London Borough of Tower Hamlets

Third Local Implementation Plan

February 2019

Foreword

I believe Tower Hamlets is the greatest place to live in London. We are a vibrant and diverse borough with a rich history. This Local Implementation Plan sets out our vision for improving transport in Tower Hamlets by implementing the Mayor of London's Transport strategy at the local level.

I have an ambition to create a borough which is an active, attractive and vibrant place for people to live, work and visit. Residents want to be proud of their local area. That's why over the past three years we've made cleaning up the borough a priority, keeping our streets clear of litter and introducing schemes like my Neighbourhood Refresh programme working with residents to make our streets safer and greener. In this Local Implementation Plan we commit to continuing to tackle our poor air quality and making the borough more accessible for pedestrians and cyclists.

The Mayor for London's Transport Strategy aims for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041. In Tower Hamlets, while 81 per cent of daily journeys made by residents are already done on foot, bicycle, or by public transport, we are not complacent about having already exceeded the Mayor's 2041 ambition for London. As a Council we wish to go further because the level of motor vehicles travelling through our borough is causing air pollution, injuries and poor health.

Car dominated streets limit the freedom of movement of people walking and cycling, and this has a detrimental impact on those who depend on walking and cycling to get about, particularly children. Too many roads and streets are polluted, congested and dangerous. This plan complements the work we are doing around our 'Breathe Clean' campaign trying to reduce emissions. Research by King's College found that children in Tower Hamlets had up to 10% less lung capacity than the national average because of air pollution. As Mayor, I'm committed to tackling this.

Our vision is for walking and cycling to play a central role in the borough's growth to relieve congestion on the roads, buses and train systems. This Local Implementation Plan, together with a range of local strategies which impact on transport, recognises that creating a cleaner and greener place to encourage more walking and cycling not only has an important role in improving the health and quality of life the borough's residents, it also brings with it economic benefits and helps to make the borough more attractive, liveable and safe.

Tower Hamlets supports the ‘Healthy Streets’ approach set out in the Mayor’s Transport Strategy and we are committed to traffic reduction, liveable neighbourhoods, working towards Vision Zero and putting health and well-being at the heart of local transport plans and schemes.

John Biggs

Mayor of Tower Hamlets

Mayor John Biggs and Cllr Krysten Perry, London Borough of Tower Hamlets Cycling Champion

Executive summary

Tower Hamlet's Local Implementation Plan (LIP) is a statutory document prepared under the GLA Act that requires the Borough to detail its proposals for implementing the Mayor for London's Transport Strategy (MTS) within the borough. With each new MTS, new LIPs are required to be prepared, and this document forms the third LIP for the Borough to correspond with the new MTS, published in March 2018.

This document is structured in three chapters.

Chapter 1 outlines the introduction, local approval process, consultation process and the Council's statutory duties.

Chapter 2 reviews the borough's transport objectives. This includes background data on geography, demographics and transport in Tower Hamlets. It is followed by a detailed review of the nine MTS outcomes set by TfL, looking at the challenges and opportunities they present to Tower Hamlets. It considers relevant local strategies, plans and ambitions relating to transport. This section describes some of the solutions to transport the Council is implementing as its Borough Objectives along with aspirations for the future. It also explains the Council's transport approach with emphasis on how transport can contribute to equality, health and well-being.

Chapter 3 details how the London-wide targets set by TfL will be met in practical terms; what infrastructure will be built and when. It provides information on schemes and initiatives to promote walking, cycling and public transport. This section includes the 'TfL Business Plan', how schemes will be funded, the three-year Delivery Plan, and annual programme of work and a risk assessment.

This document is accompanied by the Strategic Environmental Assessment (SEA) and Equalities Impact Assessment (EqIA).

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CHAPTER ONE

INTRODUCTION

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1. Introduction and preparing a LIP

1.1 Introduction

The Local Implementation Plan (LIP) is a statutory document prepared under Section 145 of the GLA Act and sets out how the borough proposes to deliver the Mayor's Transport Strategy (MTS) in its area, as well as contributing to other local and sub-regional goals. It has been developed in accordance with the Revised Guidance for Borough Officers on Developing the Third Local Implementation Plan published by TfL in March 2018.

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

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

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

The Council notes that the overarching aim of the strategy is for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041, compared to 63% today, and there are different targets set for central, inner and outer London. The MTS target for Tower Hamlets is 89% of all trips to be made on foot, by cycle or using public transport by 2041 in the Borough, compared to the 81% observed in 2016/17. The LIP outlines how Tower Hamlets Council will set local priorities and targets in order to assist with achieving this aim.

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

1.2 Local approval process

The development of the draft LIP was based on the Council's strategic priorities, and core strategies and policies.

This Consultation Draft LIP was approved by the Mayor of Tower Hamlets in October to be issued for consultation as required by LIP guidance.

1.3 Statutory consultation

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

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

The borough undertook a statutory consultation exercise between November and December 2018. A separate transport strategy will be issued for public consultation later in 2019 covering similar ground. We wish to avoid consultation fatigue on high-level transport strategy so have opted not to pursue any non-statutory consultation.

All direct consultees were written to, drawing attention to the consultation, which was made available via a website link.

The consultees were as follows:

Statutory consultee	Those consulted
TfL	TfL
Police	The Met Police Borough Commander, Ambulance and Fire Service
Disability groups	Local Voices and Accessible Transport Forum
Local authorities	City of London, Hackney, Newham, Greenwich, Lewisham, Southwark
Other consultees agreed by the Mayor of Tower Hamlets	
Transport & environment groups and operators	London Cycling Campaign, Tower Hamlets Wheelers, Tower Hamlets Living Streets

Business groups	London Legacy Development Corporation; Canary Wharf Management Group. Aldgate Partnership (Aldgate proposed BID area) Queen Mary University (Mile End and Whitechapel campus) Truman Brewery
Community groups	Friends of Meath Gardens Friends of Arnold Circus Oxford House (business and resident engagement in Bethnal Green town centres) Roman Road Trust (business and resident engagement for Roman road East and West town centres) Poplar Housing and Regeneration Community Association Limited (Chrisp Street)

We received replies from TfL, Tower Hamlets Wheelers and Leaside. Their responses were noted and addressed through correspondence.

1.4 Statutory duties

The Equality Duty's purpose is to help public bodies consider how different people will be affected by their activities and to ensure this forms part of their policy and decision-making processes. It applies to all public authorities named in Section 19 of the Equality Act, including government departments, health bodies, local authorities, transport authorities, schools and the police.

As part of the Equality Act 2010, a legal duty was placed on public bodies and others carrying out public functions to ensure that they consider the needs of all individuals in their day to day work – known as the Public Sector Equality Duty. It covers a number of protected characteristics, such as age, race and disability.

The Public Sector Equality Duty and The Equality Act require councils not to discriminate on the basis of age and ability. Therefore, the roads we live on, or use to get about, need to be usable for all ages and abilities.

We have taken account of these duties and the legal duties placed on local authorities through the Health and Social Care Act 2012 to promote public health through transport. The Tower Hamlets objectives and programme of schemes reflects our adherence to the principles of health and equality for all in public transport and highways design.

The borough has met its statutory duty and conducted a Strategic Environmental Assessment (SEA) and, as recommended, an Equality Impact Assessment (EqIA) on the proposals contained in its LIP. The SEA Environmental Report, including a non-technical summary, and a draft of the EqIA was available to statutory consultees during the consultation period.

The SEA underlines that the major issue in Tower Hamlets is air pollution, which is currently being linked with approximately 100 deaths a year in the borough. This is predominantly associated with pollutants arising from ground-based traffic movements and congestion. The difficulties for the local authority going forwards are that the pollution hot spots tend to be on routes maintained by TfL and on which the local authority can have little direct influence. As noted in the scoping report of the SEA, these air quality issues can only be addressed by the LIP3 if there is a coordinated approach, involving Tower Hamlets, regional bodies such as the Greater London Authority and TfL. These organisations need to work together with the Council to constrain motor traffic and enable more walking, cycling and public transport.

1.5 LIP approval

In November 2018, the Consultation Draft LIP was approved for statutory consultation by the Mayor of Tower Hamlets. It was then issued to TfL, neighbouring boroughs and other statutory consultees for comment in December 2018, with responses received in January 2019.

In January 2019, senior managers reviewed the plan and process, with Lead Members reviewing the consultation draft with the consultation responses on 30th January 2019. The final LIP will be submitted to Cabinet for approval on 27th February 2019.

The final LIP will be submitted to the Mayor of London in February 2019 subject to Cabinet approval.

CHAPTER TWO

LOCAL CONTEXT

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2. Local Context

2.1 Introduction

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

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

The Healthy Streets Approach is about engineering physical activity back into the daily lives of residents and reducing the use of unhealthy types of transport, most notably the use of private motor vehicles. Travel by private motor vehicle (car, motor bike or van) is sedentary (so inactive and bad for health) but also causes harm to others through pollution (air and noise), road injuries and road deaths. Roads dominated by motor vehicles blight communities, have a negative impact on well-being and freedom of movement of others, particularly children and those accompanying children, older and disabled people and anyone walking or cycling. Ultimately, the Healthy Streets Approach is a health impact assessment for our roads and public spaces. At street level, the Healthy Street approach means investing in walking, cycling, public realm and public transport to provide roads which are safe, clean and appealing to all, regardless of age or ability.

Prioritising walking, cycling and public transport is also about increasing efficiency. Cities designed for people over cars, not only have higher levels of health and well-being, but also offer a more space efficient, reliable and sustainable transport. This is vital for a borough like Tower Hamlets which faces health issues, but also has a rapidly growing population and economy.

For more information on Healthy Street, please see:

http://content.tfl.gov.uk/healthy-streets-for-london.pdf

2.2 Local context

i. Location

The London Borough of Tower Hamlets is an Inner London Borough located to the east of the City of London. It is bounded to the south by the River Thames, and bordered by the London Boroughs of Newham, Hackney and City of London north of the Thames. The Borough covers 19.77km^2 (1,978ha) land area, the eighth largest of the Inner London Boroughs.

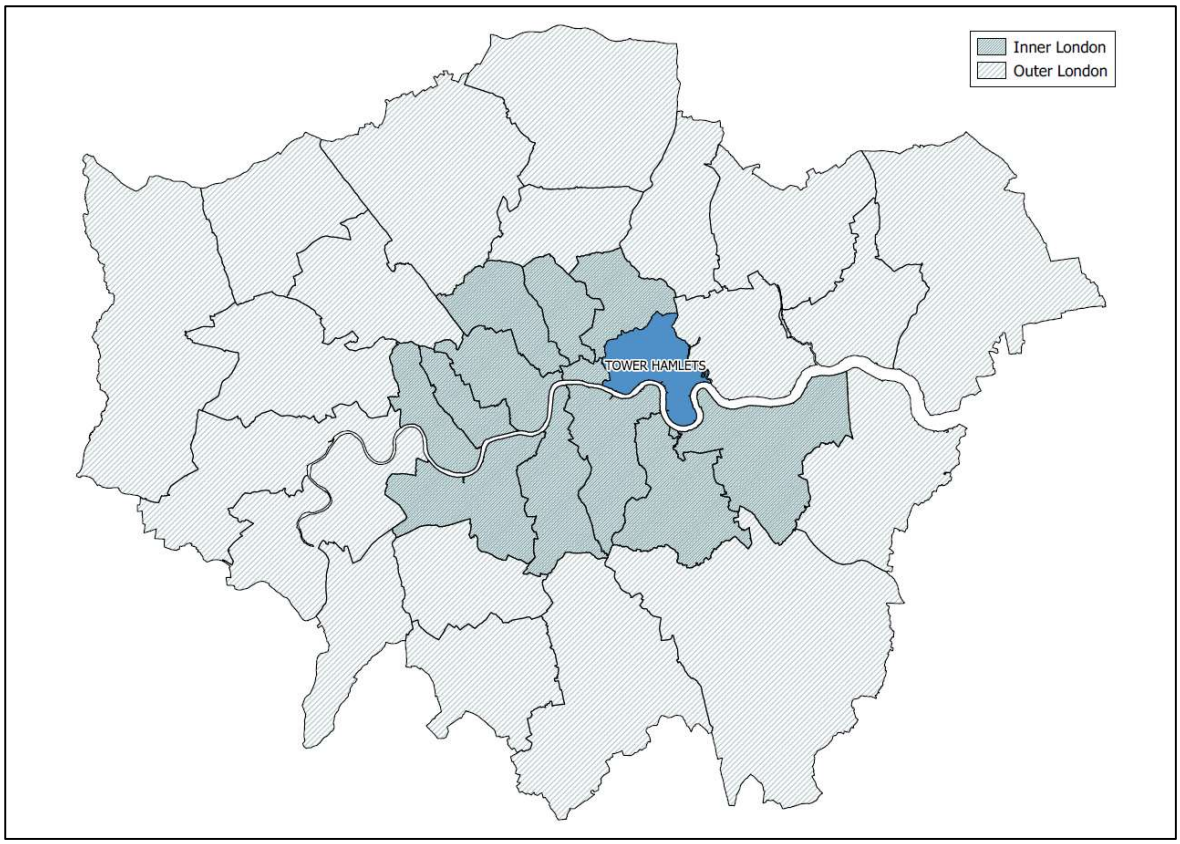

Figure 1: Tower Hamlets location

ii. Population Growth

Tower Hamlets has a resident population of 304,854 making it the fourth largest population of any of the Inner London Boroughs[1]. The daytime population increases by about 60%, rising to 428,000. This is largely due to Canary Wharf which attracts a large working weekday population.

[1] Office for National Statistics (ONS), Mid-Year Population Estimates, 2016

185,744 people commute into Tower Hamlets from other local authorities while only 71,363 people commute out of Tower Hamlets to other local authorities resulting in a net change of an additional 114,381 people (Census data, 2011)[2].

Tower Hamlets has an average population density of 149 persons/ha, the third most densely populated borough in London and the second highest of the Inner London Boroughs.

The population has increased by 35.3% (79,603 people) over the past 10 years. The overall population increase for Inner London was 16.5% over the same timeframe. This places significant pressure on existing transport infrastructure. However, the population is predicted to increase to 365,000 by 2026, making it the fastest growing population in the UK (see Figure 2).

