast. Buckland Road, Church Road, Dawlish Road, High Road, Lindley Road, Murchison Road, Vicarage Road.
- E10 7BL where 20% of premises cannot receive superfast Marsh Lane.
- E10 7DF where no premises can receive superfast. Church Road, Etloe Road, Marsh lane, Meadow Close, Park Road, Radix Road, Simonds Road, Wiseman Road.
- E10 7FE where no premises can receive superfast. Elm Park Road, Kettlebaston Road Orient Way, Perth Road.
- E10 7QT where 13% of premises cannot receive superfast. Argyll Way, Lammas Road, Lea Bridge Road, Orient Way.
- E10 7QU where 50% of premises cannot receive superfast. Lammas Way, Lea Bridge Road, Orient Way.

4.14 The challenges lie on the supply side. Waltham Forest infrastructure is dominated by Openreach and Virgin Media. Discussions with alternative fibre carriers such as City Fibre and Axione has revealed a reluctance to invest in the borough due to:
- The high cost of infrastructure build in London.
- Typically the cost of digging new duct and fibre in the area is at least £130/metre. This is 50-100% dearer than other cities.
- All carriers are constrained by a lack of skilled resources. This is even more acute in London.
- The fragmentation of London between the boroughs makes planning infrastructure over a large area time consuming and challenging.

- DCMS gap funding is now focused on rural areas meaning that London attracts less central government support.

4.15     There is intense competition from areas across the country to attract inward investment and become gigabit capable. To date only the City of Hull is approaching ubiquitous full fibre. Other cities have proactively sought to attract new investment from alternative carriers. There have been successes in doing this but in all cases it has required ether gap funding or harnessing the authorities purchasing power. It should also be noted that there are over 30 major urban gigabit deployment projects currently in progress in the UK. This includes the winners of the DCMS Local Full Fibre Network programme as well as a number of City Deal initiatives. These include Edinburgh, Aberdeen, Newcastle, Manchester, York, Leeds, Wolverhampton, Cambridge, Coventry, Bristol, Cardiff, Belfast and Stoke. Hence it is clear that the gap between Waltham Forest and these other cities will widen unless proactive plans are undertaken.

### Mobile Infrastructure

4.16     The Cellular market has Mobile Network Operators (MNOs) and are household names - Telefonica/O2, Vodafone, EE/BT and Three. These plan infrastructure through two ventures: MBNL serving 3 and EE and CTIL serving Vodafone and O2.

4.17     Traditionally, mobile networks have been built using so called Macro sites. These are the towers usually seen in fields and on top of buildings.

4.18     Macro sites are typically designed to provide a level of coverage across an area, however; as we start to consume more and more data, there is now an urgent need to supplement that base layer of coverage with increased capacity. 5G requires further macro cell deployments and these are often higher to provide the necessary coverage and capacity.

4.19     MNOs are now starting to rollout Small Cell devices and these will improve both coverage and capacity in an area. This generally invovles replcing current 10-14m monopoles with c18m monopoles, allowing 3G, 4G and 5G infrastructure to be located on one monopole – this additional height also improves coverage as 5G as the signal tends to disapate over shorter distances than 4G (which in some areas, will requie an increase in the number of monopole sites.

4.20     Waltham Forest currently has a concession with Cellnex (formerly Arqiva), which allows them the right to use the Council's street assets for the deployment of small cell devices.

Figure 4.3: Cellnex Small Cell Deployments in Waltham Forest Sept 2020, Credit image to Cubeultra: www.cubeultra.com
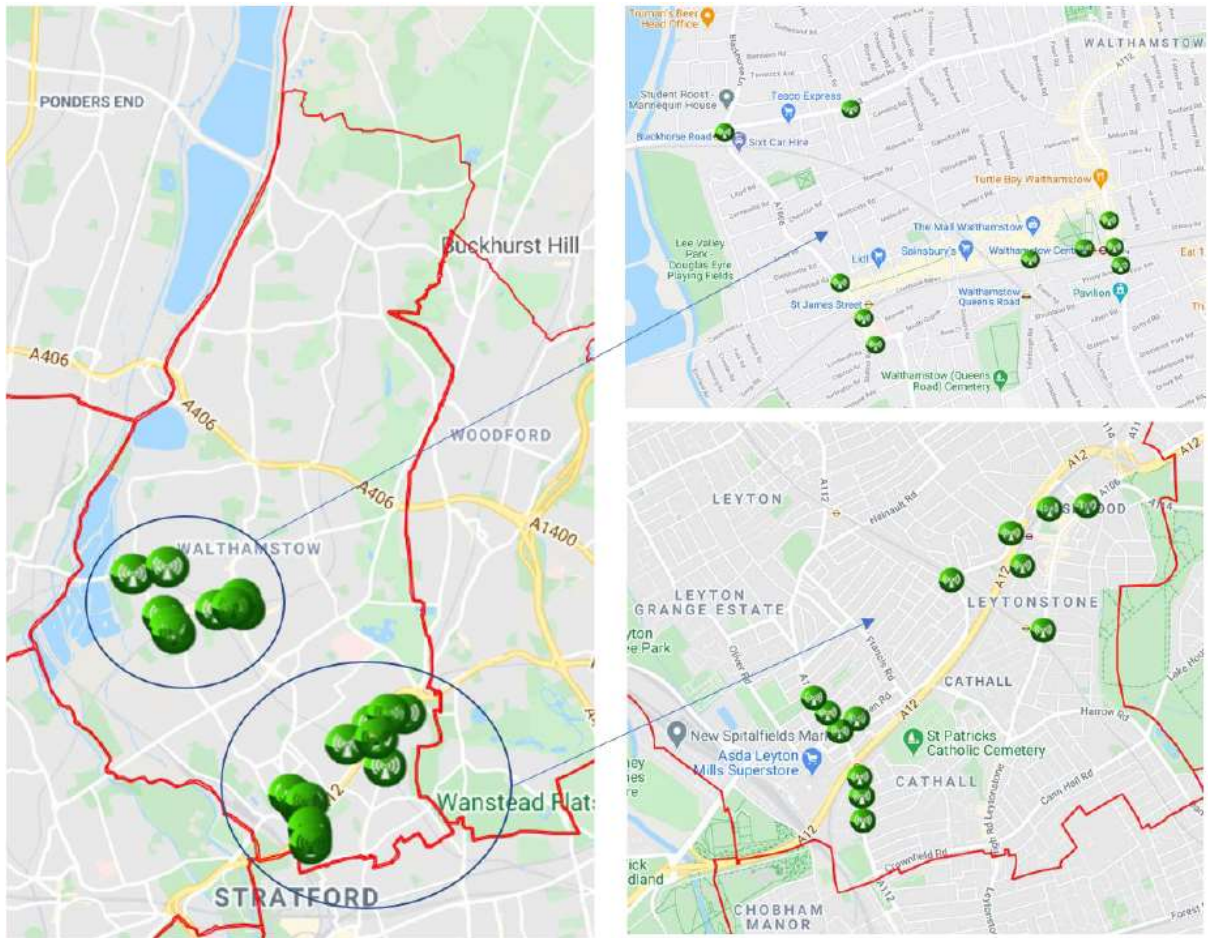
4.21   To date, all of the small cells that have been deployed across the Borough have been on behalf of Telefonica / O2. Vodafone is beginning to deploy small cells using Cellnex but as yet, none are planned for Waltham Forest. Other MNOs such as EE are favouring macro sites or rooftop deployments and Waltham Forest has already received requests for such sites.

4.22   Currently small cells connected to street furniture are connected by Openreach sourced circuits. However, as the number of cells grows in the Borough it is likely that MNOs will seek to lower their operating costs by accessing dark fibre for backhaul rather than leased circuits. The Council are in discussions with a range of operators who may seek to source duct space and /or fibre circuits from Waltham Forest should they be available.

| Waltham Forest | Premises unable to receive any service | Premises able to receive a service from only 1 operator | Premises able to receive a service from only 2 operators | Premises able to receive a service from only 3 operators | Premises able to receive a service from all 4 operators |
|---|---|---|---|---|---|
| Outdoors | 0% | 0% | 0% | 0.03% | 99.97% |
| Indoors | 0% | 0 % | 1.58% | 8.12% | 90.29% |

Figure 4.4: 4G Coverage in the Waltham Forest (Source, Ofcom, Spring 2020)

4.23    Outdoor cellular coverage across each operator is near to ubiquitous in Waltham Forest. However approximately 10% of premises in the Borough are unable to receive indoor coverage from all four operators.

4.24    With regard to 5G provision:
- EE announced plans to cover the Borough in March 2020 and deployment is on-going
- has coverage in large parts of Leyton and Blackhorse Road
- Vodafone has yet to deploy in the Borough
- O2 is deploying small cells in partnership with Cellnex and currently has 18 locations in the Borough as shown in the Figure below
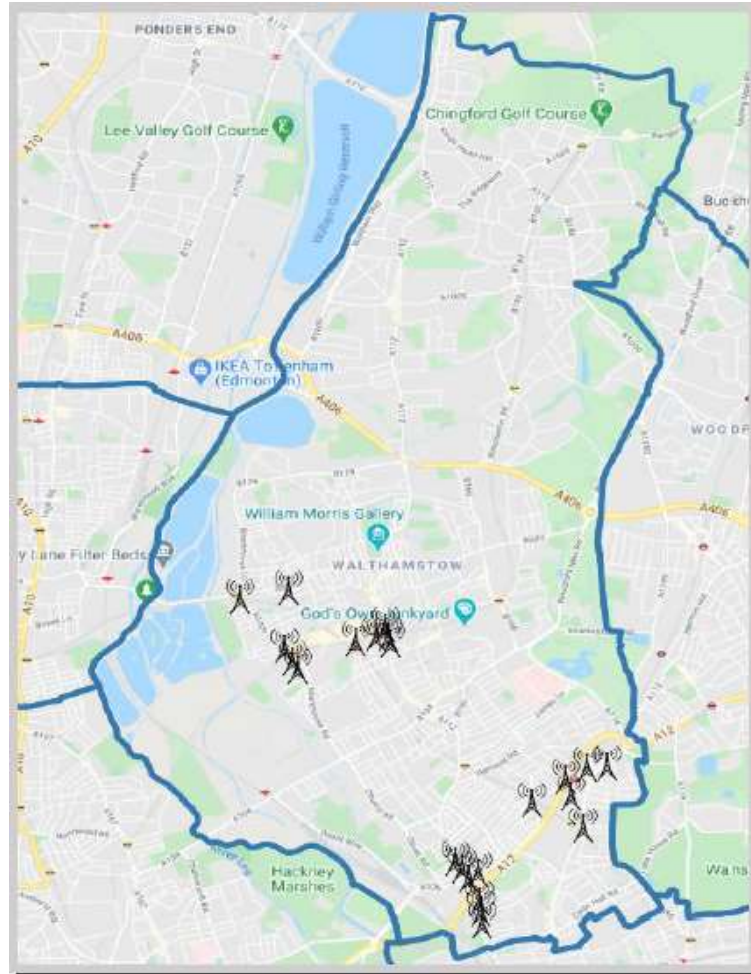
Figure 4.5: Cellnex / Arqiva sites September 2020 (Source: Cubeultra, https://cubeultra.com/)