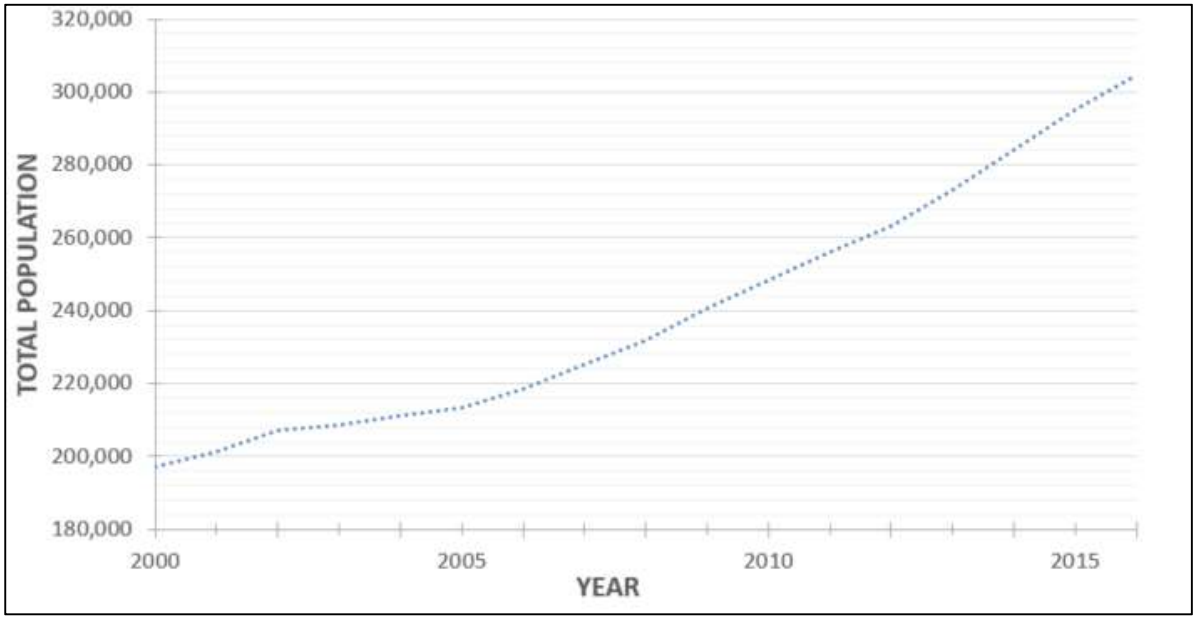

Figure 2: Tower Hamlets Population Increase 2000 – 2016

Population growth is expected to vary greatly within the Borough. Figure 3 shows the projected percentage increase in the population by Middle Super Output Area (MSOA). Populations in many areas, particularly in the centre of the Borough, are expected to fall slightly (less than 0 per cent growth). This is because there is little housing development planned in these areas. At the same time the average household size of the existing population is expected to fall as the population ages. For instance, an area in Shadwell is projected to see the biggest decrease, with a fall of 9 per cent over the next ten years.

[2] Office for National Statistics (ONS), Location of usual residence and place of work by method of travel to work https://www.nomisweb.co.uk/census/2011/WU03UK/chart/1132462401

Dramatic increases are anticipated in other areas in the Borough. Population growth is expected to be concentrated in the east of the Borough where there is large scale housing development. The populations of two areas in the Isle of Dogs - Canary Wharf and Blackwall & Cubitt Town wards - are expected to nearly double over the next decade (+90 per cent). Population growth in these and other areas of the borough is driven primarily by large scale housing development. [3]

The MTS targets and trajectories for transport outlined in this LIP3 take predicted population increase into consideration.

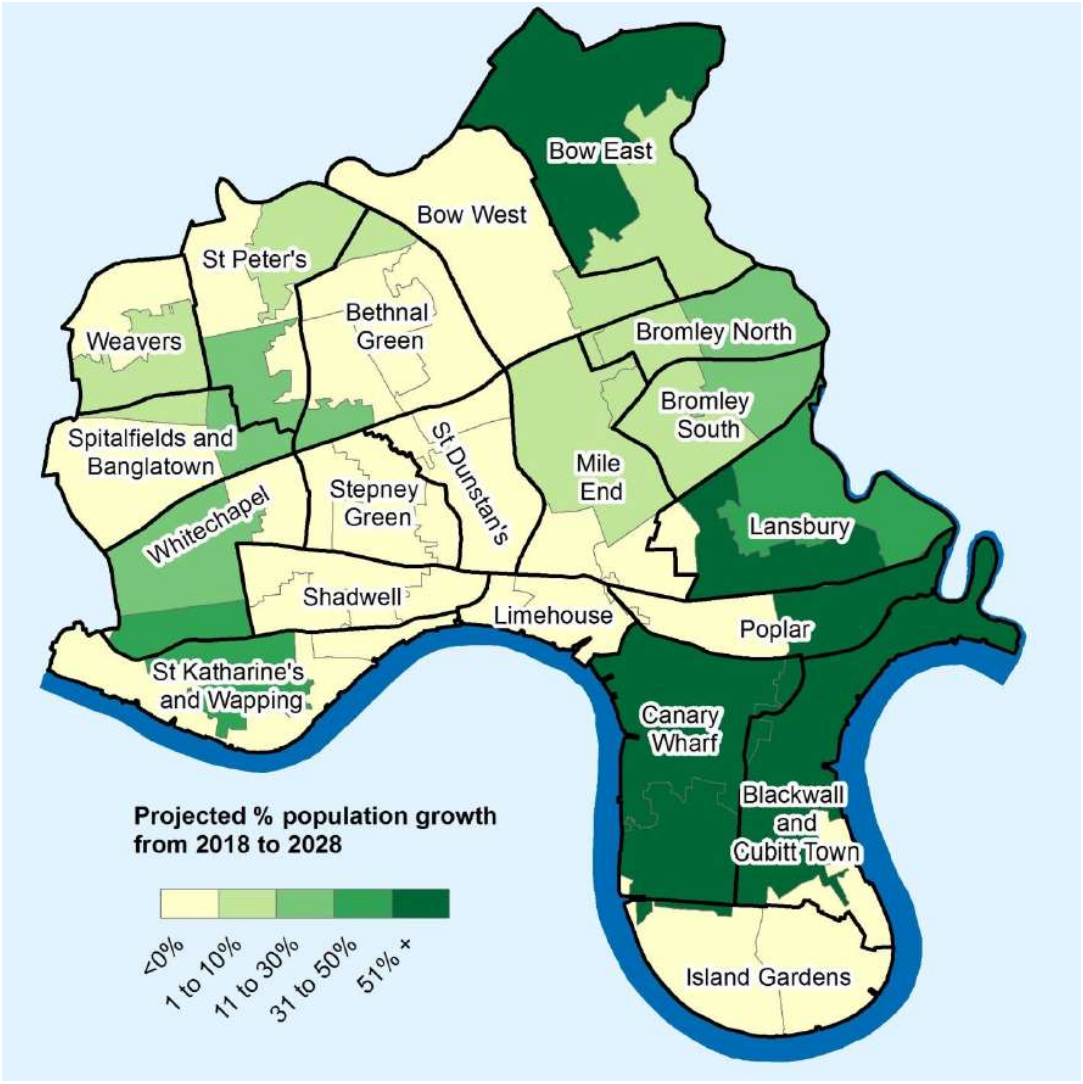

Figure 3: Projected percentage increase in population by MSOA, 2018 to 2028. Source: GLA 2016-based housing led population projections.

[3] Population Projects for Tower Hamlets. Borough Statistics 2018. Accessed via internet.

iii. Shifting age profile

The Tower Hamlets population is predominantly young. The average age of residents is 32 years, so lower than the average for Inner London which is 35 years old, the average of 36 years old for Greater London and 40 years old for England. 24% of residents are 19 years old or younger. Half the population is aged 20-39. Only 2% of residents are over 75 years old.

However, the Borough's population is expected to age soon, although Tower Hamlets will remain a relatively young borough. Over the next decade, the number of residents aged 65+ is projected to grow by 39% compared with a 17% increase in working age residents and a 7% increase in school age children.[4] The 2016 school population of 42,000 is set to increase by 25% by 2025.[5]. Figure 4 illustrates this change.

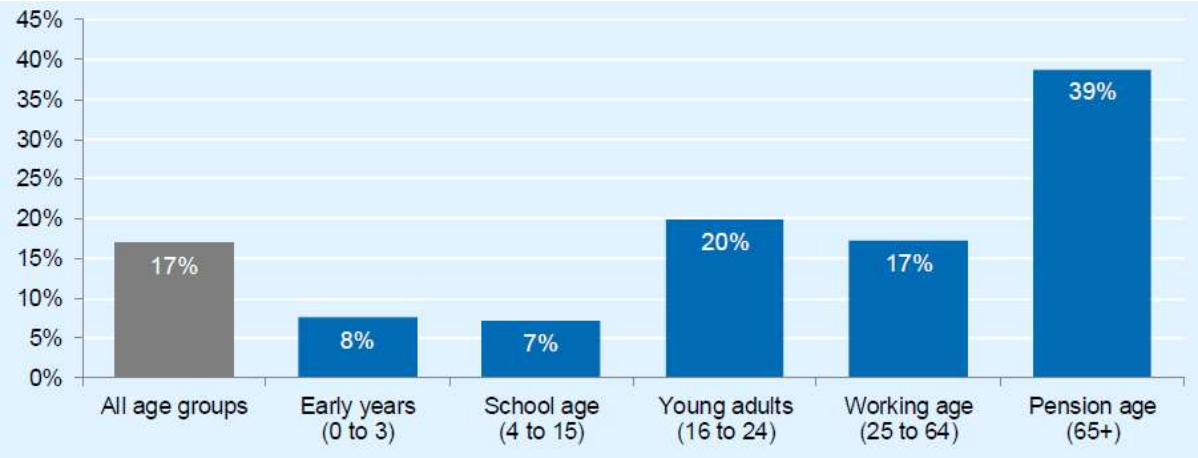

Figure 4: Projected percentage increase in population by broad age group, 2018 to 2028. Source: GLA 2016 – based Housing-led Population Projections

iv. Uncertainty

All projections are subject to some level of uncertainty and are at their weakest in times of great demographic change because they rely heavily on information about historical trends. These projections do not attempt to account for the impact of the UK leaving the European Union (known as 'Brexit'), which will likely affect the economy and migration patterns, and consequently the population of Tower Hamlets. It is unclear what assumptions should be made about the future until Brexit policies are finalised and new trends begin to emerge. [6]

[4] Population Projects for Tower Hamlets. Borough Statistics 2018. Accessed via internet
[5] Data source: Tower Hamlets Strategic Plan, 2016 – 2019).
[6] Population Projects for Tower Hamlets. Borough Statistics 2018. Accessed via internet.

v. Life expectancy and health

In Tower Hamlets, life expectancy at birth is 78.1 for males and 82.5 for females[7]. This has increased by 3.5 years for males, and 2.7 years for females over the course of 10 years. However, Tower Hamlets' life expectancy is still 2.2 and 1.7 years lower than the Greater London average for males and females respectively.

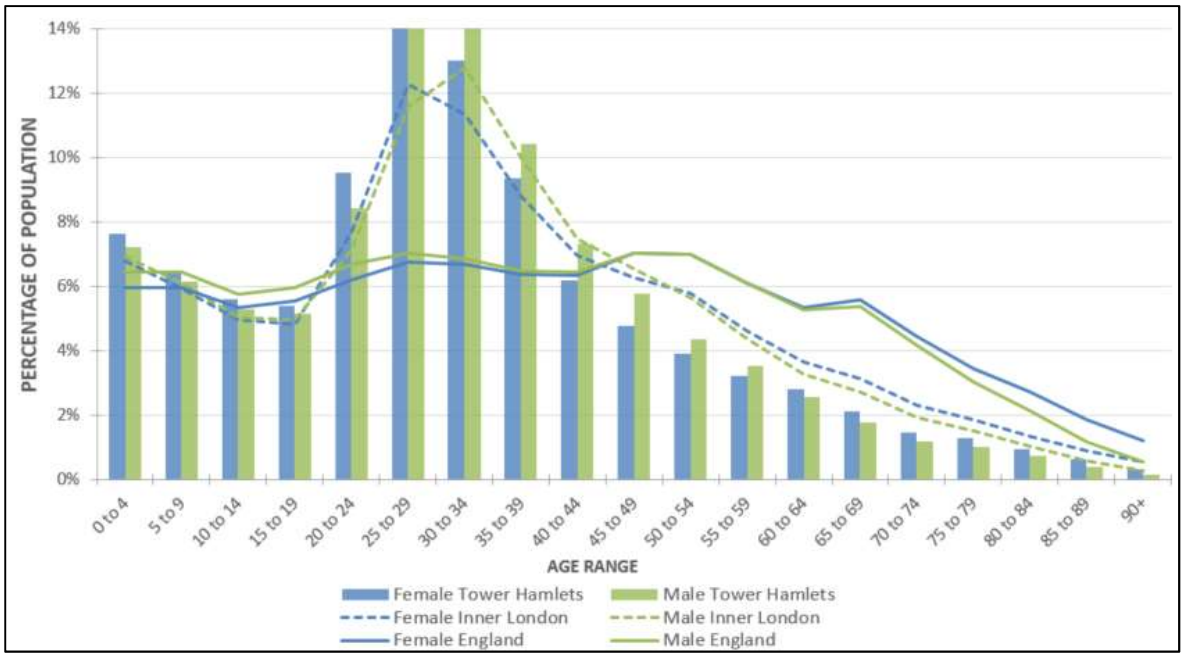

Figure 5: Proportion of residents by age and sex

The 'Tower Hamlets Health and Wellbeing Strategy 2017-2020' notes the higher levels of lifestyle risk factors in Tower Hamlets compared to elsewhere:

- 13% of children aged 4-5 are obese (7th highest in the country) and 1 in 4 children aged 10-11 are obese, amongst the highest in the country;
- 68% do not meet recommended levels of physical activity (compared to 66% nationally) with significantly lower levels in more deprived parts of the Borough.

Our aim is to encourage more walking and cycling. Cars, vans and powered two-wheelers (PTWs) support sedentary behaviours which are bad for health. Private motor vehicles provide the most sedentary form of door-to-door transport and one of the indirect consequences of increased traffic has been a rise in obesity, particularly among children. Each additional hour spent in a car per day is associated with a 6%

[7] ONS, Life Expectancy at Birth and Age 65, 2015

increase in the likelihood of obesity, while each additional kilometre walked is linked to a 4.8% reduction on the likelihood of obesity (Frank, 2004)[8].

Tower Hamlets Mayor's Strategic Pledges 2018 notes how "A Tower Hamlets child will have smaller and less developed lungs than a child where the air is clean. And anyone with a breathing problem – a child with asthma, or an adult with COPD - will suffer more in Tower Hamlets because of our poor-quality air. Several hundred Tower Hamlets residents die early every year as a result of long-term exposure to air pollution, with many of our residents, particularly children and the elderly, living with life-limiting conditions such as asthma and heart conditions" [9] Consequently our aim is also to reduce the use of all polluting and harmful vehicles including cars, vans, HGVs and PTWs to improve air quality.

vi. Diversity

Tower Hamlets has 230 individual ethnicities recorded amongst residents during the 2011 Census[10]. This is the 19th highest number recorded in England and Wales and 7th highest in Inner London. The proportion of non-white British ethnicities is now 69%, compared to 58% across Inner London and just 20% in England. This is the 5th highest proportion in England and Wales, and 3rd highest in Inner London. Figure 6 illustrates the percentages of non-white British residents by geographical area in the Borough.

Cultural diversity provides for a rich variety of community life in the borough but can pose challenges in delivering change in travel behaviours in terms of communications and cultural attitudes/perceptions towards use of different modes of transport. Therefore, our programme of supporting measures seeks to cater for these differences.

vii. Employment

The employment rate for the Borough is comparatively low amongst the working age population, at 62.2%, compared to 73.3% for the Inner London average[11]. Figure 7 illustrates the employment rate across the Borough, showing that areas of lowest employment are around Mile End and Queen Mary University of London.

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[8] Frank LD., Andresen MA, Schmidt TL, 'Obesity relationships with community design, physical activity, and time spent in car', Vancouver, 2004

[9] https://www.pdf-archive.com/2018/08/13/02-thlp18-manifestoa5web2/02-thlp18-manifestoa5web2.pdf

[10] Census 2011, QS211EW – Ethnic Group (detailed)

[11] ONS, Employment Rate by Gender (Working age), by broad age groups, and whether disabled, Annual Population Survey, 2017

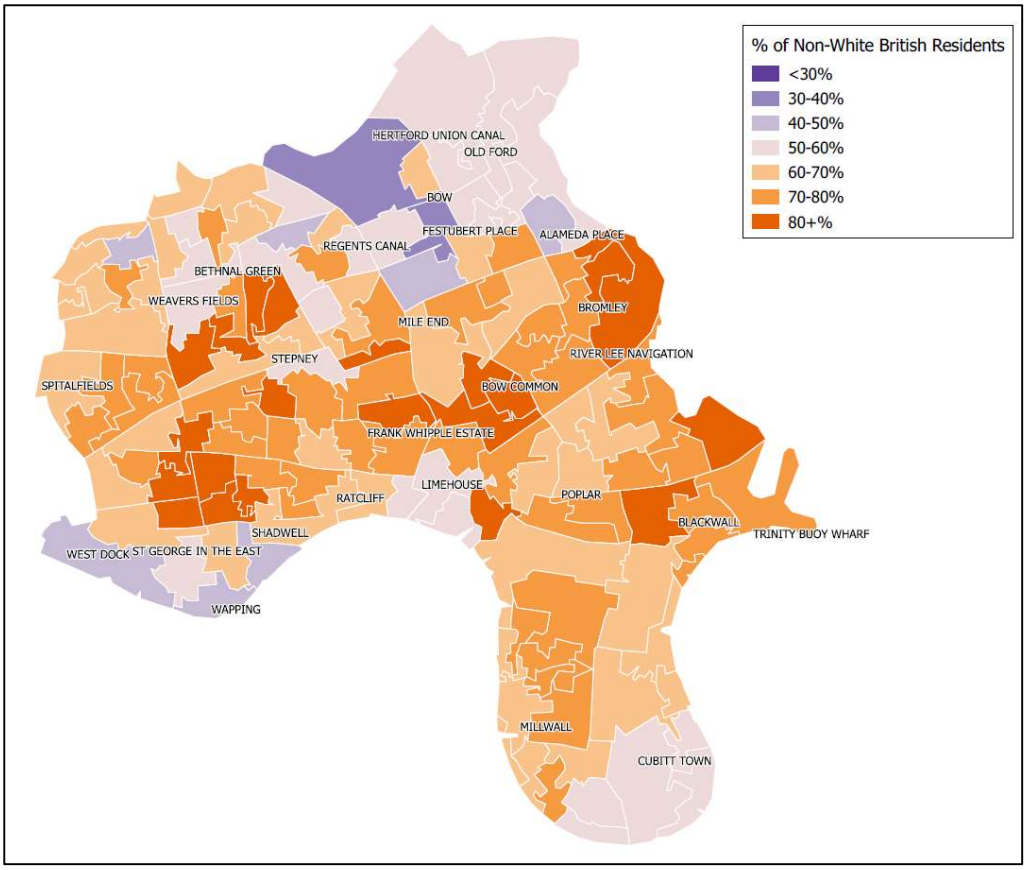


Figure 6: Proportion of non-white British Tower Hamlets residents

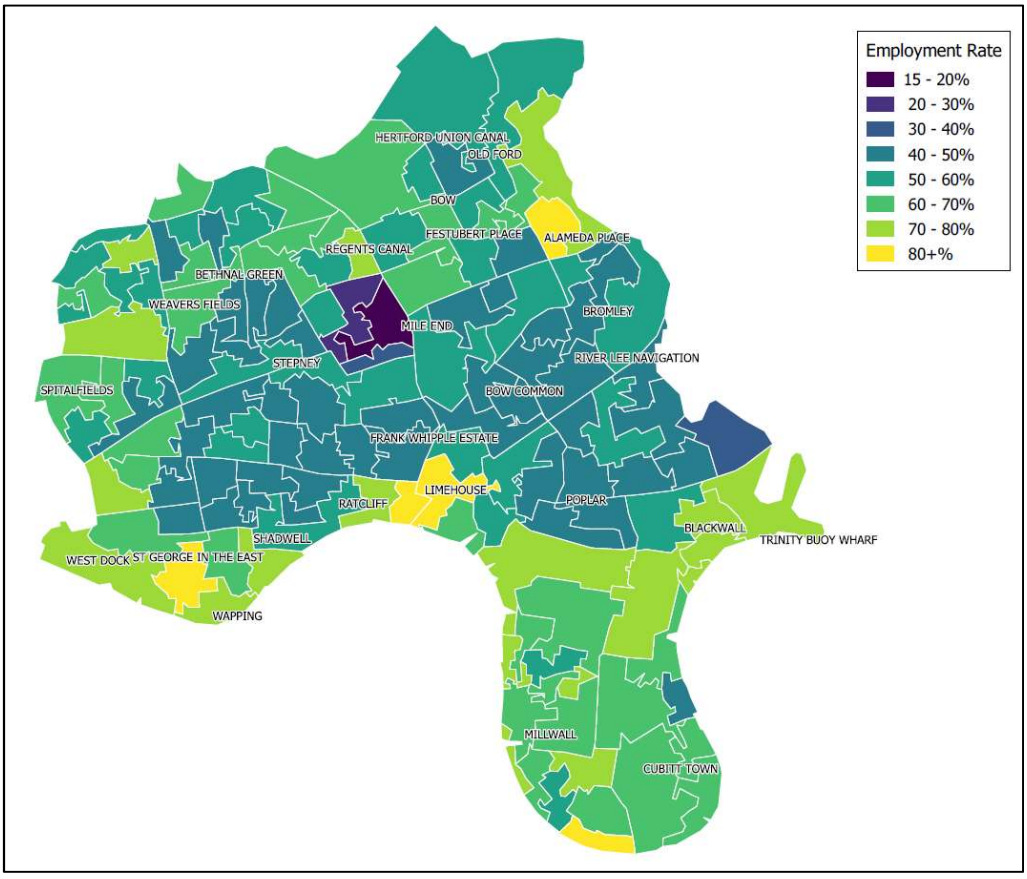
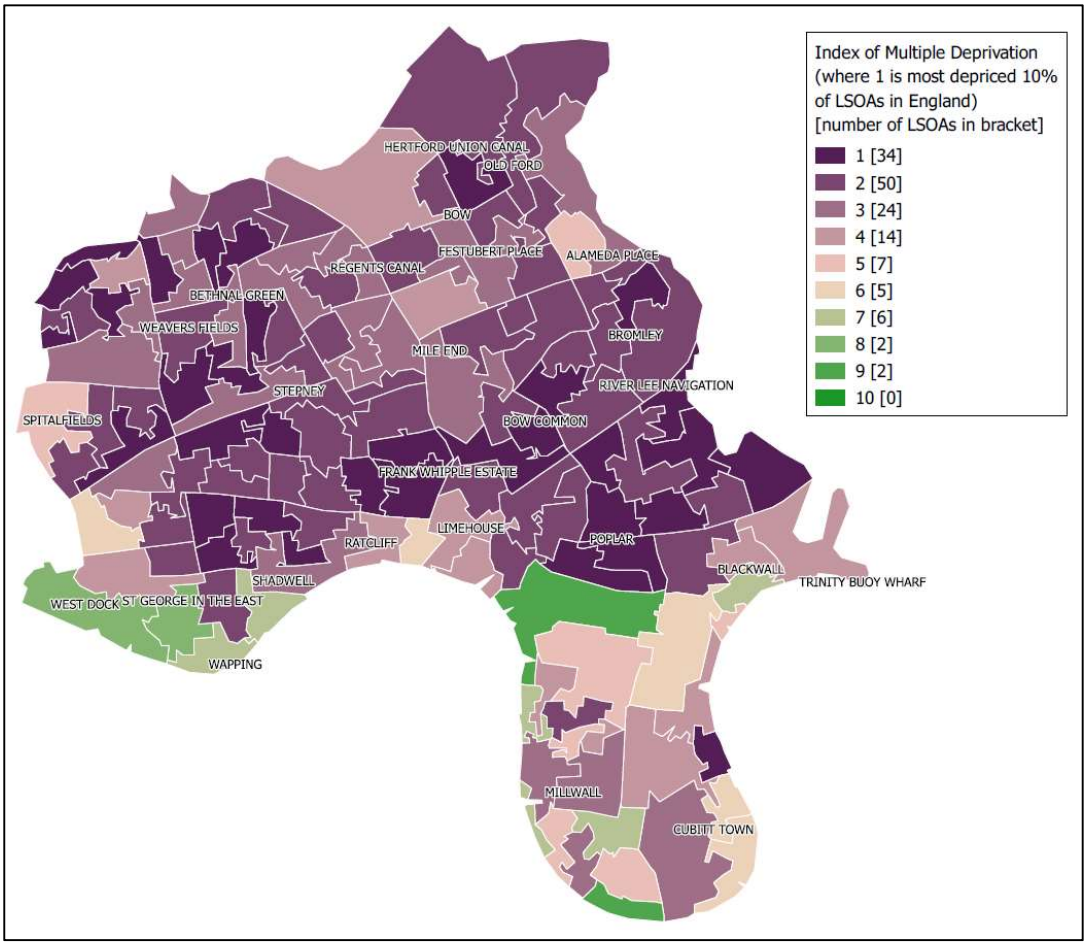


Figure 7: Tower Hamlets Employment Rate

viii. Multiple deprivation

The Index of Multiple Deprivation (IMD)[12] is based upon indicators of income, employment, education, health deprivation disability, crime, barriers to housing and services, and living environment. Each indicator is scored and given a weighting which is used as the basis for the IMD.

Figure 8 shows the distribution of IMD decile ratings within the Borough at Lower Super Output Areas (LSOA) level. These are calculated by ranking each LSOA in England from most to least deprived and splitting the rankings into 10 equal groups. Each decile is given a rating, with decile 1 comprising the most deprived 10% of LSOAs in England, and decile 10 comprising the least deprived 10%. The IMD ranks



58% (144) of Tower Hamlets' Lower Super Output Areas (LSOAs) in the most deprived 20% of LSOAs in England.

[12] Department for Communities and Local Government (DCLG), English Indices of Deprivation 2015 for London

Figure 8: Index of Multiple Deprivation Deciles[13]

ix. Economic activity

The borough's economy is dominated by the financial sector, largely due to Canary Wharf, the second largest business district in the UK. Around 107,000 commuters head to work in Canary Wharf each day, and major tourist attractions like the Tower of London draw in over 4 million visitors each year.

The Tower Hamlets Growth Strategy aims to create the right environment for sustained economic growth whilst harnessing the benefits for residents and businesses. Certain types of development and transport are conducive to this. Investing in public transport contributes to the interactions between people that are important for success (the agglomeration benefits recognised by economists) allowing big cities such as London to prosper with declining car use [14](Metz, 2014) [15](Transport Studies Group, University of Westminster). Most businesses choose to be located on dense developments near good public transport networks to access a wide talent pool of potential employees and facilitate face-to-face contact for business. In Tower Hamlets, businesses are attracted by the existing transport hubs such as LUL stations, Docklands Light Railway line, and the prospect of Crossrail at Whitechapel Road and Canary Wharf stations.

While earnings for all workers in the borough are the second highest in London, the resident population suffers from pockets of deprivation and average earnings for residents are considerably lower than average earnings of all borough workers. As noted in the Strategic Plan 2016-19 "the extent of poverty for children and older people remain stubborn long-term challenges" (p6). Tower Hamlets' adults develop health problems 10 years earlier than the national average.

x. Creating successful high streets and markets

A key part of implementing the 'Tower Hamlets Town Centre Strategy 2017 to 2022' is carrying out improvements to the public realm. To improve the competitiveness and vitality of our town centres as sustainable places at the heart of the community, celebrating our East End heritage, this strategy aims to exploit the success of the borough's street markets. This aligns with the new Local Plan, Growth Strategy and Health and Well-Being Strategy.

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[13] Department for Communities and Local Government (DCLG), English Indices of Deprivation 2015 for London

[14] Metz, D. 'Peak Car', 2014)

[15] Transport Studies Group, University of Westminster, for Transport for London and the Department of Transport, 'JLE Summary Report', (June 2004)

Successful high streets and town centres are an essential part of a thriving local economy and have been the subject of numerous reviews at a local, regional and national level, including the independent review by Mary Portas (2011) and the Grimsey Review (2013). Residents and businesses alike want to see a variety of shops and other businesses which meet the needs of local communities and offer a range of jobs for local people, in a pleasant and safe environment (Tower Hamlets Partnership, Community Plan 2015).

Tower Hamlets has relatively high numbers of independent retailers. Canary Wharf, while attracting a large weekday working population, could benefit from more arts and cultural events to draw weekend visitors. Street markets attract many visitors and enhance footfall, but the aim is to improve their offer and street environment. “We have the opportunity to design spaces that are attractive to shoppers as well as health promoting”[16] (p3).

Improvements include actions to support new waste, recycling and air quality strategies. The continuing extension of our Legible London signage programme is critical to helping visitors find local centres and places of interest and includes approximate walk times. Further improvements will include changing market stall infrastructure, modifying streetscapes, and improving key pedestrian links to town centres.

Specific draft visions exist for Town Centres; Chrisp Street District Centre, Bethnal Green District Centre, Roman Road East District Centre and Brick Lane District Centre. These visions complement our town centre regeneration programmes and delivery plans for electric vehicle charging points, air quality monitoring, cycle storage and wayfinding to improve the visitor experience and extend footfall which in-turn will support local business.

Within the Council there are strong working links between teams such as public health, regeneration, high streets, town centres, growth and economic development, and the Place Directorate which will provide a coordinated approach to implementing the Delivery Plan.

xi. Political outlook in relation to transport

Tower Hamlets as a Council has a progressive transport agenda with the Borough Mayor’s Strategic Pledges which tally with the aspirations for traffic reduction and healthy streets outlined in the MTS. The Borough Mayor’s Strategic Pledge reflects the aspirations of the MTS, with most schemes focussing particularly on green streets and clean air

[16] Tower Hamlets Town Centre Strategy 2017 to 2022

2.3 Transport overview

The existing infrastructure network in Tower Hamlets presents constraints to capacity and ease of movement, but also provides several opportunities to enable more cycling, walking and public transport use. One of the main deterrents to walking and cycling on local, residential roads is rat-running and through traffic. For this reason, the borough is pursuing Love Your Neighbourhoods projects, an approach to curb through traffic using inappropriate residential routes.

A high density of stations link to frequent services on the DLR, National Rail and Overground. The Borough will also benefit from 2 new stations on Crossrail's new Elizabeth line. Walking rates are relatively high, but the percentage of overall trips done by bicycle could be significantly increased which would help reduce motor traffic. See Figure 10 below.

A wide range of Tower Hamlets policies and programmes support the aims of the MTS and focus on walking, cycling, improved air quality and far fewer road casualties. The Borough Mayor's Strategic Pledges is committed to half of the borough becoming Liveable Neighbourhoods incorporating multi-modal improvements including new pocket parks, school streets (timed closures to motor traffic or more transformational schemes), improved walking and cycling environments, cycle hangars, car bike port and EV charge points. These are complemented by Slower by Design and Strategic Cycle Route projects on boundary roads.

i. Major TfL Schemes

In terms of major schemes planned by TfL, the proposed Rotherhithe to Canary Wharf crossing for pedestrians and cyclists has the potential to create a new route across the Thames benefitting communities on both sides of the river.