**Openreach Fibre**

4.19    In September 2020, Openreach wrote to the authority stating that Waltham Forest
will be part of its Fibre First investment programme which is rolling out full fibre to 20
million premises across the UK by the late 2020s. Details include:

• There are four BT exchanges in the Borough; Chingford, Highams Park, Leytonstone
and Walthamstow.

• In its next wave of investment Openreach intends to focus its full fibre investment
in the premises served by the Chingford and Highams Park areas only.

• The Highams Park and Chingford build out will commence in 2021 and possibly be
undertaken over a two-year period. Exact build out plans were not revealed but it is
likely that fibre spines will be built form each of these exchanges with a view to
maximise the number of premises passed and addressed not spots. Business parks
and development zones are not on the roll out plan.

• There are no plans for the deployment of full fibre in the Leytonstone and
Walthamstow exchanges. These may be part of subsequent investment waves –
possibly in the mid to late 2020s.

• Openreach will offer wholesale access to service providers over this infrastructure
but not the provision of dark fibre.

4.20   The Council welcome this investment and will work with Openreach to support their rollout programme.

**Waltham Forest Assisted Digital Strategy 2017**

4.21   Access to high-speed broadband: the OFCOM Connected Nations report (2015) says that it should be everyone's right to have a broadband speed of at least 10 megabits (Mbps). Only two per cent of households in Waltham Forest with internet access do not receive broadband speeds of at least 10Mbps per second, and all households with internet access receive at least 2Mbps.

4.22   The Waltham Forest Assested Digital Strategy 2017[45] recognises the importance of fast and reliable connectivity, including:
- Access to 4G: mobile data can be a more affordable and flexible option compared to fixed broadband packages, as it can be accessed without installation costs, line rental or long-term contracts. Only 6.56 per cent of households in Waltham Forest cannot receive 4G mobile data, compared to up to 30 per cent in some parts of London
- Enable self-help across target communities to increase levels of digital activity and reduce exclusion
- Deliver a digital skills and training offer
- Make digital channels as accessible as possible
- Reduce the levels of digital exclusion amongst residents of social housing
- Maximise the level of low cost or free internet access across the borough

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https://democracy.walthamforest.gov.uk/documents/s56878/WFC170517_Assisted_Digital_Strategy_Appendix%201_FINAL.pdf

# Evolution of mobile phone communications
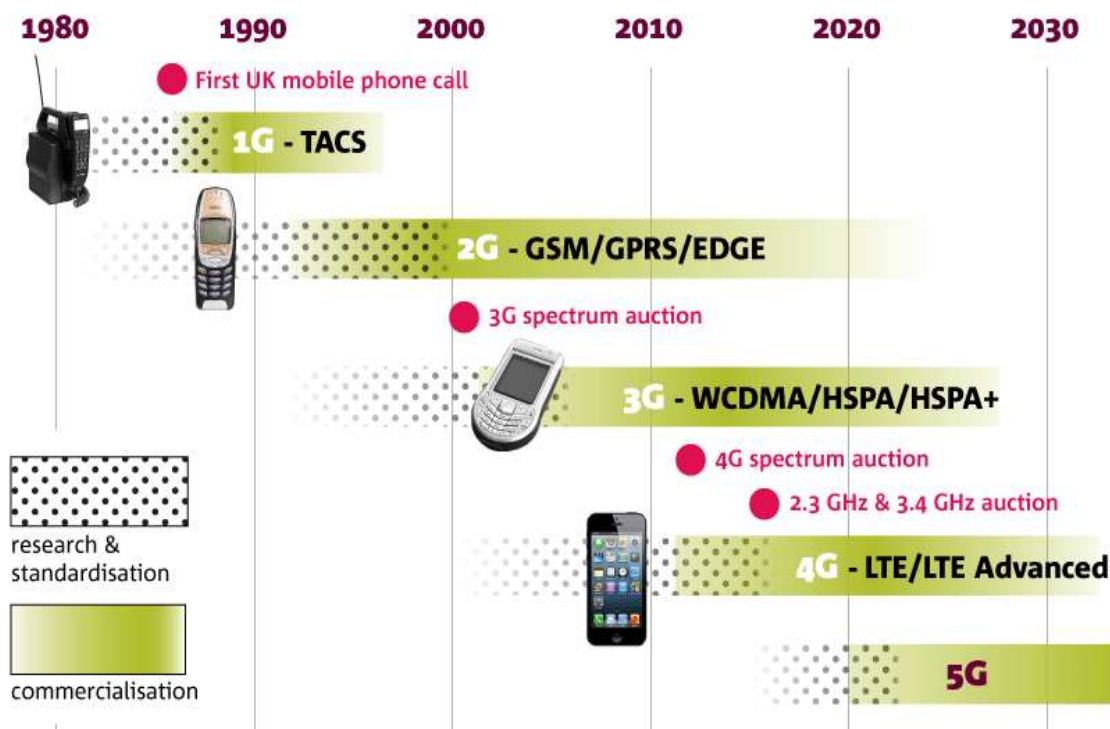


Figure 4.6: Evolution of mobile phone communication, credit image to Cubeultra, https://cubeultra.com/

**Progress so Far**

4.23    The Council has made significant progress in progressing the actions identified in the Waltham Forest Digital Strategy 2018 – these are summarised below:

- Free public wifi in 10 town centres and concession for access to our street lamps for mobile industry via agreement with Arqiva
  - Highly utilised: up to 6,500 users and 19,000 sessions per week
  - Small cells to date: 19 deployed 6 more in pipeline (Telefonica) Further demand expected including from EE
- Significant interest from telecoms industry in investing in our borough including connectivity for social housing
- c. £800k awarded as part of SIP funding round 2018
- External consultancy recommended approach for investment of the SIP fund and social connectivity and we are ready to move forward

**Delivery Approach**

4.24    The Council's long-term delivery approach for the development of the borough's digital infrastructure is as follows:

- Building **agnostic** fibre and wireless connectivity to give Gigabit infrastructure for the long term.

- **Leveraging** the market to work for us, not vice versa. Their failure to address poor connectivity cannot continue.

- Ensuring solutions will be **cost neutral** or ensure a Return on Investment (RoI) to the Council, while acting as an enabler to achieve best value

- Governance through cross-council board

- Concession:

    – Continue to support further rollout of small cells across the borough

    – Opportunity to spur 5G investment

- SIP funding: the Council has been successful in securing £800k through the London Business Rates Retention Scheme to support development of the borough's digital infrastructure. This funding will be used to:

    – Utilise Council owned ducting across the borough and extend up to 4km into economic growth zones.

    – Initially to connect Council buildings and CCTV and thereafter to open up to industry to spur delivery to premises.

    – £800k is capital investment and we will reuse existing revenue spend to operate the network

- Housing connectivity:

    – Create new Wayleave agreement and work with key suppliers to sign this and deliver gigabit connectivity with appropriate controls

    – Note that by law we have to provide access to the industry

- Continue to look for other opportunities:

    – Commercialisation of assets

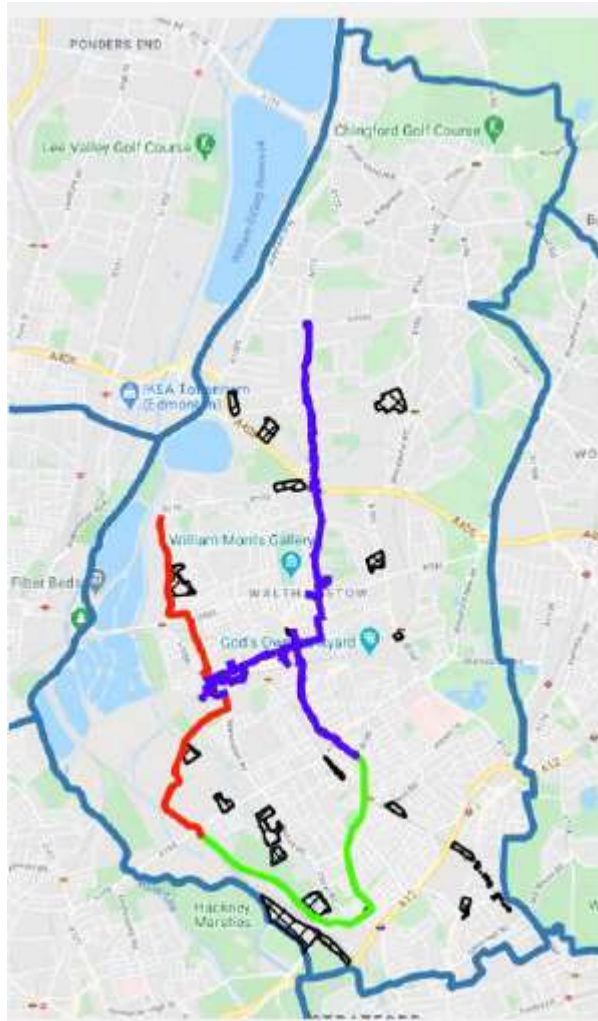    – Ensure readiness for potential government funding

Figure 4.7: Existing and proposed Council ducting network, utilising SIP funding (blue is existing, red is planned, green is proposed Phase 3)

4.25 The SIP funded programme includes build out of the red route, CCTV camera upgrades and some upgrade to the existing ducting

4.26 The proposed Green route is projected to cost £700k - £1m, depending on routes and associated camera upgrades.

4.27 Moving forward there is an option to link public sector sites (CCTV and WAN) and commercial sites such as mobile base stations/small sites across the Borough. This is projected to cost £3-4m.