The Silvertown Tunnel, a new twin-bore road tunnel under the Thames linking Greenwich Peninsula and Silvertown, is also planned by TfL at a cost of £1 billion. More detail on the Silvertown Tunnel is provided in the Delivery Plan section of this document under the TfL Business Plan.

Figure 9: Plan of Tower Hamlets including transport infrastructure

ii. Opportunities and challenges

The current mode share for trips originating in Tower Hamlets are shown in Figure 10.

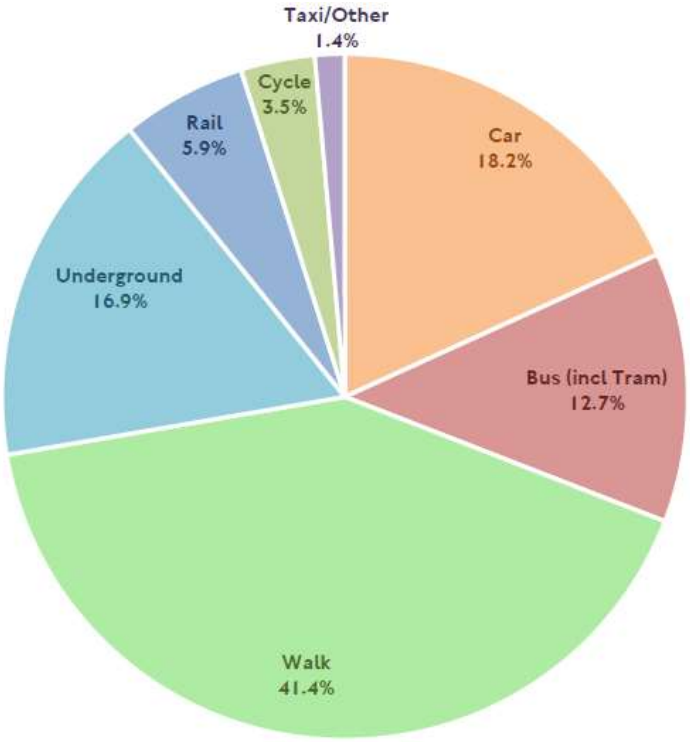

Figure 10: Mode share trips originating in LB Tower Hamlets (July 2017), Source: Transport for London, http://content.tfl.gov.uk/tower-hamlets-june-2017.pdf

Table 1 shows the car and van availability per household. The average ratio of cars or vans per household in Tower Hamlets is 0.429 across the Borough, with 85% of residents without access to off-street parking. This is low in comparison to:

- Inner London: 0.537 cars/household
- Greater London: 0.812 cars/household
- England: 1.156 cars/household

This should mean lower car-dependency compared to other boroughs. Nevertheless 17% of Tower Hamlets residents say that traffic congestion is among their top three personal concerns (Tower Hamlets Strategic Plan, 2016 – 2019, p7).

The highest car ownership occurs south of Cubitt Town (0.692), and the lowest occurs in Whitechapel, to the east of Aldgate East station (0.263). Differing car ownership throughout the Borough is shown in Figure 11.

Car or Van Availability[17]	Tower Hamlets	Inner London	London	England
No cars or vans in household	63%	56%	42%	26%
1 car or van in household	32%	35%	41%	42%
2 cars or vans in household	4%	7%	14%	25%
3 cars or vans in household	1%	1%	3%	5%
4 or more cars or vans in household	0%	0%	1%	2%

Table 1: Car/van availability per household

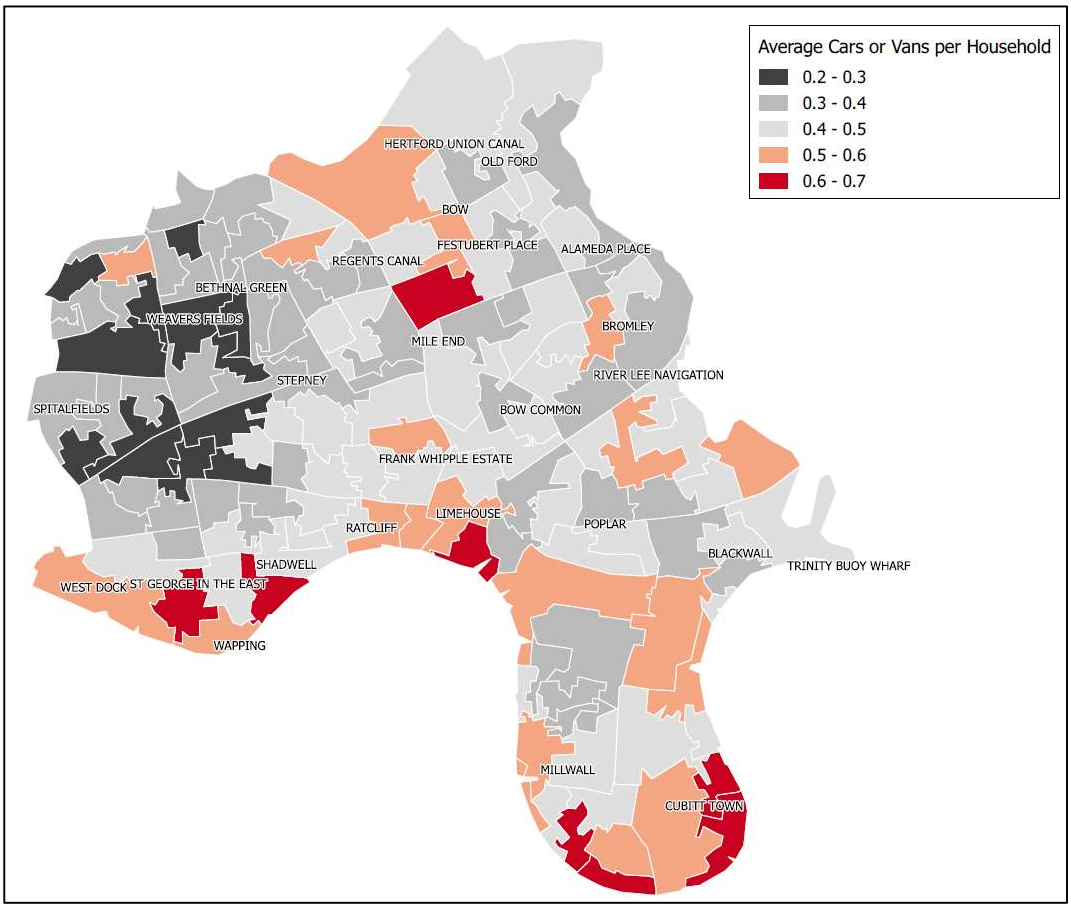

Figure 11: Average Cars of Vans per Household

[17] Census 2011, KS404EW - Car or van availability

While Tower Hamlets lacks green space in comparison to other inner London boroughs, a substantial proportion of land is currently dedicated to water and the canals and tow-paths provide attractive walking and cycling routes. 17% of land is dedicated to road and again this provides an opportunity in terms of space which can be re-allocated away from harmful modes towards healthy, active travel. See Table 2.

Land Use (%)[18]	Tower Hamlets	Inner London	London	England
Area of Water	22%	4%	3%	3%
Area of Greenspace	15%	22%	38%	87%
Area of Path	1%	1%	1%	0%
Area of Rail	2%	2%	1%	0%
Area of Road	17%	18%	12%	2%

Table 2: Land-use proportions in Tower Hamlets

Due to this, there is significant potential for increased walking and cycling within the Borough. Figure 12 shows there is significant potential to increase walking in the Isle of Dogs area which can be supported through improved walking environments. See 3.2.1.v for further information.

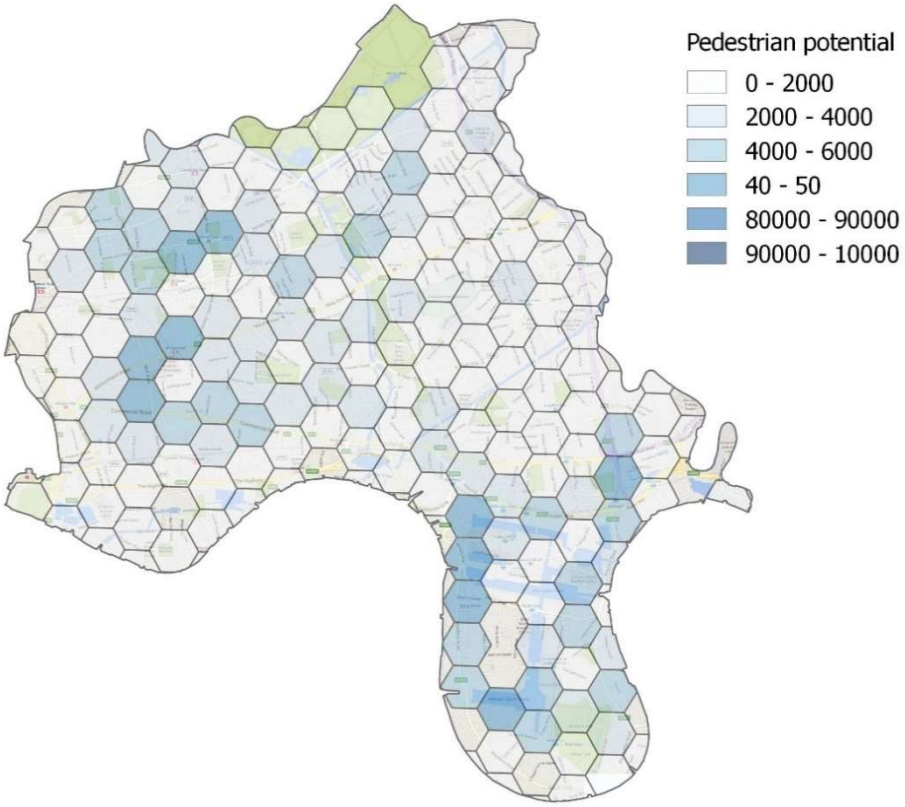

Figure 12: Walking Potential. Source: Transport for London

[18] Department for Communities and Local Government (DCLG) Generalised Land Use Database, 2005

With the Borough aiming to be one of the best in London for walking and cycling[19], there is also significant potential to increase cycling levels, especially along strategic cycling routes (see Figure 13).

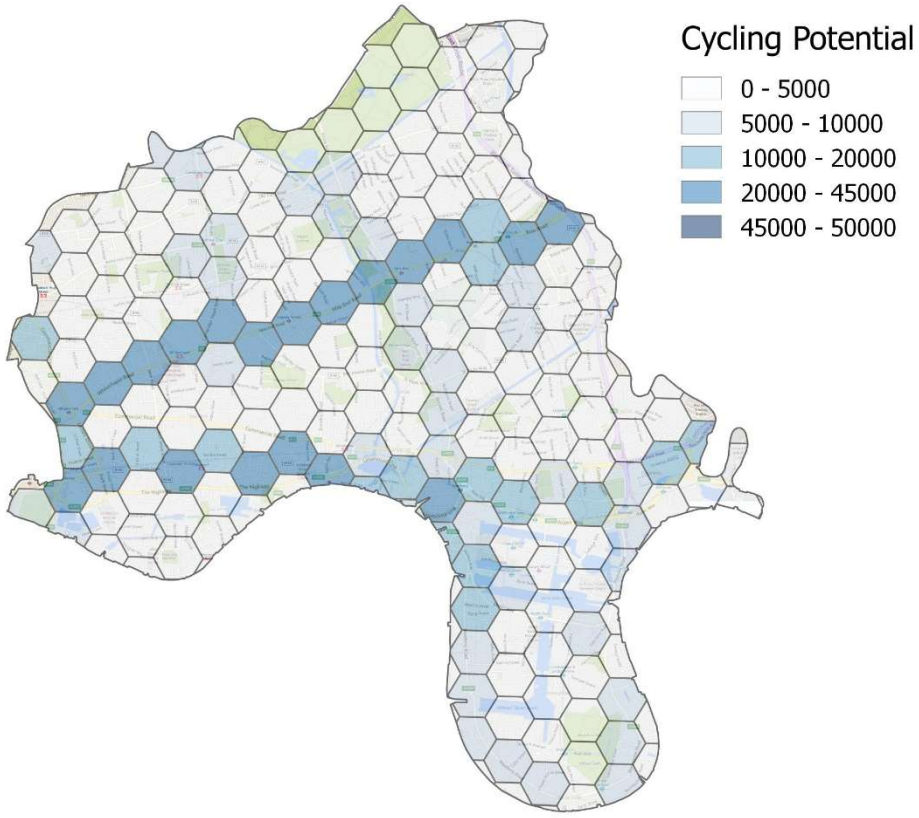

Figure 13: Tower Hamlets Cycling Potential. Source: Transport for London

The Council has an ambitious vision for the future of cycling in the Borough and wants to become one of the easiest and safest places to cycle in London. The document outlining our cycling aspirations 'Tower Hamlets – A Cycling Borough' (2016) "recognises that increased cycling has an important role in improving the health and quality of life the borough's residents, bringing about economic benefits and making places more attractive, 'liveable' and safe" (p2). See 3.2.1.viii for further information.

It is important that we capitalise on this potential to increase active travel levels in the coming years. With high levels of enthusiasm and interest among both members and the local community, there is significant opportunity to create behaviour change at present. This will allow a shift in modes towards healthier, more active lifestyles.

With all new developments, major planning applications and master planning now requiring appropriate, adequate and well-located green space and infrastructure,

[19] Tower Hamlets Strategic Plan 2018-2021

including for walking and cycling, there is an opportunity for proposed developments to make a positive difference (see 3.2.8/9).

The Emerging Local Plan 2031[20] contains numerous policies in support of the LIP:

- S.TR1, clauses 1a and 1b, support walking, cycling and public transport as priorities for the borough
- D.TR2(2) requires mitigation for any development that will increase congestion
- D.TR3(1) relates to parking standards, which are low for cars and quite high for bikes
- D.TR3(3) encourages electric vehicle charging points, cycle hire, cycle parking in general, and car-club spaces rather than individual car parking spaces
- D.TR4 focuses on sustainable freight (i.e. rail and water transport of freight)

In addition, the Isle of Dogs & South Poplar Opportunity Area will support pedestrian and cycle improvements including a new and improved bridge crossing at South Dock, a new decked connection over Aspen Way and a link between Rotherhithe and Canary Wharf.

These development proposals and policies that prioritise active travel in new developments provide the chance to move away from car-based travel, supporting the MTS aim of 80% of journeys to be made by foot, cycle or public transport by 2041. With the support of investment outlined in the Delivery Plan, Tower Hamlets can address the challenges it currently faces and create opportunities for active travel to be the best choice for journeys.

[20] https://www.towerhamlets.gov.uk/Documents/Planning-and-building-control/Strategic-Planning/Local-Plan/Appendix_1_Tower_Hamlets_Local_Plan_2031_Regulation_19.pdf.