4.28 Further Guidance on Commercial Models available to Local Authorities can be found at: https://www.gov.uk/guidance/commercial-models

# 5. Energy Supply

**National Grid**

5.1    National Grid[46] is the owner and systems operator of the UK's national electricity and gas supply network. The regional and local gas and electricity network is then broken down into Distribution Networks and operated by Distribution Network Operators (DGNs)[47].

**Electricity**

5.2    Waltham Forest falls within the area of distribution network operator UK Power Networks (UKPN). UKPN are responsible for monitoring, planning and delivery of electricity across the area it manages which covers over 29,250km$^2$.

5.3    In 2019, UKPN published a Central London Plan update[48] covering the requirements and need for the centre of London, however there is no specific information available for areas that fall outside of central London. UKPN includes information about their performance and plans for their overall network within their Business Plan. Electricity network operators have a legal requirement to provide adequate electricity supply to meet the requirements of new residential development.

5.4    UKPN submit their business plans to the regulator (Ofgem) for approval and review, as set out as part of Ofgem's national guidance. The government publishes local and regional statistics relating to energy consumption.

5.5    The government publishes local and regional statistics relating to energy consumption. The boroughs energy usage (2005-2017) can be found at: https://www.gov.uk/government/statistical-data-sets/total-final-energy-consumption-at-regional-and-local-authority-level

5.6    The Council works closely with the GLA and UKPN to ensure the boroughs growth needs are assumed and catered for. As noted on the GLA website[49], according to UKPN, some of the large buildings being built in London have a maximum demand equivalent to a

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[46] https://www.nationalgrid.com/

[47] https://www.ofgem.gov.uk/electricity/distribution-networks/gb-electricity-distribution-network

[48] https://library.ukpowernetworks.co.uk/library/en/RIIO/Main_Business_Plan_Documents_and_Annexes/20044+UKPN+Central+London+Plan+FINAL+WEB+PDF+11.02.19.pdf

[49] https://www.london.gov.uk/what-we-do/planning/london-plan/past-versions-and-alterations-london-plan/london-plan-2016/london-plan-chapter-five-londons-response

town with a population of around 50,000. It is expected that at least in the short term, electricity demand could increase by up to 4 per cent annually. In order to provide UKPN with regular, up-to-date information about future growth in London, UKPN are provided with regular updates from the London Development Database (LDD)[50] to ensure that their demand forecasts are as robust as possible.

**Current Capacity and Meeting Future Demand**

5.7 The North of the Borough generally falls within UKPN's Eastern Planning Network (EPN) and the south of the borough predominantly falls in UKPN's Southern Network Planning Area (SPN) – see figure 5.1 below.

5.8 Figure 5.1 below also shows current capacity at the Borough's key electricity substations. Discussions with UKPN have confirmed UKPN's commitment to supplying all residents with access to a stable and reliable supply of electricity, in line with their statutory obligation.

Figure 5.1: Current sub-station capacity in Waltham Forest (Source: UKPN, October 2020)

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[50] https://www.london.gov.uk/what-we-do/planning/london-plan/london-development-database
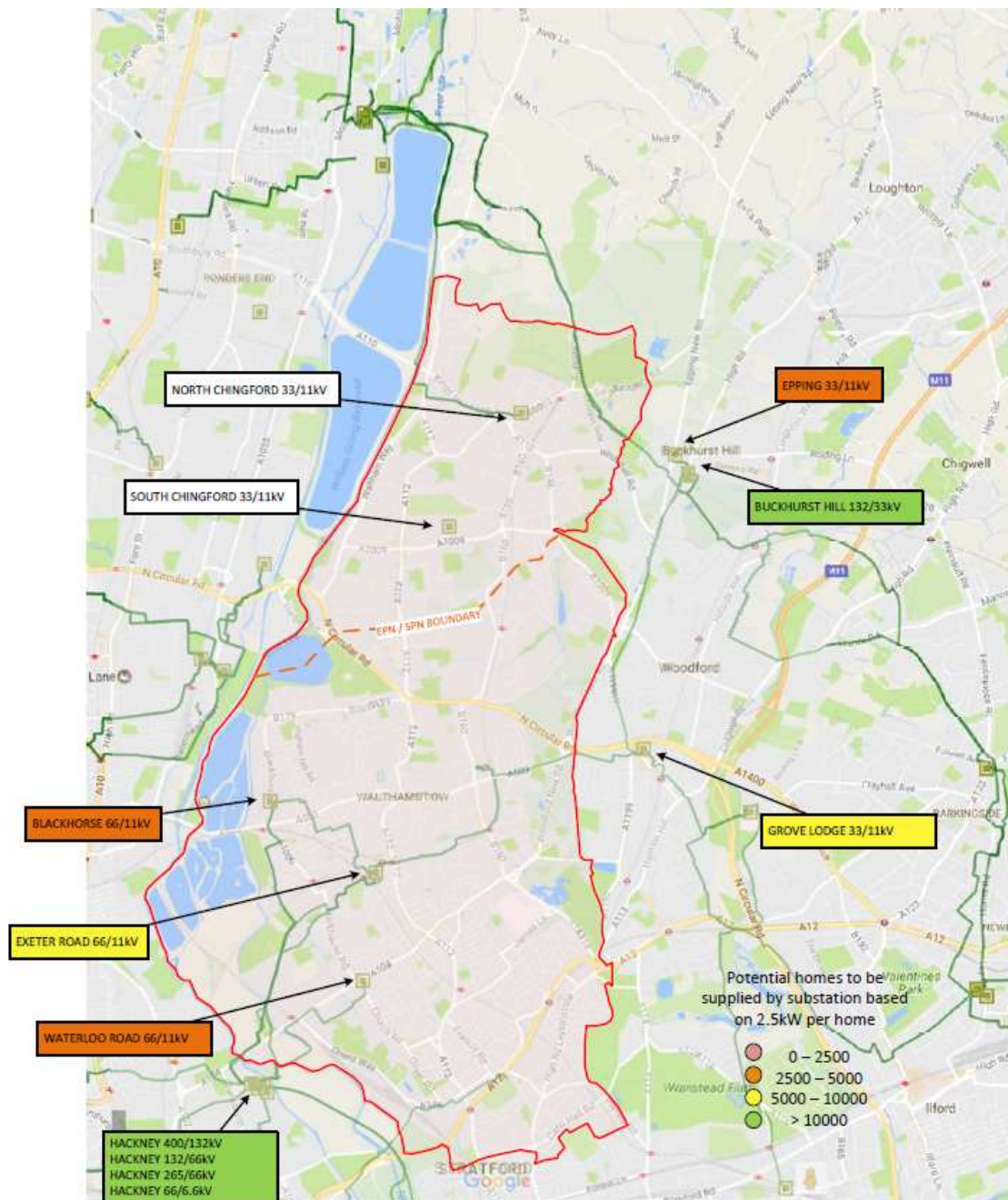
5.9   The south west of the borough continues to be where capacity is more constrained. However UKPN has confirmed a number of ongoing and planned investments that will increase the capacity to accommodate future housing and employment growth in the area.  These are:

- Work is currently being carried out to reinforce the circuits between Hackney and Exeter Road substations to provide for future upgrades which will enable the substations to operate a higher primary voltage and with increased capacity. This scheme has been funded by UK Power Networks at a planned cost of £13.7m with completion expected in 2022.

- Potential works have also been identified to rebuild the site known as Walthamstow Tee Point (at the junction of Blackhorse Lane and Exeter Road). The area is currently

used to house three tee points, but if the site could be developed to build a 132kV switchboard it would add interconnectivity to the network and provide additional connection points, greatly improving network resilience and capacity to accommodate future growth.

5.10  The Council will continue to work closely with UKPN to identify, plan for and deliver these strategic infrastructure investments in the borough.

## Gas

5.11  National Grid is the gas transmission and distribution network operator for Greater London including Waltham Forest. As with electricity, as the provider, National Grid has a duty to supply, plan and develop gas infrastructure in their area, responding to requests for new gas supplies.

5.12  The government publishes local and regional statistics relating to energy consumption. The boroughs energy usage (2005-2017) can be found at: https://www.gov.uk/government/statistical-data-sets/total-final-energy-consumption-at-regional-and-local-authority-level

5.13  The National Grid's Gas Ten Year Statement, 2018[51] states that industrial gas usage is heavily linked to the price of coal and has risen sharply since the price in coal rose in 2015. Residential demand however has fallen by 2% per year since 2004, they relate this to government incentives and increased consumer awareness having led to consumers improving levels of insulation and install better quality gas boilers.

### National Grid Digitisation Strategy, 2019

5.14  The National Grid Digitisation Strategy, 2019[52], highlights the importance of investing in digital technologies in the energy sector, noting that it is a critical part of the pathway to net zero. It provides an opportunity for the energy sector to bring about cost savings for consumers, improve customer experience, enable greater whole system coordination and transparency, and accelerate the development and deployment of innovative technologies.

### Cadent Gas

5.15  Cadent Gas[53] are the Distribution Network Operator for the Borough. Waltham Forest sits in the North London Network, where Cadent serve 2.3m customers, extending from central London, covering north of the Thames to High Wycombe in the west and Southend-on-Sea to the east.

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[51] https://www.nationalgrid.com/uk/gas-transmission/document/124356/download
[52] https://www.nationalgrid.com/uk/gas-transmission/document/128996/download
[53] https://cadentgas.com/home

5.16 Cadent also manage the National Gas Emergency Service on behalf of the gas industry. If you smell gas or suspect carbon monoxide, call for free on 0800 111 999*.