CHAPTER THREE

BOROUGH TRANSPORT OBJECTIVES

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3. Borough Transport Objectives

3.1 Borough objectives

Our objectives align and assist with meeting the Mayor's Transport Strategy aim of increasing the sustainable travel mode share. Specific borough outcome indicators are included to aid delivery of the LIP objectives. The objectives and delivery plan in this document place equality, inclusivity, health and well-being at the heart of transport in Tower Hamlets.

The Council has four priority objectives summarised below, with reference to our outcomes and how they align with the nine MTS outcomes.

The borough's priority objectives are:

1. Tower Hamlets streets will be healthy and more residents and visitors will travel actively.

2. Our roads and public transport will be safe, secure and accessible.

3. Tower Hamlets will be clean and green, with less motor traffic and cleaner air.

4. Active travel and public transport will be the best option (attractive, safe, affordable, accessible, reliable and fast) in existing and new developments, sustaining new jobs and homes.

Table 3 overleaf identifies how the borough objectives align to our target outcomes, at the same time as showing their relationship to the nine MTS priority outcomes. For ease of reference, the final two columns show how these relate to the Borough strategic pledges and actions in the Delivery Plan.

Tower Hamlets LIP3		MTS Outcomes	Evidence and Borough Objectives	Delivery Plan – commitment in LIP
Borough Objectives	Borough Outcomes			
1. Tower Hamlets streets will be healthy and more residents and visitors will travel actively.	Expanded and improved walking and cycling network Creation of 50 School Streets and half of the borough to be Liveable Neighbourhoods Reduced use of private motor vehicles New public transport connections	1, 3, 5, 8	3.2.1.ii, 3.2.1.v, 3.2.1.viii, 3.2.1.ix, 3.2.1.x, 3.2.1.xi, 3.2.1.xii	4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10
2. Our roads and public transport will be safe, secure and accessible.	Higher quality streets which are inclusive, safe and enable more walking and cycling 100% of Tower Hamlets' bus stops will be accessible More step-free rail stations Reduction in KSIs and improved perception of road safety	2, 3, 6	3.2.2.ii, 3.2.2.iii, 3.2.2.v, 3.2.2.vii, 3.2.6.ii, 3.2.6.iii, 3.2.6.iv	4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10
3.Tower Hamlets will be clean and green, with less motor traffic and cleaner air.	Reduced rat running traffic Greater use of electric vehicles by businesses and car clubs More cycle hangars and secure cycle parking More street trees, soft landscaping and pocket parks to capture carbon	2, 3, 4	3.2.3.ii, 3.2.3.iii, 3.2.4.iv, 3.2.4.v, 3.2.4.vi, 3.2.4.vii, 3.2.4.viii	4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10

4. Active travel and public transport will be the best option (attractive, safe, affordable, accessible, reliable and fast) in existing and new developments, sustaining new jobs and homes	Maximise car-free development Walking, cycling and public transport prioritised in new developments as the best options to improve connectivity to public transport and manage traffic growth Greater public transport capacity as a result of working with TfL	5, 6, 7, 8, 9	3.2.5.ii, 3.2.5.iii, 3.2.5.iv, 3.2.5.v, 3.2.5.vi, 3.2.6.ii, 3.2.6.iii, 3.2.6.iv, 3.2.7.ii, 3.2.7.iii, 3.2.8/9.iii, 3.2.8/9.iv, 3.2.8/9.v, 3.2.8/9.vi, 3.2.8/9.vii	4.2, 4.3, 4.4, 4.5, 4.8, 4.9

Table 3: Borough objectives and their link with the MTS outcomes

3.2 Mayor's Transport Strategy outcomes

The following section outlines the local challenges and opportunities for Tower Hamlets in the context of the nine MTS outcomes, and details how the Council can contribute towards the achievement of the outcomes.

Outcome indicators have been detailed within the MTS with measurable targets for 2021 and 2041 for outcomes 1 to 7. These vary by borough. Tower Hamlet's specific indicator targets have been detailed in each section under 'MTS Borough Indicators'.

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

i. MTS Outcome Indicators

Outcome 1a: All Londoners to be doing a healthy level of activity through travel, demonstrated by 70% of people reporting two periods of ten minutes spent walking or cycling on the previous day.

Measure: Londoners to do at least the 20 minutes of active travel they need to stay healthy each day by 2041.

Metric: LTDS borough residents. Proportion of London residents doing at least two x10 minutes of active travel a day (or a single block of 20 minutes or more).

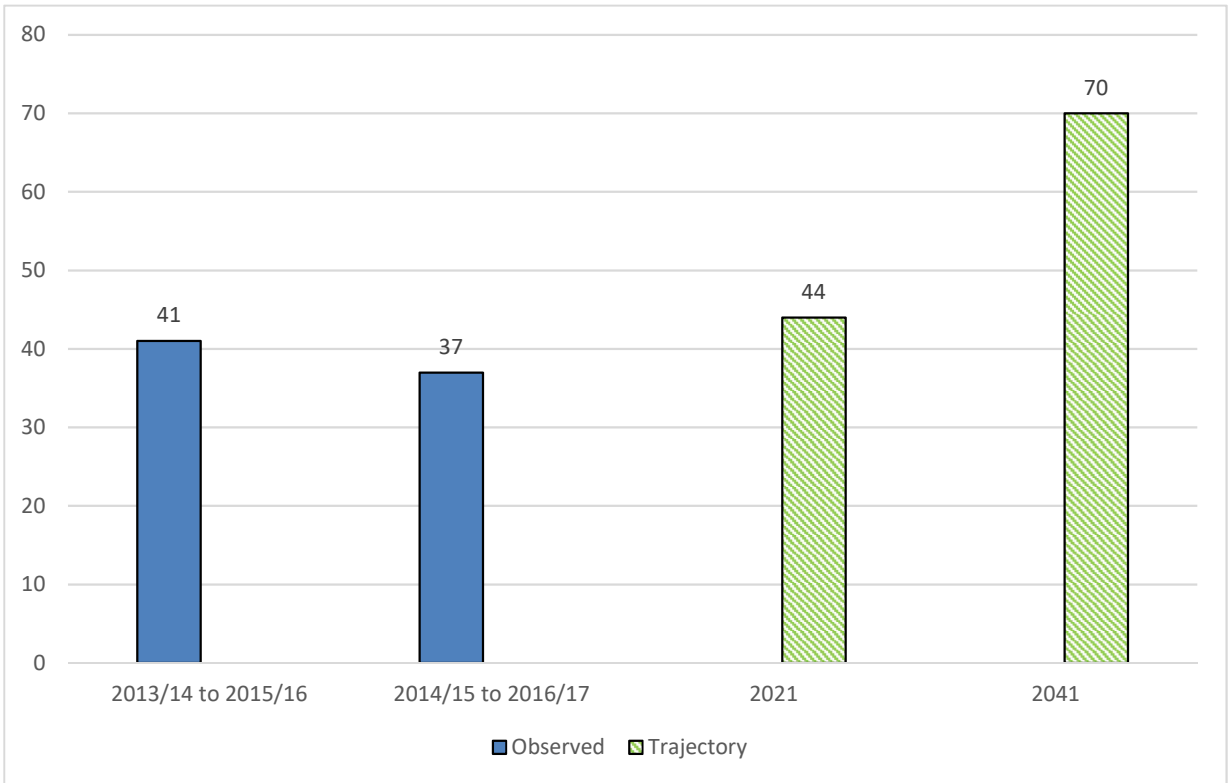

Figure 14: Percentage of residents doing at least two x10 minutes of active travel a day. Source: LIP3 MTS outcomes borough data pack v1_1

Outcome 1b: London's streets will be healthy and more Londoners will travel actively. Walking or cycling will be the best choice for shorter journeys.

Measure: 70% of Londoners will live within 400m of the London-wide strategic cycle network by 2041.

Metric: GIS analysis and Strategic Cycling Analysis

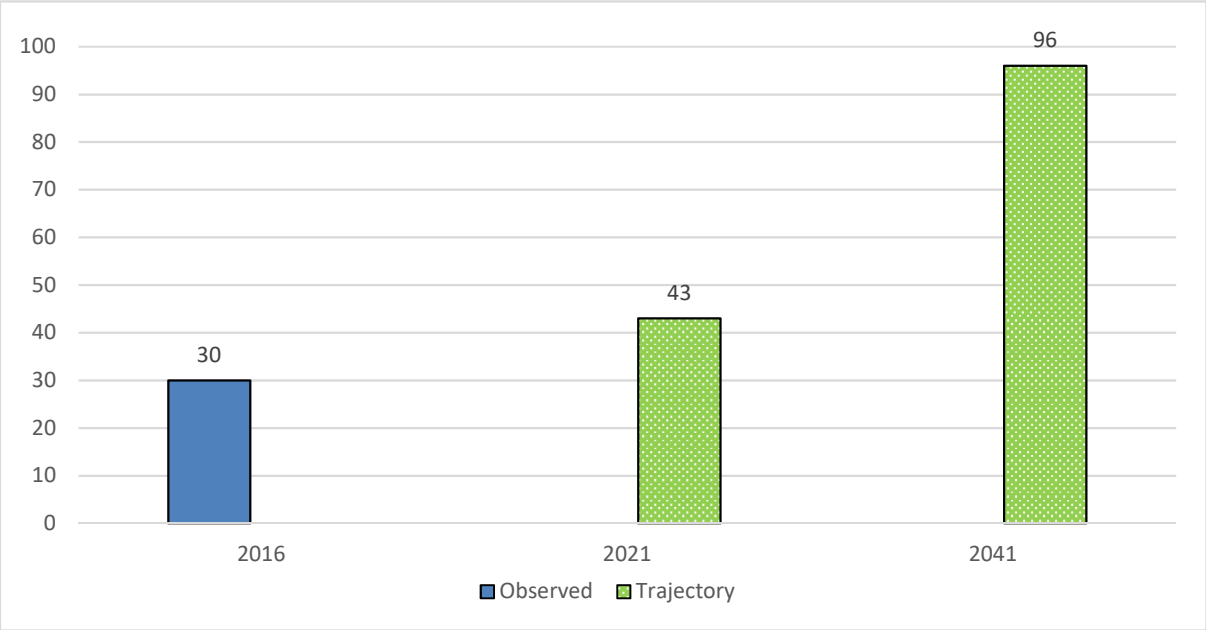

Figure 15: Percentage of population within 400m of strategic cycle network in Tower Hamlets.
Source: LIP3 MTS outcomes borough data pack v1_1

ii. Supporting health across the Council

To support this outcome, the Borough will use its stated priorities to deliver improvements to walking and cycling.

The Borough Mayor's Strategic Pledges 2018[21] are closely aligned with this MTS Objective to make Tower Hamlets friendlier for pedestrians and cyclists, because this will make our borough safer and healthier for everyone. Consequently, these improvements will be completed through close working with TfL. Through our planning process, the new Local Plan and our Green Grid Strategy, we will increase the number of low emissions routes for walking and cycling.

The Council will update the Tower Hamlets Cycling Strategy to include progress on the design of all five strategic routes identified as having significant potential for

[21] https://www.pdf-archive.com/2018/08/13/02-thlp18-manifestoa5web2/02-thlp18-manifestoa5web2.pdf

cycling. We will prioritise these routes for completion as high-quality, flagship cycling routes by 2022.

We will make a major investment in filtered permeability to extend the network of informal cycling routes along quieter streets and parks. We will actively support the proposal for a new pedestrian and cycle crossing between Canary Wharf and Rotherhithe on the northern alignment." (p8 & 9) subject to proven feasibility and land use constraints being resolved.

'Communities Driving Change' commissioned by the Council, aims to support residents in improving their health and wellbeing at the local level. The programme puts local residents in the driving seat by asking them what the response to their health and wellbeing needs to look like. The programme runs for three years and will involve multiple neighbourhoods, their residents and local organisations. Communities Driving Change is a priority of the council's Health and Wellbeing Strategy 2017-2020 designed to tackle health inequalities.[22]

Together these programmes will promote physical activity and active travel which will encourage a shift away from private motorised modes of travel (para 9.9).

'Tower Hamlets Health and Wellbeing Strategy' 2017-2020 (draft) identifies that more active travel and less motor traffic would help address a number of health and wellbeing priorities highlighted (p10) including poor health, unemployment, child obesity, polluted air, and lack of access to green space and employment. More active travel leads to cleaner air, improved fitness, community cohesion, happiness and greater access to green spaces and jobs for all.

Under the 'Tower Hamlets Health and Wellbeing Strategy 2017-2020' the actions to be taken in relation to healthy places are:

1. Gathering evidence showing the link between health and development so that health and wellbeing is central to planning and development decisions
2. Assessing health impacts at the core of policy decisions across the partnership (not just the council)
3. Ensuring that a healthy place is a priority for policy decisions under the Community Infrastructure Levy (p14)

'Tower Hamlets Green Grid Strategy' (originally developed in 2010 and updated 2017) proposes a framework for the design and delivery of attractive walking routes across the borough. Public transport and local roads within Tower Hamlets face capacity issues which will probably be exacerbated as the population grows unless

[22]https://www.towerhamlets.gov.uk/News_events/News/2017/November_2017/Communities_are_%27driving_change%27_through_new_health_programme.aspx

action is taken. The Green Grid helps address this by facilitating walking for shorter trips (e.g.: to school, shops, services, work and transport hubs).

Walking route quality varies in Tower Hamlets. Issues such as lack of safe crossings, narrow footways and close proximity to traffic, street clutter including railing and excessive sign posts, lack of natural surveillance due to inactive street frontages and lack of way finding can make walking unappealing and unsafe.

Borough-wide Green Grid actions include better connectivity, making the most of water spaces, regeneration and wayfinding (e.g.: integrating the Grid into the Legible London maps). Design principles involve art installations to reflect the diversity and history of the Borough, more street trees and soft landscaping, new wildlife space, quiet streets and routes away from polluted roads, safe streets with natural surveillance and lighting, quality materials, de-cluttering, widened footways, and Green Grid-branded signposting.

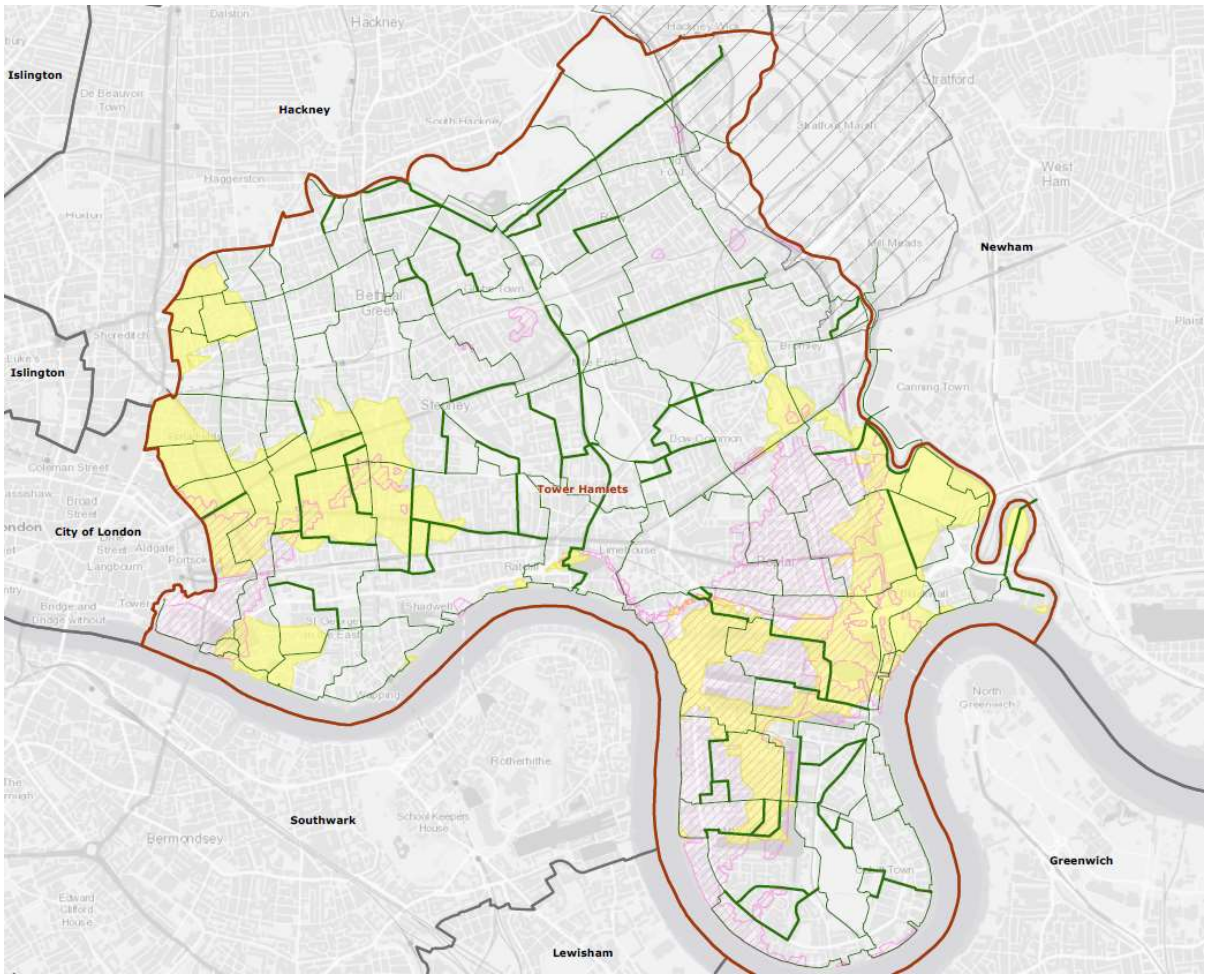

Figure 16: Open Space Deficiency and Access to Nature Deficiency

Love Your Neighbourhoods: Tower Hamlets has many main arterial roads going through it, serving the strategic Transport for London road network. Through-traffic should by and large stick to these main roads but many of our residential neighbourhoods have seen huge increases in rat-running traffic, making them more

dangerous, noisy and polluted. Love Your Neighbourhoods will address issues such as this as well as engaging with local communities to develop area-wide public realm improvements and encourage changes in travel behaviour, all to the benefit of residents' health and wellbeing. We have an ambition to have started work in half of the borough by 2022.

All new road schemes in Tower Hamlets will have the London Cycling Design Standards applied to them and new roadwork schemes will aim to not be detrimental pedestrians or public transport users. [23]

Play Streets: Enabling children and young people to play safely in non-dedicated play spaces within their local environment, such as streets, squares or Home Zones, allows them to develop risk awareness in relation to other road users. They will also be able to develop the skills necessary to navigate their neighbourhoods more safely. Studies have shown that, where traffic is slower, parents allow their children to play outdoors in much greater numbers than in similar streets where it is faster. [24]

As part of the consultation for developing the Mayor of London's guidance on making London a better place for children to play, a key aspect was to make streets safe for children to play [25](p26). Play Matters in Tower Hamlets (para 7.2.4) includes creating a culture throughout the Borough, which is supportive of children playing in the streets and communities where they live. [26]

School Streets: The Borough Mayor's Strategic Pledges make a commitment to introduce School Streets at 50 of our primary schools to improve air quality around our most polluted and congested schools at drop-off and pick-up times (see Figure 17). Each primary school in a Love Your Neighbourhood scheme will be assessed for School Street access restrictions or more transformational schemes.

The initiative aims to increase the safety around schools, promoting active travel amongst school children. By encouraging cycling, scooting and walking to school, the health and wellbeing of children will be improved.

[23] https://www.pdf-archive.com/2018/08/13/02-thlp18-manifestoa5web2/02-thlp18-manifestoa5web2.pdf
[24] Play Matters in Tower Hamlets A strategic approach to play in Tower Hamlets
[25] http://democracy.towerhamlets.gov.uk/mgConvert2PDF.aspx?ID=5795
[26] Play Matters in Tower Hamlets A strategic approach to play in Tower Hamlets

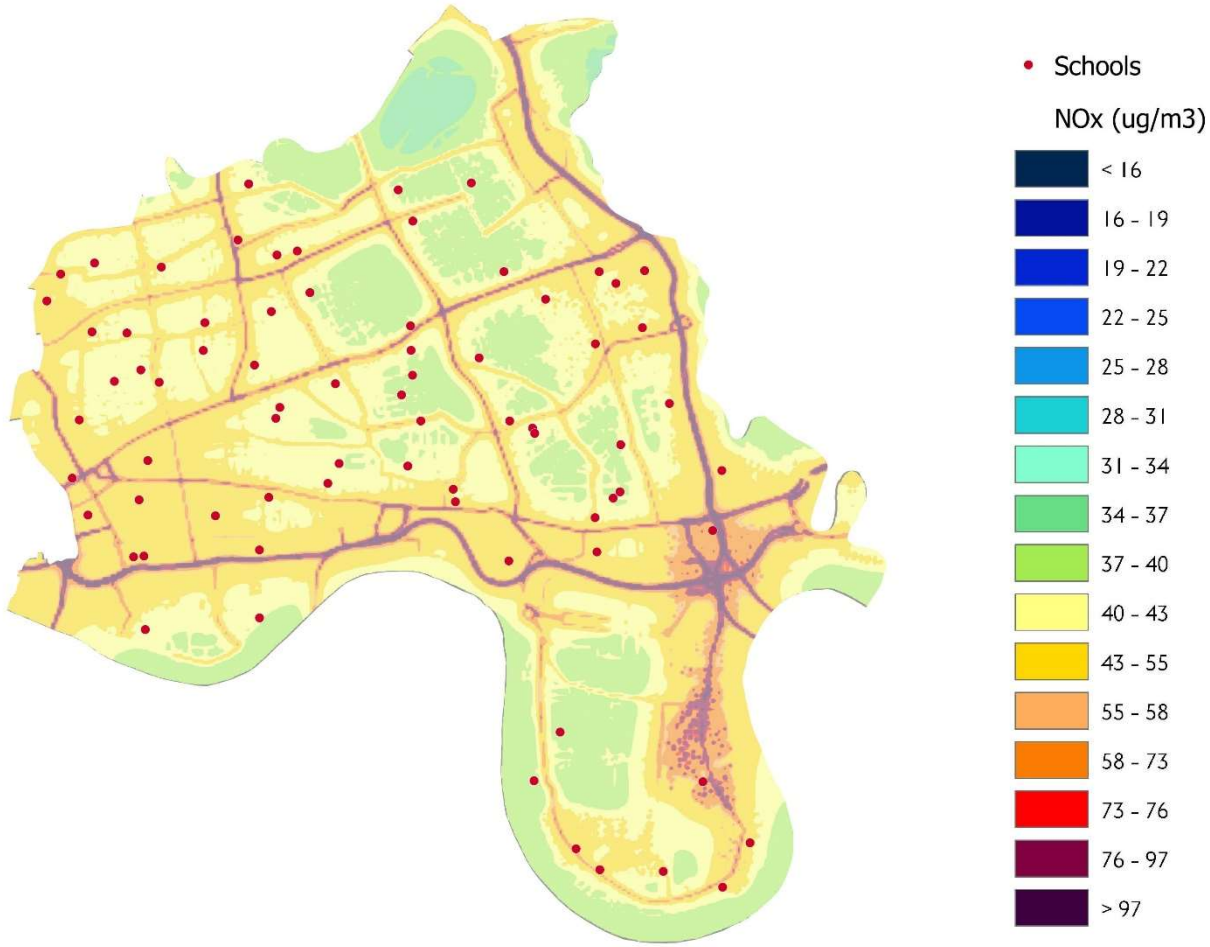

Figure 17: Schools mapped against air quality hotspots
Source: Greater London Authority, London Atmospheric Emissions Inventory (LAEI) 2013.

iii. Walking

Walking is, in many ways, the mode of travel that is most important to the aims of the strategy ('Walking action plan: making London the world's most walkable city.' Transport for London. July 2018). All trips involve walking (or using a mobility aid) at some point in the journey. For those using wheelchairs or pushchairs, the quality of the walking environment can be especially important. A quarter of trips made by Londoners each day are on foot, and the number choosing to walk has been relatively constant for many years. A better walking environment will help connect communities and reduce road danger, air pollution, noise, and health and economic inequalities.

As well as recognising the importance of walking as a mode of transport, it also recognises the walking potential available in the borough. This is discussed in section 2.3.ii above.

iv. Walking challenges

21% of Londoners say too much traffic is a barrier to walking, and 14% say traffic travelling too fast is what stops them walking more. 12% of Londoners say that fear of road collisions stops them from walking more. In 2016, pedestrians accounted for 35 % of those killed and seriously injured (KSI) on London's streets, and 16% of KSIs in Tower Hamlets (in 2016) (see section 3.2.2).

Fear of traffic is the main reason people give for being unwilling to let their children walk unaccompanied ('Walking action plan: making London the world's most walkable city.' Transport for London. July 2018, p. 27). TfL analysis highlights the importance of helping London's children to walk more.

Tower Hamlets benefits from good road and rail links, as well as the River Thames, River Lea and a network of waterways including several canals. However, such features often create physical barriers to walking, so that pedestrians have to take more circuitous routes with limited way-marking.

There are two major causes of severance in the borough: the East Anglian railway line running from east to west from Liverpool Street to Stratford; and the north/south A12 trunk road in the east of the Borough. Both restrict movement between neighbourhood centres[27] which this plan aims to overcome.

v. Walking opportunities

Solutions for inner London include: reducing car use; freed-up space for other non-car uses, including major schemes that transform streets in certain locations and restricting traffic where appropriate to provide better environments for walking and cycling; improving walking access to key transport hubs; making areas around stations welcoming and good for onward active, efficient and sustainable travel; building strategic interchanges to make it easier to switch between rail, bus, walking and cycling; creating dense, mixed land-use developments in areas with good public transport and access to services within walking distance.

Specifically, there are TfL schemes which can help increase walking in Tower Hamlets:

1. Further design consultation on the Rotherhithe to Canary Wharf crossing in 2018.
2. Liveable Neighbourhoods programme (£115m total for London)
3. Reducing waiting times for pedestrians at signalised crossings and identifying locations for Pedestrian SCOOT technology

[27] Green Grid Update 2017. Accessed via internet.

4. Ensuring roadworks are not a barrier to walking

Local strategies supported in The Borough Mayor's Strategic Pledges 2018 also provide opportunities for walking:

LIP3 objectives outlined in this document prioritise pedestrians in the following ways:

1. Creating Love Your Neighbourhood schemes: reducing rat-running traffic on residential roads to make walking and cycling more pleasant, safer and easier;
2. Building more crossings which give legal priority to those crossing to enable children and others to walk independently;
3. Providing side road priority to pedestrians by design;
4. Improving information and wayfinding;
5. Applying the Healthy Streets check for new schemes;
6. Improving the condition of footways; and
7. Greening the streetscape to make it more attractive for walking.

vi. Cycling

The borough recognises the growing importance of cycling as a mode of transport and the cycling potential available (see 2.3.ii). The cycling potential for Tower Hamlets has been calculated using detailed cycling potential results from the Propensity to Cycle Tool (www.pct.bike).

The PCT routes cyclists using the Cyclestreets 'direct' route – so it is not necessarily where everyone currently cycles, but it gives an idea of key desire lines (where people might want to cycle, if it were facilitated). As with any tool it is not perfect and needs to be interpreted with local knowledge.

Figure 18 shows what the PCT suggests for current (2011) levels of commuter cycling in Tower Hamlets. The Go Dutch scenario seen in Figure 19 calculates what we would see if English commuters become as likely as Dutch commuters to cycle trips of particular lengths and hilliness. The scenario suggests Tower Hamlets' commuter cycling levels could be 15-39% rather than 0-9%.

Cycle use is already rapidly expanding despite a need for improvement in facilities and infrastructure. There is great potential to increase cycling in Tower Hamlets because:

- Nearly two thirds of potentially cyclable trips are currently made by car.
- Of the 4.3 million potentially cyclable trips made every day, 3.5 million would take less than 20 minutes for most people to cycle.
- Almost half the population is aged between 20 and 39, the most popular ages for regular cycling, and large population growth is expected in the next ten years.

- Car ownership in the borough is also lower than the inner London average. According to the 2010 London Travel Demand Survey 61% of households do not own a car and so are reliant on alternative modes of travel.
- Tower Hamlets has a network of attractive off-road canal and riverside paths which are suitable for most types of people to cycle.
- Tower Hamlets (along with Newham) is the flattest borough in London.