5.17 The Council works with Cadent and the GLA to ensure the network is planned and delivered accordingly. Approximately 20% of the borough's energy bills go towards looking after the existing network in the borough and making necessary improvements.

**Cadent Gas Business Plan 2021-2026**

5.18 The Cadent Gas Business Plan 2021-2026[54] sets out a range of priorities to guide their investment over the next 5 years. No specific projects are identified for Waltham Forest however the Council supports the commitment of Cadent Gas to tackling Climate Change including investment in facilitating a transition to low emission energy systems.

| Outcome | Delivering a resilient network to keep the energy flowing safely and reliably | Providing a quality experience to all of our customers, stakeholders & communities | Tackling climate change and improving the environment | Trusted to act for our communities |
|---|---|---|---|---|
| Priorities | Managing network asset risk for now and the future - Mains replacement - Asset health risk - Emergency service | Setting standards that all of our customers and stakeholders love | Decarbonising our business operations | Building trust through every action |
| | Cyber resilience | Keeping the energy flowing | Reducing our wider environmental impact | Making a positive difference for our communities |
| | Physical security | Minimising the disruption from our works | Facilitating the low emissions energy systems transition: - Green Gas - Hydrogen - Peaking and Storage - Decommissioning | Sustainable engagement to drive better customer outcomes |
| | Workforce planning | Supporting customers in vulnerable situations - Identifying needs - CO awareness - Fuel poverty - Going beyond | | Creating an environment for our employees to thrive and be proud of the service we deliver |
| | Data strategy | | | Transparency in how we operate |

Figure 5.2: Cadent Gas Business Plan 2021-2026 priorities

5.19 The UK gas sector is regulated by Ofgem[55].

**Low Carbon Heating & District Heating Networks**

5.20 There are ambitions to extend the existing privately delivered district heating network at the Blackhorse Lane station hub sites into the wider local area. The Council has also facilitated and provided de-centralised energy networks in the Marlowe Road / Wood Street South area and the new neighbourhood of three large development sites in Coronation Square in Leyton. The Council is continuing proactive work with the GLA to identify and plan for additional potential district heating across clusters of development

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[54] https://cadentgas.com/nggdwsdev/media/Downloads/business-plan/Cadent_BusPlan_PART3_Full-Plan_NC.pdf
[55] https://www.ofgem.gov.uk/gas

sites and locations as identified through the Site Allocations Document as part of the new Local Plan.  The Council will work with the GLA to update the London Heat Map on an on-going basis.  This will enable and facilitate new low carbon heating and energy projects, as part of delivering initiatives to support the declared Climate Emergency reducing carbon emissions within the borough.

5.21    The Council has a strong track record in delivering solar photovoltaic installations on both its' social housing and operational premises.  This work will continue accessing external grant funding or Salix energy efficiency funds where possible, including for the current key flagship Council projects at EMD cinema and Town Hall Campus / Fellowship Square flagship projects.

5.22    The Waltham Forest Local Plan (2012) and reviewed Draft Local Plan 2035 continue to support development joining up to the heat network where possible and viable. The Council will continue to work closely, sharing information such as updated population projections and housing/growth trajectories, with utilities providers to ensure that adequate provision is maintained and delivered across the borough area.

# 6. Water Supply & Sewage

6.1     The main sections to consider in this section are:
- Water Resources and Water Supply
- Waste Water Collection and Treatment

6.2     Further information on the wider water environment, including Blue infrastructure and Strategic Flood Risk, see Chapter 21.

6.3     Thames Water is the UK's largest water and wastewater services company.  They serve over 13.5million customers in London and the Thames Valley area.  The Environment Agency's role is to monitor Thames Waters environmental relate activities, including issuing permits for discharge from sewage works, the supply of drinking water, as well as the role of monitoring water quality.

**Strategic Flood Risk Assessment – Level 1 & 2**

6.4     To support the production of this IDP, the borough has produced a Level 1 and 2 Strategic Flood Risk Assessment.  Both these documents are available as part of the evidence base library for the Waltham Forest Local Plan 2035.  Both the Environment Agency and Thames Water have been involved in the development of this IDP.

6.5     A sequential test has been undertaken to support the Local Plan 2025 and Site Allocations DPD.  This has been informed by the Strategic Flood Risk Assessment work.

6.6     The Council is continuing to engage with Thames Water on an Infrastructure Phasing Plan for the detailed levels of growth as set out in the Local Plan and supporting housing trajectory.  For further information on Flood Risk, see Chapter 21.

**Water Resources and Supply**

6.7     As a statutory undertaker, Thames Water has a duty to maintain the security of water supply. Every five years they are required to produce a Water Resources Management Plan (WRMP)[56]. This sets out how they plan to meet customers' needs while protecting the environment over the plan period. Thames Water published their current WRMP in February 2015 for the period 2015-2040. The next WRMP will run for 80 years from 2020-2100.  At the time of writing, this WRMP is known as the draft WRMP 2019.

6.8     In addition to the WRMP, Thames Water has produced a Drought Plan (2017)[57] that covers the period up to 2022 and demonstrates how Thames Water will react to a period of unusually low rainfall. The Plan meets the Drought Plan guidelines and

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[56] https://www.thameswater.co.uk/about-us/responsibility/sustainability
[57] https://www.thameswater.co.uk/about-us/regulation/drought-plan

develops the path to achieve increased protection against more severe droughts.  The Plan concludes that for this planning period, Thames Water can meet with these challenges within the existing asset base.

**Existing and planned provision**

6.9     Water resources continue to be planned for at a Water Resource Zone (WRZ) level. This is defined as the largest possible zone in which all water resources can be shared, ensuring that all customers experience the same level of service, with the Waltham Forest falling within the London WRZ.

6.10    On average Londoners consume 156 litres of water per day per person, 17 litres above the national average. Waltham Forest, with the rest of Greater London, is in an area classified as seriously water stressed. Greater London has been at risk of drought following two dry winters and saw water use restrictions imposed during 2006 and 2012. The Draft New London Plan acknowledges the importance of a good water supply to the health of residents and in supporting London's economy. The Draft New London Plan encourages the reduction of leakage from the network and the implementation of increased efficiency measures, which are reflected in Thames Water's five-year plan 2015- 2020[58].

6.11    London's water is supplied from a variety of sources, including ground water, abstracted water from the River Thames and River Lea stored in reservoirs and boreholes, many of which are in the borough, as well as treatment/re-use of effluent from sewage treatment works. Thames Water has a desalination plant in Beckton, which at times of peak stress has the ability to supply around 1 million people and can produce approximately 140 million litres of treated water each day.

6.12    The Thames Water Baseline Supply Demand Balance 2015-2040 highlights that by 2039/40 there will be a deficit of water supply in Greater London, and a deficit is noted in the wider south east. Therefore, Thames Water is developing plans to transfer water from the River Severn to the River Thames catchment as well as other opportunities for water transfer through the canal network. Long-term plans are being developed for a new reservoir near the Upper Thames in Oxfordshire. This would provide water storage and enable water transfer, with the potential to supply a large area of the country. It is yet unclear as to when these projects will be put in place, particularly in light of COVID19.

**Future provision**

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[58] https://www.thameswater.co.uk/about-us/regulation/our-five-year-plan

6.13    In addition to Thames Water's long-term plans around water transfer and a new reservoir in the Upper Thames Valley, their current and draft five-year business plans highlight 56 investments in reducing leakage in the existing water network. This program will continue, with a balance made between different measures to take pressure off water supply whilst providing an appropriate level of service to their customers. Other measures include metering, a program that Thames Water continues to roll out, and water efficiency, which covers multiple areas, not just within the Thames Water network. It also seeks to educate users to encourage use of water efficient fixtures and habit change.

6.14    Thames Water are currently consulting on a revised draft Water Resource Management Plan 2019. This draft includes updates to information based on updated population modelling, with London showing a deficit in water supply from 2024/2025, and includes an update to the preferred programme, however this update is only in draft form so may undergo changes before the plan is put in place.

**Sewage & Wastewater**

6.15    Sewage infrastructure includes foul water drainage and surface water drainage, the sewerage system which covers the majority of Greater London, including the Waltham Forest is operated by Thames Water.

6.16    Thames Water as the sewerage operator covering the borough have a requirement to ensure that adequate sewer treatment infrastructure is provided to meet the requirements of new development.

Figure 6.1: Waltham Forest in relation to sewer catchment areas
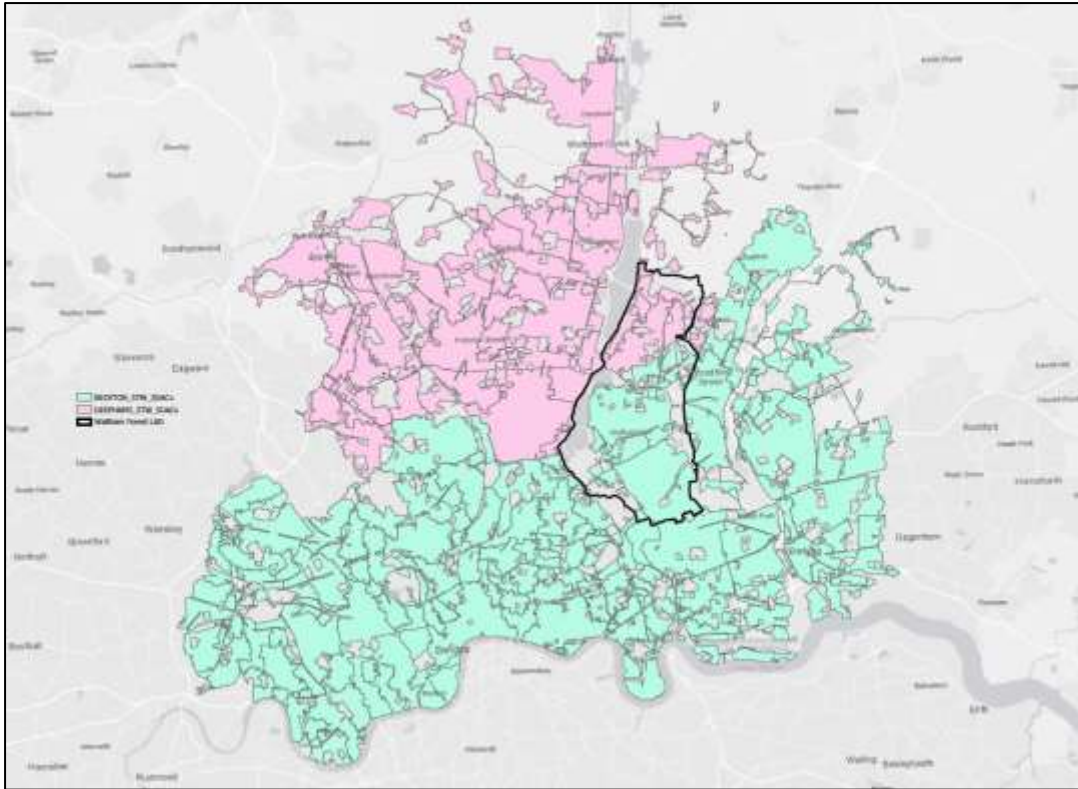
**Thames River Basin Management Plan**

6.17 The purpose of a Thames River Basin Management Plan[59] is to provide a framework for protecting and enhancing the benefits provided by the water environment. To achieve this, and because water and land resources are closely linked, it also informs decisions on land-use planning.

6.18 The Plan notes that pollution from waste water is affecting 45% of water bodies in this river basin district. Wastewater, or sewage, can contain large amounts of nutrients (such as phosphorus and nitrates), ammonia, bacteria, harmful chemicals and other damaging substances. It can enter water bodies where sewage treatment technology to remove enough of the phosphorus and harmful chemicals doesn't exist, from leakages from privately owned septic tanks and, in wet weather, storm overflows can discharge untreated sewage having a significant impact on bathing waters. Population growth and changes in rainfall patterns are also increasing the pressure on the sewer network.

**Catchment Partnerships – Thames 21**

6.19 Catchment partnerships are groups of organisations with an interest in improving the environment in their local area and are led by a catchment host organisation. They inform the river basin management planning process and help implement measures by:
    – providing local evidence

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718342/Thames_RBD_Part_1_river_basin_management_plan.pdf

- targeting and coordinating action
- identifying and accessing funding for improvements in the catchment
- incorporating river basin management planning into the wider environmental management of the catchment

6.20   The partnerships work on a wide range of issues including, but not restricted to, the water environment and river basin management. Thames 21[60] is the largest River Trust in the river Thames district. The Council works closely with Thames 21 to support the implementation of their Five Year Plan, 'Championing the River' (2016-2021)[61] and to support the establishment of new projects incorporating nature based solutions, building connections with expert knowledge and support for a wide range of water environment challenges and improvements. These include: natural flood management, road runoff pollution pathways, sustainable urban drainage (SUDS) and constructed wetlands and restoring river habitat and natural processes to increase resilience for biodiversity.

**Existing and planned provision**

6.21   London is served by eight major sewage treatment works;
- Beckton
- Beddington
- Crossness
- Deephams
- Hogsmill
- Long Reach
- Mogden

6.22   Riverside Thames Water has been undergoing a program of investment into sewage treatment works, with the facility at Deephams having been extended, and works to expand Beckton sewage treatment works and upgrade Mogden sewage treatment works currently underway. Currently when there is heavy surface runoff from rainwater London's combined system that collects surface water runoff and sewage still uses the River Thames and River Lea as an overflow outlet. The quality of the River Thames has improved in recent years, with wildlife, such as seals, now visible in the Thames estuary area.

6.23   To continue to improve London's rivers and to prevent the overflow of sewage and surface water runoff during bad weather, Thames water are building the Thames Tideway Tunnel, which has been described as a super sewer. This tunnel will add significant capacity to London's combined sewage and surface runoff system, providing an alternative outlet for overflow than the Thames and River Lea, protecting the rivers

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[60] https://www.thames21.org.uk/
[61] http://www.thames21.org.uk/wp-content/uploads/2013/11/5-Year-Plan-final_PROOF.pdf

from continued pollution by reducing sewage discharged into the River Thames by 95%. The sewage and surface runoff that flows through the Thames Tideway Tunnel will travel parallel to the River Thames until Limehouse, here it will travel to Abbey Mills Pumping station where it will join the Lee Tunnel, which was completed in 2016, and be pumped to the sewage works at Beckton.

6.24    The Thames Tideway Tunnel is due to be completed in 2023. The London Boroughs of Hackney, Newham and Tower Hamlets and eastern Waltham Forest are all served by the sewage treatment works at Beckton, with the western part of Waltham Forest served by the sewage treatment works at Deephams.

6.25    Both facilities have or are in the process of undergoing modernisation and expansion, with delivered infrastructure such as the Lee Tunnel supporting expanded provision for boroughs, when the Thames Tideway Tunnel is completed this expanded network capacity will benefit boroughs across Greater London.


**Future provision**

6.26    Thames Water provide five-year plans, the current plan being 2015-2020, with a 2020-2025 plan currently under development and awaiting adoption[62]. Thames Water's on-going focus, in addition to serving existing and future development in the area they cover, is around sustainability, extracting as much energy from their wastewater network and recycling as much as possible.

6.27    As part of their five-year plans, Thames Water set out plans for investment, expansion and modernisation at their sites in line with population growth. The 2015-2020 plan sets out that Thames Water sewage facilities will have improvements works carried out during the plan period to keep pace with population growth, the initial information published with regards to the 2020-2025 plan sets out further investment in 37 waste water sites across their network.

6.28    Thames Water continue to plan based on population growth, and with include this within projections of their future capacity need.  The Council is currently working with Thames Water to agree an Infrastructure Phasing Plan to support the Local Plan to 2035.

6.29    The Draft London Plan, 2019, also notes that a water advisory group with representatives from across the water sectors in London has been established to advise the Mayor and share information on strategic water and flood risk management issues across the capital.

6.30    The London Borough of Waltham Forest will engage with all partners and stakeholders to support future delivery in the borough and beyond the borough's boundary.

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[62] https://www.thameswater.co.uk/about-us/regulation/our-five-year-plan

# 7. Sustainable Waste Collection & Management

7.1 London has seen a growth in the Construction Demolition and Excavation (CDE) waste stream, as the Local Authority Collected Waste – or Household Municipal Waste stream has reduced. This is due to the continued emphasis on waste reduction and recycling. The Draft New London Plan continues with the aim of London being net self-sufficient in relation to waste disposal, with a range of targets such as those around recycling and an increased emphasis on the circular economy in policy.

7.2 Waste management in London is the responsibility of the London Boroughs as waste authorities. The London Plan using a methodology, which includes a variety of factors including population, apportions each of the London Boroughs an apportionment target of waste that they should manage. Although the Council is the planning authority for the borough, it is not the waste management authority and therefore is not given an apportionment target in the London Plan. The London Boroughs are required to plan for their waste apportionment, however in many cases boroughs have joined together to produce joint waste plans. There are three waste authorities; Waltham Forest is part of the North London Waste Authority (NLWA)[63].

7.3 Each of the waste management authorities is required to produce a waste plan, with the East London Joint Waste Development Plan adopted in February. The seven boroughs of the North London Waste Authority are still at draft stage with their waste plan. The Council is required to work with boroughs to support them in reaching their waste apportionment target. Specific waste planning Memorandums of Understanding have been agreed between Council and the North London Waste Authority boroughs.

**Expected Demand**

7.4 The Draft London Plan[64] sets out that in 2015, London produced just under 18 million tonnes (mt) of waste, comprising:
  – 3.1mt household waste – 17 per cent
  – 5.0mt commercial/industrial waste – 28 per cent
  – 9.7mt construction, demolition and excavation waste – 54 per cent

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[63] https://www.nlwa.gov.uk/
[64] https://www.london.gov.uk/sites/default/files/intend_to_publish_-_clean.pdf

7.5    Modelling[65] suggests that if London achieves the Mayor's reduction and recycling targets, it will have sufficient Energy from Waste capacity to manage London's non-recyclable municipal waste, once the new Edmonton and Beddington Lane facilities are operational.

7.6    In 2015, London managed 7.5mt of its own waste and exported 11.4mt of waste. London also imported 3.6mt of waste. This gives London a current waste net self-sufficiency figure of approximately 60 per cent. Around 5mt (49 per cent) of waste exported from London went to the East of England and 4.2mt (42 per cent) to the South East. The bulk of this waste is CD&E waste. Approximately 1.3mt of waste was exported overseas[66].

7.7    Waltham Forest's expected waste forecasts and apportionment to 2041 are as follows (Apportionment is a percentage share of London total waste to be managed by the borough.

Figure 7.1: Forecast arisings from household, commercial and industrial waste in Waltham Forest 2021-2041 (000's Tonnes) – source Draft London Plan 2019

| Borough | 2021 | 2041 |
|---|---|---|
| Waltham Forest | 202 | 218 |

Figure 7.2: Waltham Forest apportionment of household, commercial and industrial waste 2021-2041 (000's Tonnes) - source Draft London Plan 2019

| Borough | Apportionment | 2021 | 2041 |
|---|---|---|---|
| Waltham Forest | 2.4% | 199 | 211 |

7.8    In 2015, 2.9mt of the waste sent to the East of England went to landfill and 2.2mt went to landfill in the South East. Some 32 per cent of London's waste that was biodegradable or recyclable was sent to landfill. The Mayor, through the Draft London Plan, is committed to sending zero biodegradable or recyclable waste to landfill by 2026.  The Council supports this vision and will work with the Mayor and relevant partners to make this a reality.