The targets set out in our Cycling Strategy 2016 are that by 2025 we will at least:

1. Double the volume of cyclists in the borough
2. Increase the proportion of residents cycling to work to 15%
3. Reduce the risk of cyclist accidents by half
4. Double the number of children cycling to school

The current, proposed and future network to enable this growth can be seen in the 2016 Cycling Strategy which is due to be updated this year (see Figure 20, Figure 21 and Figure 22 below).

vii. Cycling challenges

As the proportion of cyclists has grown, cycle safety has become an area of increasing concern in Tower Hamlets, particularly given the rise in fatalities on busy arterial roads as can be seen from Figure 30. The Tower Hamlets Local Plan 2031 (Regulation 19) seeks to reduce the impact of delivery, servicing and construction traffic on the environment and the health and well-being of residents in terms of noise disturbance and its contribution to road congestion and air pollution.

viii. Cycling opportunities

We are working with Transport for London to improve routes on the Cycle Grid by 2022. Routes include:

- Future Route Hackney to Greenwich via Grove Road, Burdett Road and Westferry Road
- Grid Extension 1: Hanbury to Cephas Street via Durward Street
- Grid Extension 2: Cable Street to Portelet Street (QW6) via Bancroft Road and Jubilee/Sutton Street
- Grid Extension 3: Virginia Street to Spital Square
- Grid Extension 4: Bishopsgate to Cable Street (provisional)

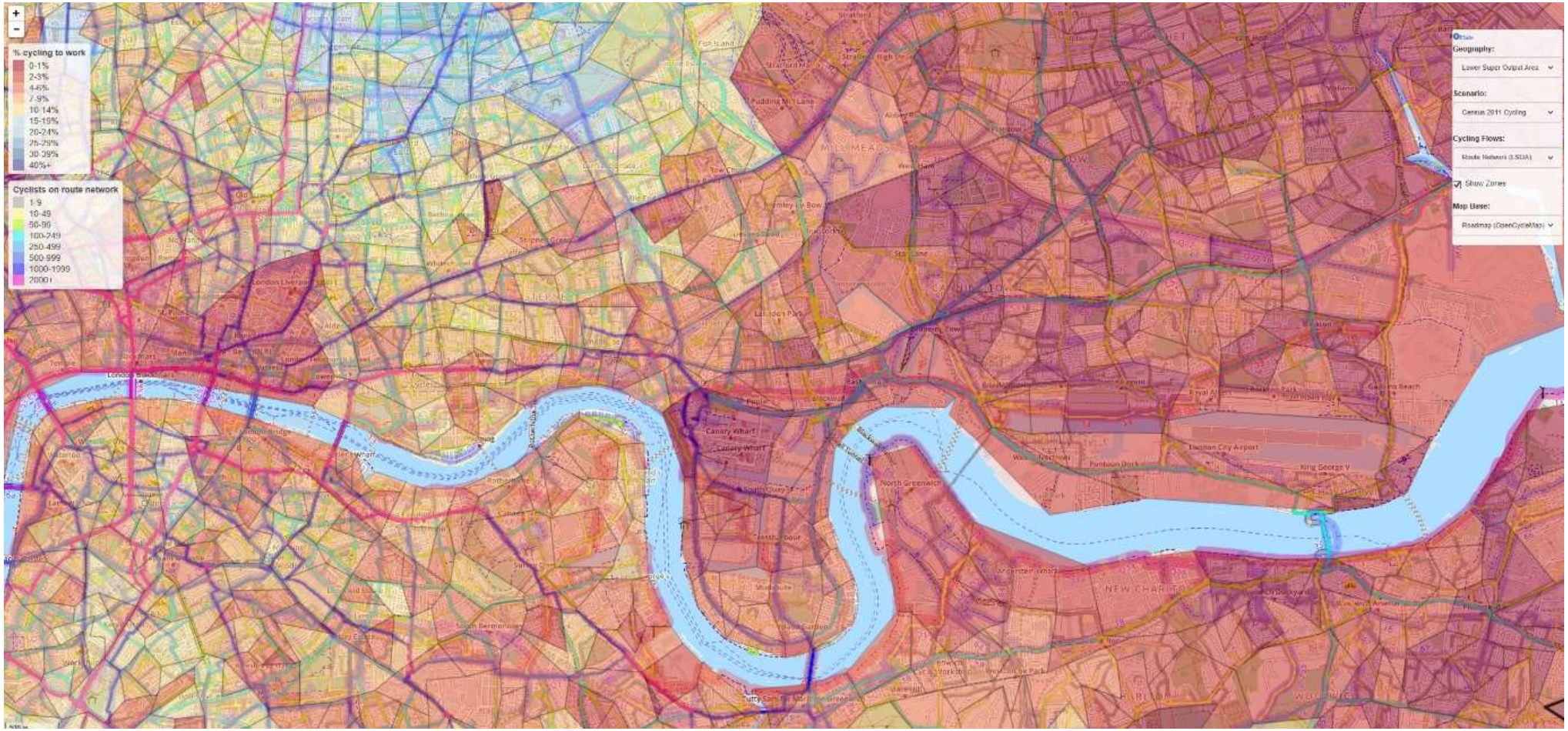

Figure 18: Levels of commuter cycling in Tower Hamlets, 2011. Derived from the Propensity to Cycle Tool.

Figure 19: Go-Dutch scenario for Tower Hamlets. Derived from Propensity to Cycle Tool.

Figure 20: Current cycle network in Tower Hamlets. Source: 2016 Cycling Strategy

Figure 21: Proposed cycle network in Tower Hamlets. Source: 2016 Cycling Strategy

Figure 22: Future cycle network in Tower Hamlets. Source: 2016 Cycling Strategy

ix. Bike Hire Scheme

The Santander Cycle Hire Scheme is well used in the borough with 1.2 million hires in the last 12 months which equates to over 3000 hires per day. After the spike in Olympics year the level of use has remained constant.[28] There is a strong network of over 100 docking stations, providing 2,700 docking points and over 2,000 bikes across the entire borough putting everyone within 400m of a station. This scheme helps to overcome problems of safe storage and access to cycles for many residents and has proved to be very popular.

However, the Council does not support the establishment of any unlicensed Dockless Cycle Hire Scheme in the borough to protect footway areas from obstruction and being aware of ASB behaviour associated with such schemes. We note several trial schemes are being withdrawn after experiencing viability problems.

x. Cycle parking

Many of our residents do not have space in their homes to securely store cycles. We have introduced secure estate and on-street cycle hangars. Demand has rapidly out-stripped supply. The Borough Mayor's Strategic Pledge 2018 outlines a commitment to installing an additional 100 on-street cycle hangars annually.

We will work with Tower Hamlets Homes and other housing providers in the borough to ensure that every resident who needs it has access to suitable secure cycle parking, to allow residents to rent garages for cycle storage of non-conventional bikes that won't fit in other on-street and estate storage.

A secure Cycle Hub at Whitechapel Crossrail station is planned to cater for regular commuters and we will explore further opportunities for such facilities.

We will continue to install 'Car Bike Ports' to expand bike parking in areas of high or growing demand and work with commercial landlords to increase commuter and resident cycle parking on land which is not owned by the Council.

xi. Inclusive cycling

Cycling take-up is unequal in the UK; children, women, older people, ethnic minorities and the disabled are generally less likely to cycle. This is usually because the road environment is unsuitable for most to be and feel safe.

The Department for Transport estimates that only 2% of children cycle to school nationally. However, the cycling charity Sustrans reported in 2015 that their Bike It programme in 126 schools across London, several of which were in Tower Hamlets, resulted in an increase in regular cycling from 6% to 12.5%. Therefore, we have taken

[28] Tower Hamlets Cycling Strategy October 2015

6% as the baseline proportion for Tower Hamlets. Our target is to achieve 12% of all children cycling to school by 2025. Training is offered to all pupils in a given year group irrespective ability. Training was carried out at 45 schools in 2014/15.[29]

Women have more complex travel diaries, linking multiple trips, and making more and shorter trips (Department for Transport, 2014)[30] – exactly the kinds of journeys which could be done on foot or bicycle.

Women also make approximately four times as many 'escort education' trips as men (Department for Transport, 2016a)[31] so are more likely to have the added complication and responsibility of cycling with children which heightens safety concerns. A physical environment which may be acceptable to a single person without responsibility for others becomes unacceptable when cycling with children (Pooley, 2011). While most people, regardless of gender, prefer not to interact with motor traffic while cycling, women place greater importance on being separated from traffic (Aldred et al., 2016)[32].

Many disabled people already cycle and many more could do so given the right conditions. Disabled Londoners, like Londoners in general, overwhelmingly use public transport or the car as their main mode. Cycling accounts for 3% of commutes by disabled Londoners, well behind other modes but used by more Londoners than taxis and 'other' combined (each on 1%)[33]. Where possible we will adopt the design principles set out by Wheels for Wellbeing.

The Council supports a popular All Ability Cycling Club[34]. Residents of all ages and abilities in Tower Hamlets can now take advantage of the new and improved All Ability Cycling Club, funded by Tower Hamlets Council and run by Bikeworks in Victoria Park. The All Ability Club has been awarded London 2012 Inspire Mark status. The club is free to attend and open to all, regardless of age or ability. There are a range of bicycles available for participants, including hand cycles, wheelchair bicycles, tandems, scooters, two wheelers and training is provided by qualified instructors.[35]

All new road schemes in Tower Hamlets will have the London Cycling Design Standards applied to them and all cycling schemes will be planned to cater for non-

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[29] Tower Hamlets Cycling Strategy, 2015

[30] Department for Transport, (2014). 'National Travel Survey Trip Chaining: 2002-2014'

[31] Department for Transport, (2016a). 'Average number of trips (trip rates) by age, gender and purpose: England, 2016'. National Travel Survey. Table NTS0611

[32] Aldred, R., Woodcock, J. and Goodman, A., (2016). 'Does More Cycling Mean More Diversity in Cycling?', Transport Reviews, 36:1, pp. 28-44

[33] Andrews, N., Clement, I. and Aldred, R., 2018. Invisible cyclists? Disabled people and cycle planning–A case study of London. Journal of Transport & Health, 8, pp.146-156.

[34] https://www.towerhamlets.gov.uk/lgnl/transport_and_streets/cycling/all_ability_cycling_club.aspx

[35] Tower Hamlets Cycling Strategy October 2015

standard cycles, including disability adapted bikes, bike trailers, cargo bikes and bikes adapted to carry small children.[36]

We will continue to work with local cycle groups and British Cycling (the national governing body) to promote cycling for sport and leisure, including Sky Rides, Santander Cycle Rides, all ability cycling club and women-only rides.[37] In section 3.2.2.vii the benefits of social and group cycling are highlighted.

However, safety concerns remain the main barrier to more cycling for all so cycling infrastructure will continue to be improved and extended to enable more people to cycle on a daily basis.

xii. Measuring cycling 'success' & Bike Life Project

Our guiding principles (set out in 'Tower Hamlets – A Cycling Borough') focus on producing an environment which enables all ages and abilities to cycle. With fear of traffic being the major deterrent to cycling for 80% adults (Pooley, 2011)[38] solutions which provide protection and continuity without delays are likely to be attractive for the majority. This type of provision for cycling will mean re-allocating road space away from motor vehicles and reducing on-street car parking (both of which can be unpopular).

Presence of children, women, older people and disabled cycling is therefore just as important a measure of success as cycling numbers. Although it is possible to measure increasing diversity in cycling in London, at the borough level sample sizes taken by Transport for London are too small to give meaningful results. However, Tower Hamlets is partnering Sustrans in a Bike Life Project which places the borough in a unique position as the only London Borough able to measure cycling diversity.

BikeLife is a project taking place across a number of cities throughout the UK, which aims to encourage the long-term development of cycling. Tower Hamlets is the first and only London borough to be involved so far. The project, which is inspired by the Copenhagen Bike Account report, aims to:

- Encourage and assist in the long-term planning of provision for cyclists, particularly by helping create better targets and measuring progress against those targets.

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[36] https://www.pdf-archive.com/2018/08/13/02-thlp18-manifestoa5web2/02-thlp18manifestoa5web2.pdf

[37] Tower Hamlets Cycling Strategy October 2015

[38] Pooley, C., 2011. Understanding Walking and Cycling. Lancaster Environment Centre, Lancaster University.

- Increase awareness, amongst both the public and decision-makers of all the benefits of cycling and its place in creating “more liveable” cities.
- Encourage sharing of best practice and ambitions between participating cities
- Secure sustained political commitment to cycling.

In Tower Hamlets BikeLife will provide research into cycling conditions, cycling behaviour and its impacts, public attitudes to cycling and new initiatives. In conjunction with all the participating BikeLife cities, the research will be carried out and published on a biennial basis. BikeLife will provide a good opportunity to measure the participation of local residents in cycling, and monitor levels of cycling according to ethnicity, gender, socio-economic profile and other characteristics. It will also build on existing research on cycling including the borough’s own Annual Resident Survey.

MTS Outcome 2: London’s streets will be safe and secure

i. MTS Outcome Indicators

Outcome 2: Vision Zero – Deaths and serious injuries from all road collisions to be eliminated from our street.

Measures: 65% reduction in KSIs by 2022 on the 2005-09 baseline. 70% reduction in KSIs by 2030 on the 2010-14 baseline. 0 KSIs by 2041.

Metric: Casualties Killed or Seriously Injured (KSIs) according to STATS19 data.

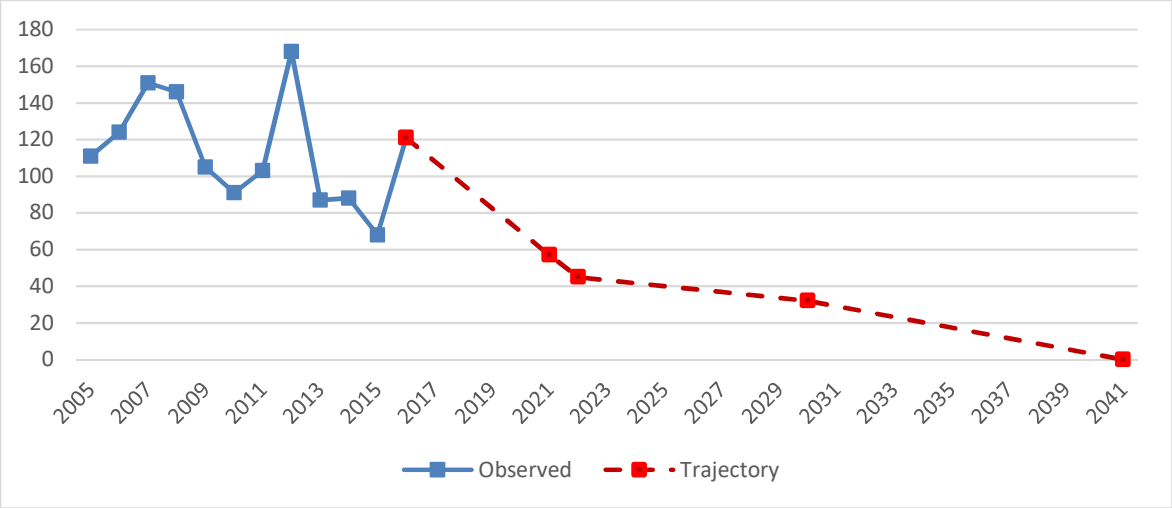

Figure 23: Killed and seriously injured casualties.
Source: LIP3 MTS outcomes borough data pack v1_1

The Metropolitan Police Service (MPS) introduced a new collision reporting system in November 2016 – the Case Overview and Preparation Application (COPA). The City of London Police also moved to the Collision Reporting and Sharing (CRASH) system in October 2015. This has had a number of impacts on the data that is available to

Transport for London (TfL), and the London Boroughs in the ACCSTATS database for collision investigation.

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

TfL commissioned the Transport Research Laboratory (TRL) to undertake a back-casting exercise to enable pre-November 2016 data to be compared with post-November 2016 data. These initial back cast estimates include the number of people killed or seriously injured (KSI) for each borough between 2005 and 2017 and this data has been used to update borough targets to align with those contained in the Mayor's Transport Strategy, namely a 65 percent reduction in KSIs by 2022 against the 2005-09 baseline, a 70 percent reduction in KSIs by 2030 against the 2010-14 baseline and zero KSIs by 2041. The targets were released following consultation on the LIP3, so an assessment of how these may require additional measures to achieve them will be incorporated in our next more detailed Road Safety Action Plan. The level of ambition remains unchanged, despite these revised figures.

ii. Vision Zero

Every year, more than 2,000 people are killed or seriously injured on London's streets[39]. In London in 2016, more than 30,000 people were injured in road collisions with 1,272 casualties in Tower Hamlets. Between 2012 and 2016 inclusive (i.e.: over 5 years) 5,915 people were injured and 30 people were killed in road crashes in Tower Hamlets. People from more deprived areas, some ethnic minorities, disabled people, children and older people are disproportionately affected by road danger.

There has been a significant shift in approach to safety on the roads which is recognised in the Mayor's Transport Strategy, and which we wish to act upon – a shift from 'road safety' to 'road danger reduction'. This must not be a simple switch of terminology. Instead it must be a fundamental shift in approach, policy and action. As highlighted in the Mayor's Vision Zero action plan:

"For too long these tragic road incidents have been accepted as inevitable events. This would be unthinkable on other transport modes. We must change this mindset"

Road danger reduction focusses on motor vehicles, targeting the danger at source. It means reducing the number of motor vehicles, reducing their speed and designing roads to prioritise walking and cycling. This approach tallies with the ambition to

[39] Vision Zero action plan: Taking forward the Mayor's Transport Strategy'. Transport for London, July 2018

reduce motor traffic and increase walking and cycling and Healthy Streets as set out in the Mayor's Transport Strategy.