7.9    The London Plan also recognises that waste servicing contracts do not recognise administrative or council boundaries and waste flows across borders.  The Mayor has committed to working with boroughs, the London Waste and Recycling Board[67], and the London and neighbouring Regional Technical Advisory Bodies to address cross-boundary

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[65] https://www.london.gov.uk/what-we-do/planning/london-plan/london-plan-technical-and-research-reports

[66] https://www.london.gov.uk/sites/default/files/intend_to_publish_-_clean.pdf

[67] https://www.lwarb.gov.uk/

waste flow issues with the aim of managing all of London's waste in London. Waste is deemed to be managed in London if any of the following activities take place within London:

– waste is used for energy recovery
– the production of solid recovered fuel (SRF), or it is high-quality Refuse Derived Fuel (RDF) meeting the Defra RDF definition as a minimum[68] which is destined for energy recovery
– it is sorted or bulked for re-use (including repair and re-manufacture) or for recycling (including anaerobic digestion)
– It is reused or recycled (including anaerobic digestion).

**Existing Provision in Waltham Forest**

7.10   The London Waste Map[69] shows the locations of London's permitted waste facilities and sites that may be suitable for waste facility location.

7.11   Table X below shows the waste and recycling tonnages over the last 5 years for Waltham Forest.  Overall, despite significant housing and population growth in the borough over the past number of years, waste generation has remained fairly static, with a very slight decline. In general terms, this demonstrates that in residents are throwing away less.

Table 7.3: Refuse, Recycling & Composting (tonnes per year) in Waltham Forest 2015-2020
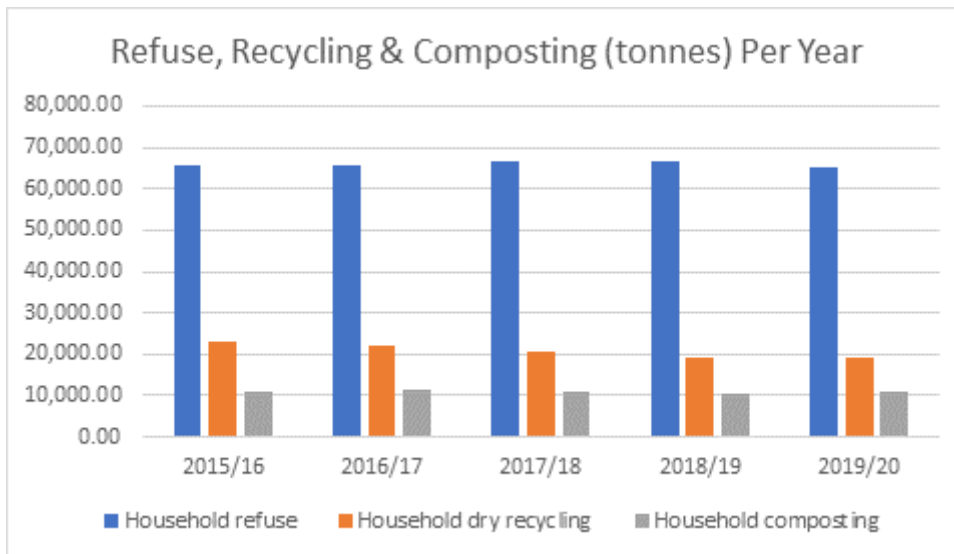


**Future Provision in Waltham Forest**

7.12   To support the shift towards a low-carbon circular economy, The Draft London Plan states that all facilities generating energy from waste should meet, or demonstrate that they can meet in future, a measure of minimum greenhouse gas performance known as the carbon intensity floor (CIF). The CIF is set at 400g of CO2 equivalent generated per

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[68] http://www.sita.co.uk/services-and-products/our-products/rdf-srf for an explanation of the differences between SRF and RDF
[69] https://maps.london.gov.uk/waste/

kilowatt hour (kwh) of electricity generated. The GLA's free on-line ready reckoner tool can assist in measuring and determining performance against the CIF[70].

7.13   The Council will continue to work closely with neighbouring boroughs and their constituent waste authorities to support them in fulfilling their waste apportionment targets.  Waste sites in Waltham Forest are safeguarded unless re-provision can be demonstrated to be taking place within Greater London as per London wide waste policy. The significant areas of SIL within the borough area provide the potential for new waste facilities to come forward further as an appropriate type of use within this land use designation.

**Low Hall Depot**

7.14   The Low Hall Depot North site measures approximately 9,100m2 and is currently occupied by the main operational depot of the LBWF. The site is owned by the Council.

7.15   The existing Low Hall Depot is inefficient in many respects. The poor layout of the site and the nature of the building stock results in inefficient operations and inefficient use of an important brown-field site, in a part of the Borough where both housing and employment growth are required. The current buildings are of poor quality and all nearing the end of their functional life, requiring substantial investment or replacement in the near future. A significant amount of land is currently given over to parking of operational and staff vehicles, and the storage of materials is low density and makes poor use of the land on site.

7.16   Informed by detailed site investigations, flood-risk analysis and stakeholder engagement, the Council believes an opportunity exists to substantially modernise, consolidate and rationalise the existing and future operations onto a smaller site footprint and to utilise this site. Through developing a sensitive and well-integrated depot facility that meets existing and future needs on a reduced site footprint, the proposal has the potential to improve connectivity for pedestrians and cyclists and increase access to open space and community facilities, strengthening the existing neighbourhood and community.

7.17   The following current uses are currently present on the site:
- Various Highways teams
- Parking/Transport team
- Parks & Leisure
- Dog Team
- Graffiti Team
- Ground Maintenance/Care Taking
- Various containers belonging to other services

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[70] https://www.london.gov.uk/file/665524/download?token=Q28HNWvK

7.18  The Depot development will provide a new office facility for depot staff, consolidated vehicle parking and associated vehicle wash and workshops will house the Highway Maintenance/traffic management teams, waste/recycling collection services, caretaking and grounds maintenance for housing estates, Parks Service, bus transport and Parking Services.

7.19  The new depot provides a healthy, safe and secure working environment for all staff, contractors and visitors. It will have a more efficient and effective use of space for delivery of all re-provided services, provides for the use of modern technology and the Council's new ways of working in service delivery. The new depot enables the Council to meet its statutory and third-party contractual obligations.

7.20  Detailed site investigations, flood risk analysis and engagement with site users have demonstrated that the required Depot operations can be consolidated and rationalised onto a smaller site footprint. Surplus land released through the Depot redevelopment creates an opportunity to deliver housing and employment space, to meet local needs, contribute to growth and support the local economy.

7.21  Through developing a sensitive and well-integrated Depot facility on a reduced site footprint, the redevelopment has the potential to improve connectivity for pedestrians and cyclists and increase access to open space and community facilities, strengthening the existing neighbourhood and community. Several measures will be introduced to improve the environmental sustainability of the new Depot, including interventions to reduce carbon production, decrease the use of private cars and improve local biodiversity along the Dagenham Brook corridor.

**Cost: Projected GDV:** £20m

**Timescale:** 2024

### Waste Collection Fleet

7.22  The waste collection service will normally require a new collection round and a new vehicle for every extra 6,000 properties that are built.  The creates an approximate requirement of n addition 4.5 vehicles over the plan period to 2035.  A new vehicle costs around £250k to buy and the operating costs including staffing, fuel and maintenance are around £120k a year.

7.23  The Council's Waste Service Team are also exploring the potential of implementing a separate food collection service in April 2023.  The food collection service would require approximately six crews to collect the food waste, with similar capital and revenue costs of £250k per vehicle, and operating costs including staffing, fuel and maintenance of approximately around £120k a year.

7.24  These projects have been included in the Infrastructure Delivery Schedule in Appendix 1.

# 8. Emergency Services

**London Fire Brigade**

8.1    London Fire Brigade (LFB) is the busiest fire and rescue service in the country and one of the largest firefighting and rescue organisations in the world.

8.2    Under the Policing and Crime Act 2017 the London Fire and Emergency Planning Authority (LFEPA), which was a functional body of the GLA established under the Greater London Authority Act 1999 and ran the London Fire Brigade (LFB), was abolished and replaced by the London Fire Commissioner. The London Fire Commissioner is a corporation sole and the fire and rescue authority for London. It is also a functional body of the GLA and the Mayor of London sets its budget, approves the London Safety Plan and can direct it to act.

8.3    The work of the LFB is not just to respond to emergency incidents, but also to carry out prevention and protection work to reduce the number of fires and emergency call-outs. As most of those people who are injured by or die in a fire do so in their own home, LFB fire crews carry out home fire safety visits (HFSVs) and fit smoke alarms. The LFB also ensures compliance with the safety laws, and carries out audits of premises in London that are subject to the Regulatory Reform (Fire Safety) Order. The LFB plans fire cover on a London-wide basis and the Borough doesn't solely rely on the stations located within Hackney; fire engines at surrounding stations (and from elsewhere in London if necessary) are sent to incidents in Waltham Forest.

8.4    There are currently four fire stations in the borough:

- Chingford
- Walthamstow
- Leyton
- Leytonstone

Figure 8.1: LFB Incident data[71] for Waltham Forest 2014-2019

| Year | Total Number of Incidents | Fires | Special Services | False Alarms |
|------|---------------------------|-------|------------------|--------------|
| 2019 | 2981 | 731 | 776 | 1474 |
| 2018 | 3009 | 803 | 805 | 1401 |
| 2017 | 2845 | 668 | 762 | 1415 |
| 2016 | 2773 | 672 | 781 | 1320 |
| 2015 | 2530 | 662 | 697 | 1232 |

8.5    Overall in 2019 the London Fire Brigade attended 2,981 incidents in Waltham Forest, of which 731 were fires, 776 were special services[72] and 1,474 were false alarms. There

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[71] https://data.london.gov.uk/dataset/london-fire-brigade-incident-records
[72] Special services consist of 20 different types of emergency non-fire incidents, which are mainly rescues. In Hackney,

were 38 fewer incidents in Waltham Forest in 2019 compared to the previous year, which is a marginal decrease.

### Fire Service Future Supply

8.6 With reference to the LFEPA's most recent Asset Management Plan (AMP) (2017)[73], the estates analysis has indicated that no stations in the borough have been identified for redevelopment or replacement.

8.7 However, the plan notes that the financial, political, property and operational environment may change over the period of this AMP, and the AMP provides preparation for this with a view to alignment with the London Safety Plan (2017). Hence the priorities for fire station improvements will be delivered flexibly to respond to changing service needs, corporate priorities, operational initiatives and availability of funds.

### London Ambulance Service

8.8 The London Ambulance Service[74] is one of the busiest in the world and in 2017/18 responded to more than 1.8 million calls, attending 1.1 million incidents[75]. Demand for the services has been increasing year on year. There are two ambulance services operating across London: London Ambulance Service and St John's Ambulance, both of which are supported by and supply services to the NHS.

8.9 The London Ambulance Service have two stations in Waltham Forest: -

- Walthamstow (J4) - Wadham Road, London, E17 4HR
- Whipps Cross (J3) - James Lane, London E11 1NU

8.10 A facility is also located nearby at Edmonton (Windmill Road, London N18 1NJ).

### Ambulance Service Future Supply

8.11 Like many other public services the London Ambulance Service is under pressure to make savings without compromising the level of service provided. It has produced a strategic document called Our Strategic Intent – 2018/19-2022/23 which sets out that to deliver the strategy will require substantial changes to their operating model.

8.12 This is being driven by a number of factors, including the changing landscape of medical conditions needing attention, the demographic challenge and increase in levels of older people, increasing demand on the service, and the need for an organisational response to this. The service has therefore set out that it wants to shift from a default of conveying patients to hospital to a 'see and treat' approach, which would create

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the types of special service most commonly required are: lift releases, effecting entry/exit, flooding (mainly domestic leaks), road traffic collisions and making safe (mainly structures).
[73] http://moderngov.london-fire.gov.uk/mgconvert2pdf.aspx?id=6019
[74] https://www.londonambulance.nhs.uk/
[75] https://www.londonambulance.nhs.uk/document-search/annual-report-2017-2018/

opportunities with other urgent, primary or voluntary services to provide better care for patients in the community.

8.13 Significant proposed changes to the London Ambulance Service operating model include the proposed investment in new technology infrastructure within both the Emergency Operations Centre and mobile vehicles, which will rely on improved levels of digital connectivity within the Borough and across London.

8.14 A further proposed change is to match the service's fleet, infrastructure and footprint to patients' needs, ensuring that building and land efficiency is maximised and seeking to consolidate estate by creating 'operational deployment centres across the capital and co-locating make-ready and vehicle preparation hubs to support a faster, consistent vehicle turnaround and ensure that all deployed vehicles are fully equipped and maintained. This will involve working together with other 'blue light services' as noted above, as pen well as with NHS partners to identify where opportunities for co-location or estate sharing would provide cost savings and better sites for staff to work from.

8.15 The work on estate footprint assessment has not yet commenced and therefore at this stage no infrastructure requirements can be referenced. As this work progresses the IDP will be reviewed to establish whether any of the new infrastructure needs will need to be included, although as with other emergency services it is not expected that ambulance infrastructure costs would require any form of developer contributions.


**Policing**

8.16 Between 2010 and 2017 the Metropolitan Police was under considerable budgetary pressure to find £600m of savings. This has had a notable impact on the levels of policing across London.

8.17 Since 2016 Scotland Yard has been moving away from the previous 32-borough model to a system of 12 larger Basic Command Units (BCU). These new units merge at least two boroughs that then share buildings and resources. The BCU delivers the same core functions and has thematic rather than geographic leadership, with two dedicated ward officers (DWOs) and a police community support officer (PCSO) remaining in every London ward.

8.18 For Waltham Forest this new structure means a merge with Newham in late 2018. However, the new structure means that officers will potentially have to cover a broader geographical area and be ready to respond to crime in adjoining BCU areas.

8.19 Alongside the BCU, the Metropolitan Police has also moved away from its Local Policing Model (LPM: 2013-2017) that focussed on Neighbourhood Policing Teams to a new 'One Met Model' that was introduced in late 2017 as part of a 2016-2020 restructure. In Waltham Forest policing is delivered across four main teams:

- Response Teams, dealing with 999 calls and responding to emergencies

- Neighbourhood Officers, including Schools Liaison Officers, District Ward Officers and Youth Engagement Officers
- Criminal Investigations Department (CID Officers) – responsible for investigating serious crimes
- Safeguarding Officers, principally dealing with safeguarding children and vulnerable adults

8.20 At a Borough Neighbourhood Level the One Met Model means a minimum of the two District Ward Officers and one PSCO, as noted above, that will be 'ring fenced' from abstraction, as well as additional DWOs to a total of 1,700 across London and allocated to higher demand wards through local consultation. In addition to this the One Met Model also provides 281 Youth and Schools Officers across London, rising to 600 working full time in schools, Pupil Referral Units (PRUs) and other educational institutions to prevent crime and protect young people.

8.21 Government has recently committed to providing 20,000 additional police officers across England. The Council will work with and support the local BCU and the MET Command to lobby and secure additional resources for the borough.

8.22 Details on the boroughs crime statistics can be found at https://www.met.police.uk/sd/stats-and-data/met/crime-data-dashboard/

**Mayors Policing and Crime Plan 2017-2020**

8.23 The Mayor's Office for Policing and Crime (MOPAC)[76], by virtue of the Police Reform and Social Responsibility Act 2011, must produce a Police and Crime Plan[77]. This sets out the following:

- MOPAC's police and crime objectives, which are:
  - The policing of London
  - Crime and disorder reduction in London
  - The discharge of the Metropolitan Police Services' (MPS's) national and international functions

- The policing of London that the Commissioner of Police of the Metropolis (the Commissioner) is to provide: the financial and other resources that MOPAC is to provide to the Commissioner; the means by which the Commissioner will report to MOPAC; the means by which the Commissioners performance in providing policing will be measured; the services that are to be provided by virtue of Section 123 of the Anti-social Behaviour, Crime and Policing Act 2014; any grants that MOPAC is to make under that section, and the conditions (if any) subject to which any grants are to be made.

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[76] https://www.met.police.uk/police-forces/metropolitan-police/areas/about-us/about-the-met/police-and-crime-plan/
[77] https://www.met.police.uk/SysSiteAssets/foi-media/metropolitan-police/priorities_and_how_we_are_doing/corporate/mopac_police_crime_plan_2017_2021.pdf Now Superceded by: https://www.london.gov.uk/publications/building-safer-london

**Waltham Forest Violence Reduction Partnership (VRP)**

8.24    Waltham Forest's Violence Reduction Partnership (VRP)[78] brings together partners - drawn across the Council, the Metropolitan Police, Health and Education services and the borough's community groups - to work collaboratively through a public health approach which tackles violence and the causes of violence.  The Vision of the VRP is to reduce violence in Waltham Forest so that our residents feel safer.

8.25    The VRP's public health approach tackles violence and the causes of violence across four 'domains' stands, as follows:
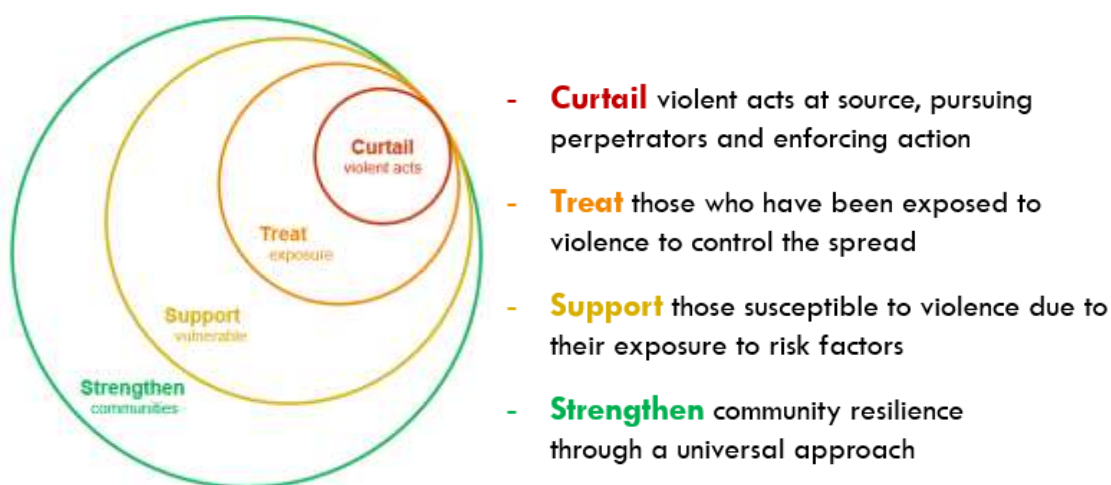


- **Curtail** violent acts at source, pursuing perpetrators and enforcing action

- **Treat** those who have been exposed to violence to control the spread

- **Support** those susceptible to violence due to their exposure to risk factors

- **Strengthen** community resilience through a universal approach

Figure 8.2: Waltham Forest VRP - Public Health Approach

8.26    Each domain has a working group made up of key partners – including Council and Police Officers, health and education services, and community groups.

8.27    Each domain group meet once a term to develop innovative and strategic approaches to reduce violence, and to update on progress.

8.28    Young people are well represented on each of the domain groups, but to ensure their voice is fully embedded, a separate Young People's Group meets to test emerging actions, offer challenge and/or endorsement.

8.29    Further information on the ongoing working of the VRP and what has been achieved since its launch, please see the Violence Reduction Partnerships Annual Report 2019[79].

8.30    For further information on the VRP, including how to get involved, details are available on the Council's website here.

**Policing: future supply and demand**

8.31    The MPS has already delivered budget savings of £600 million with targets for a further saving of £370 million by 2021. How impending budget cuts will affect policing in the

[78] https://www.walthamforest.gov.uk/content/violence-reduction-partnership
[79] https://www.walthamforest.gov.uk/sites/default/files/2021-10/Violence%20Reduction%20Partnership%20Annual%20Report%202019_0.pdf

borough cannot yet be determined, but commitments to frontline Emergency Response and delivering Neighbourhood Policing will remain. Despite these commitments, the Council has recognised the real impacts of budgetary cuts and has undertaken its own initiatives to help alleviate crime, as set out above. The Council anticipates that post-2021, and following the next round of budget savings, that it will have to review its suite of initiatives to help address public safety. This plan will periodically review available statistics on crime in the Borough and set out any new initiatives or increased levels of provision of existing initiatives where the Council has deemed them necessary to support police work. Such initiatives will be costed in further iterations of this report.

8.32    Whilst funding for expansion or improvement of the police estate has traditionally come through its own capital funding channels, this now appears severely limited in the current and future financial climate. Whilst there may be opportunities for public sector partners to work together to jointly get the most from their estate – this is currently under review with the scope to unify 'blue light services' in single locations where this is viable – it is unlikely that developer contributions through CIL/S106 would form a significant part of the overall funding required to deliver the infrastructure required to support Police services, and consequently the Council and Police partners will likely have to identify alternative sources of funding for this provision.

**Policing Requirements to 2035**

**District Ward Offices (DWOs)**

8.33    The Metropolitan Police Service (MPS) has identified the need for District Ward Office (DWO) accommodation in the borough as part of their Estates Strategy.

8.34    A DWO is a small room containing lockers and operational equipment and forms a 24/7 base of operation for the MPS.  It is not public facing, but rather a location typically used by officers at the beginning and end of their shifts.  The MPS currently police over 600 Wards in Greater London and DWO's are an integral part of this.

8.35    The Map Below (Figure 8.3) shows the requirement for DWO provision in Waltham Forest.  The Red and Amber colours relate to wards which have the greatest need for DWO coverage.  Through this map, the MPS has identified the following locations as in need of DWO coverage:

- Hale End & Highams Park – Amber
- Chapel End – Amber
- Higham Hill – Amber
- William Morris – Red
- Markhouse – Amber
- Wood Street – Amber
- Cann Hall – Amber
- Cathall – Amber

Figure 8.3: Requirement for District Ward Offices (DWOs) in Waltham Forest
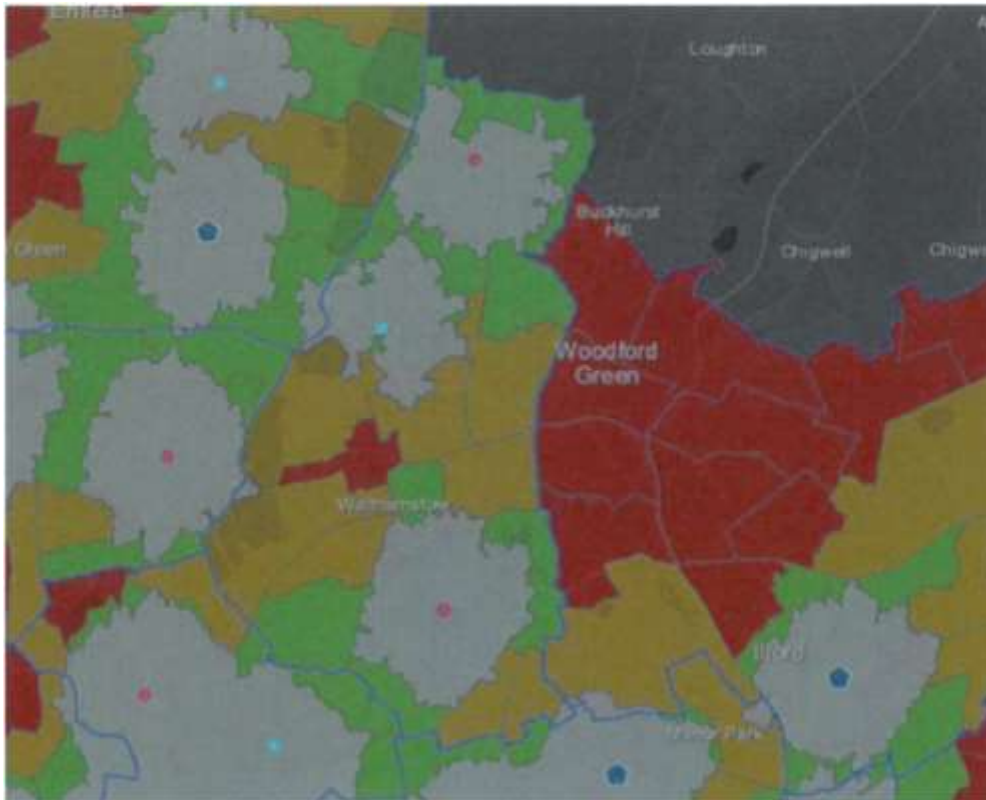


8.36    With regard to the delivery of DWOs the Council will engage with developers on all schemes of sufficient scale to be referable to the Mayor, to discuss potential on-site delivery of a DWO in an identified are of need.

8.37    As part of the engagement with the MPS and their representatives in the production of this IDP, it has also been communicated that the MPS are compiling a methodology for Section106 developer contributions and that this should be available in due course.  The Council will consider this approach when further information is available.

**Borough CCTV Operations Centre**

8.38    Based in a state-of-the-art operations centre in Waltham Forest, the Council's CCTV Operations Team can monitor and respond to security issues across the borough 24/7, deterring burglars and vandals and help keep homes, businesses and public spaces safe. The Operations Centre offers a range of services in addition to CCTV, including alarm monitoring, plant tracking and lone worker support.

8.39    The Borough's Operations Centre currently controls a network of 318 CCTV cameras in the borough.  The location of these cameras can be seen in Figure 8.4 below.

Figure 8.4: CCTV locations in Waltham Forest
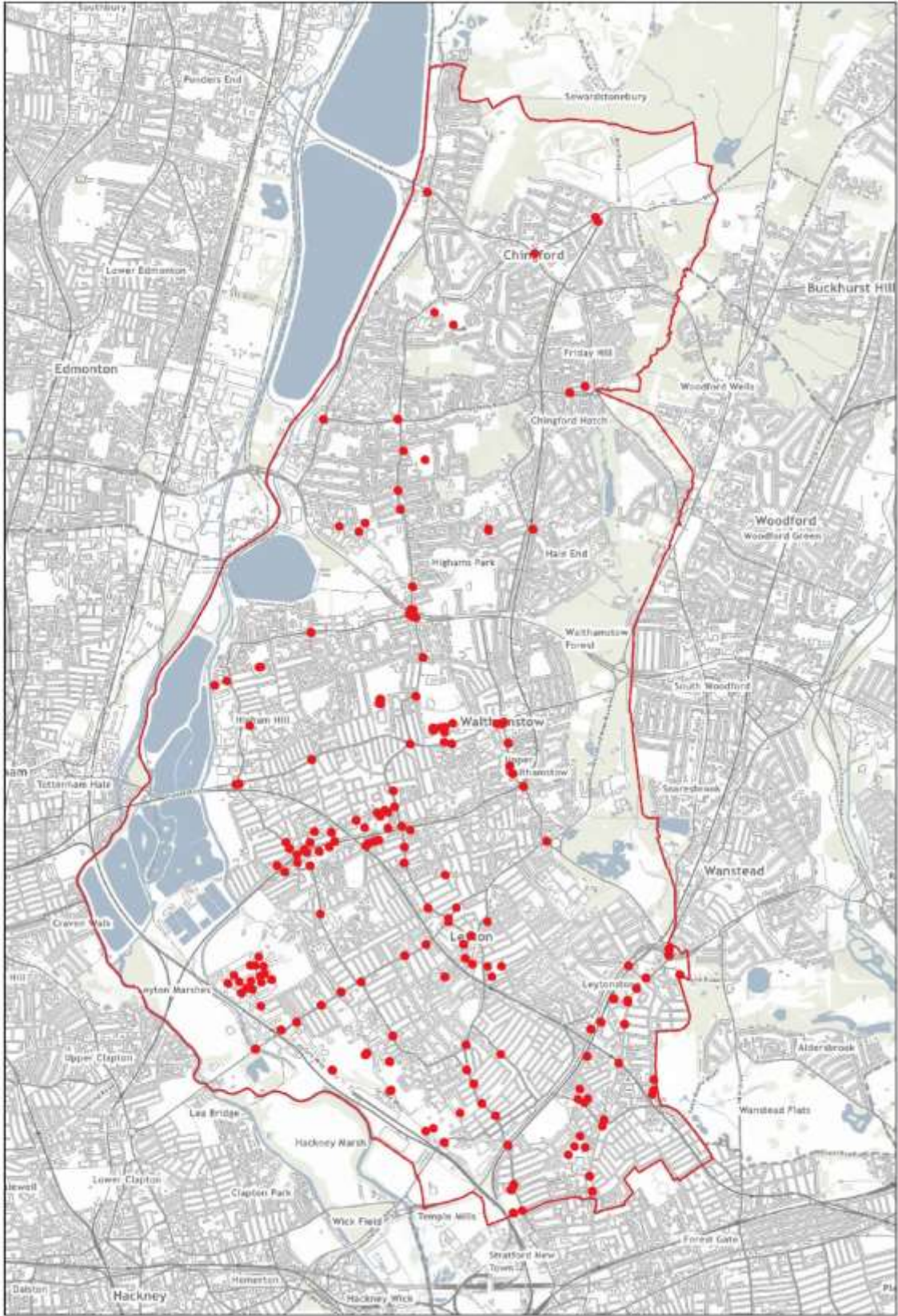
8.40    The Council's experienced CCTV Operations Team will help residents and businesses review their current equipment and help assess the best CCTV solution for need.

8.41    The Operations Centre Team also work closely with the Police and other Emergency Services and assist them in apprehending law breakers and providing evidence and monitoring ongoing events in the borough.

8.42    The Operations Team are committed to delivering a professional service with the latest digital technology. Further information can be found [here](here).

**Future Growth to 2035**

8.43    Major developments in areas of need are expected to connect to and make financial contributions towards the development of the borough's CCTV network, supporting the provision of emergency services in the borough, as well as active Traffic Enforcement, and of council services more generally.

8.44    The scale of contributions is often determined by the specific design of the site. The Council encourages a 'design out crime approach' ie the Home Office's Design and Technology Alliance against Crime and the Design Council, supported by the Technology Strategy Board, established a programme called Design Out Crime. From 2008 to 2010, it tackled problems in five priority areas where design can play an important role in fighting crime: alcohol-related crime, hot product theft, businesses, schools and housing.