Reducing road danger will be based upon Safe Systems rooted in the principle that our lives and health should not be compromised by our need to travel. As is reflected in Vision Zero, no level of death or serious injury is acceptable on our streets, and we all – particularly those driving vehicles which potentially pose harm – have a responsibility to ensure we don't threaten or harm others.

By considering risk and fear of traffic in addition to actual casualties we will aim to reduce KSIs on Tower Hamlets' streets. The Borough already implements a number of the measures which support Vision Zero, including School Streets targeting collision hotspots, Liveable Neighbourhoods and has a 20mph speed limit in place on all roads maintained by the Borough. It will continue to implement and extend these measures to meet Vision Zero including working with TfL to implement a 20mph speed limit on more roads maintained by TfL. In addition, we will continue to deliver Road Safety Education programmes in schools and older people's groups, and through Community Safety will help to deliver reductions in anti-social driving. Our commitment to Vision Zero is clearly reflected in the Delivery Plan in sections 4.9 and 4.12 in the form of improving compliance with 20mph limits and supporting measures, Slower by Design programmes, and Love Your Neighbourhoods schemes.

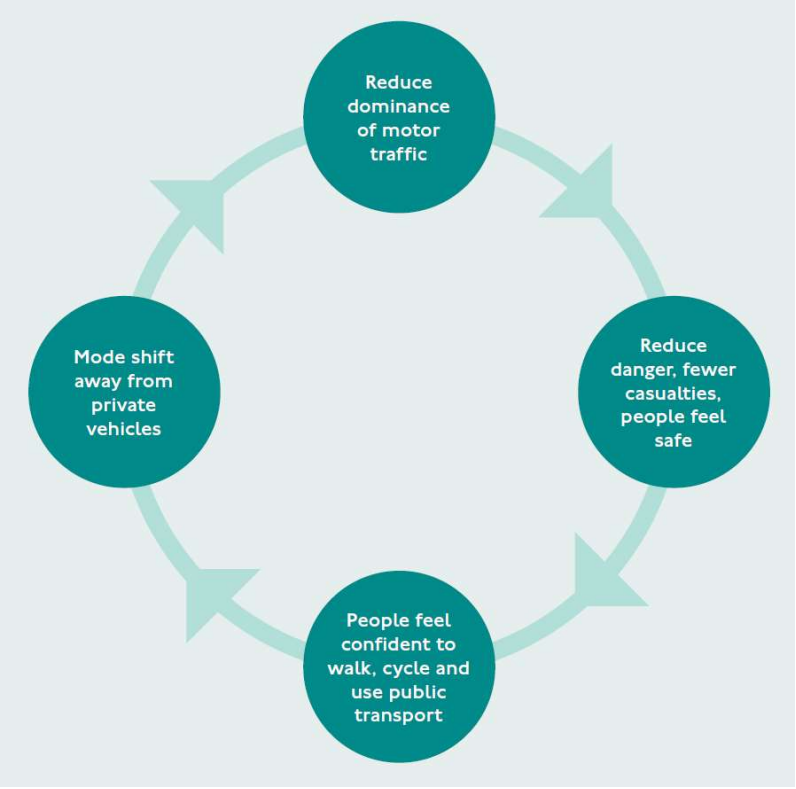

Figure 24: Road danger reduction as part of the Healthy Streets Approach. Source: Vision Zero action plan: Taking forward the Mayor's Transport Strategy'. Transport for London, July 2018.

iii. Casualties

It must be noted that post-2016, there have been changing patterns of collisions following implementation of CS2 which has diverted more through traffic onto less appropriate borough roads, consequently making cyclists and pedestrians more at risk on busy shopping and residential streets. See Table 4 and Figure 25.

Pedal cyclists and Powered Two Wheelers (PTWs) are vastly over-represented in Borough casualty statistics. Only 3.5% of all trips are by bicycle but 21.6% of injuries and deaths on the roads of Tower Hamlets are suffered by people cycling. These statistics include 17km of TLRN roads which cross the borough. PTWs account for only 0.4% of trips but 20.3% of injuries and deaths in the Borough. This is no doubt due to the greater speed, weight and volume of PTWs compared to someone on a bicycle, but it is concerning that many such vehicles can be driven by learner drivers often working as delivery couriers.

To tackle the issue of cycle safety, Tower Hamlets will improve cycle safety with better protected routes. This follows the London Cycle Design Standards which includes a requirement for a greater degree of physical separation on busy roads. The upgrading of CS2 and CS3 will increase their capacity and safety and other cycle routes that do not meet the latest guidance for quality will be upgraded. These changes could consist of Quietways, painted cycle lanes or, the option that often improves people's perceptions of safety the most, segregated cycle tracks/lanes[40].

		No. / Severity of casualties				As % of all casualties	Approx. % trip mode share
Year	Mode of travel	1 Fatal	2 Serious	3 Slight	Sum		
2012-2016	1 Pedestrian	14	176	867	1057	17.7%	41.4%
	2 Pedal cycle	8	137	1140	1285	21.6%	3.5%
	3 PTW	4	131	1076	1211	20.3%	0.4%
	4 Car	4	45	1905	1954	32.8%	18.2%
	5 Taxi	0	4	148	152	2.6%	1.0%
	6 Bus or coach	0	6	153	159	2.7%	12.7%
	7 Goods vehicle	0	3	111	114	1.9%	0.5%
	8 Other vehicle	0	0	23	23	0.4%	Unknown
	Sum	30	163	1027	30		

Table 4: Total casualties in Tower Hamlets, all modes, 2012-2016

[40] Tower Hamlets – A Cycling Borough, January 2016

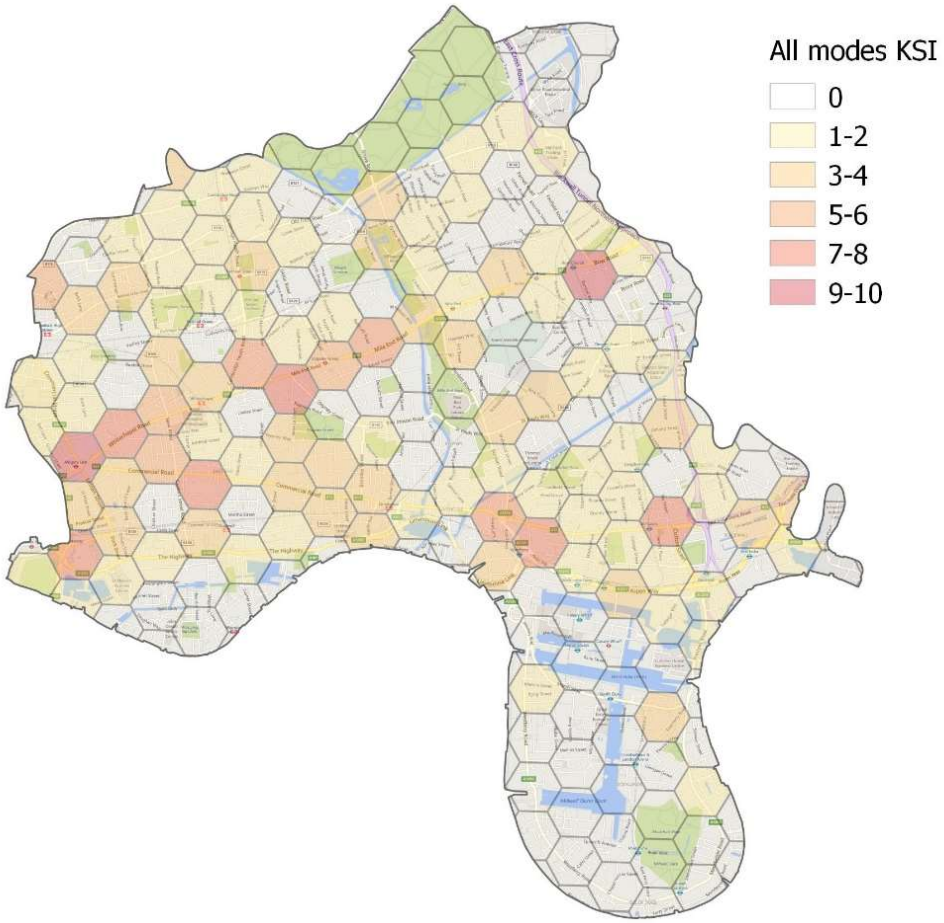

Figure 25: Killed and Seriously Injured (KSIs) for all modes 2014-16 Source: Transport for London

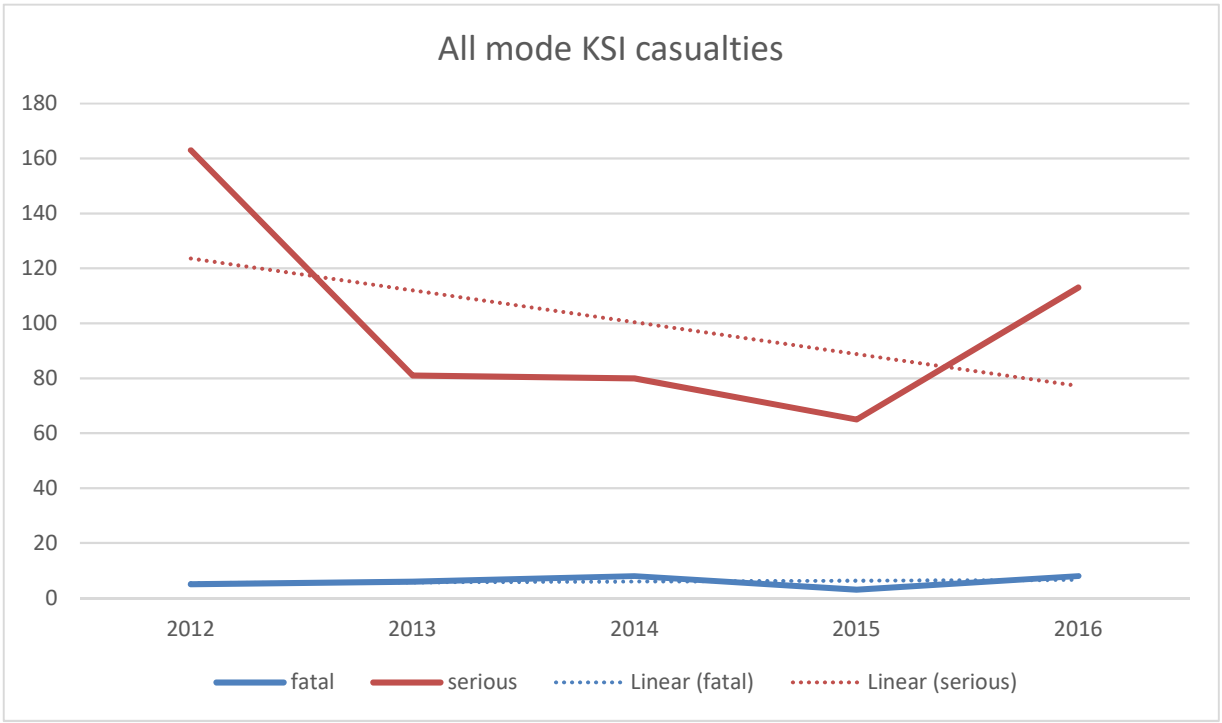

Figure 26: LB Tower Hamlets all casualties, fatal and serious 2012-2016

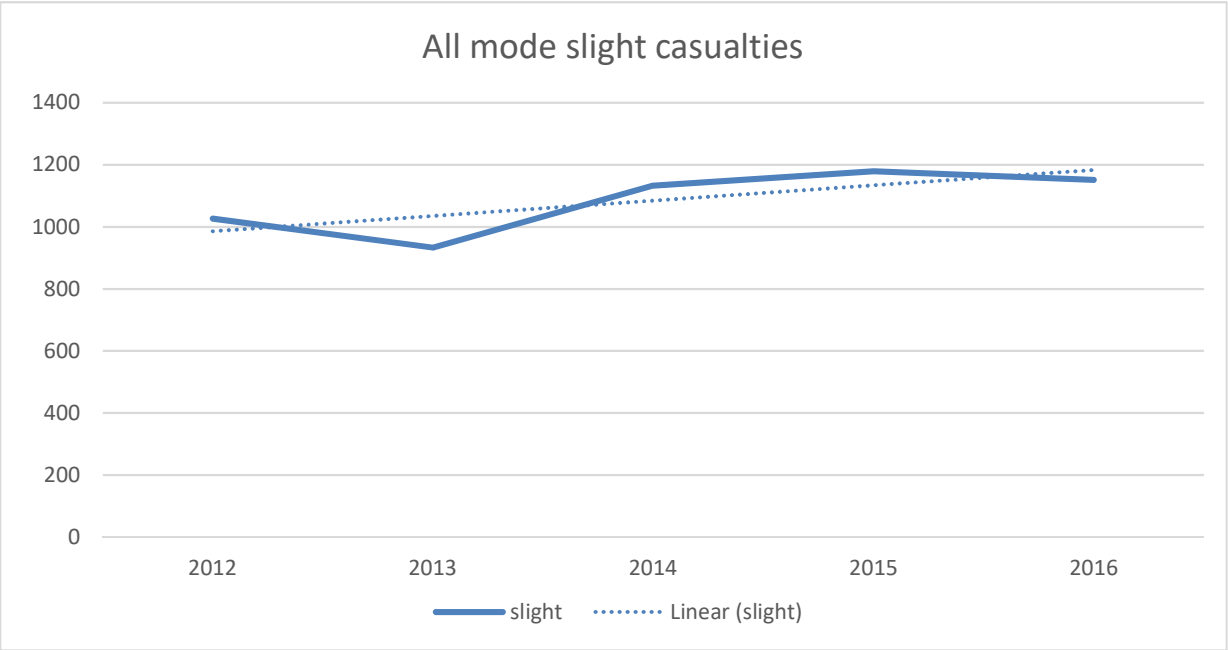

Figure 27: LB Tower Hamlets all mode casualties, slights only 2012-2016

The number of serious casualties has declined since 2012 while the number of fatalities has flatlined as indicated by the dotted trend lines shown in Figure 26. However, the number of collisions resulting in slight casualties has remained stubbornly high as illustrated by the trend line in Figure 27. Given the need to reduce casualties, including slight injuries, the Council has adopted a wholesale approach to road danger reduction by introducing a Borough-wide 20mph limit in 2015 in explicit support of Vision Zero.

As a high percentage of KSIs are related to journeys made on the TLRN (see 3.2.2.iv below) many of which are the result of through-traffic from other boroughs (rather than local trips), achieving Vision Zero will be challenging. Tower Hamlets would welcome discussion with neighbouring boroughs to ensure there is a coordinated response to the issue. This would ensure any projects created under Vision Zero within each borough, do not negatively impact on surrounding boroughs and their KSI rates.

ASB driving is also a major issue in the borough, with night-time road racing, speeding and cars congregating on local residential roads. This creates an unsafe and unpleasant environment for pedestrians and cyclists and fear of stepping outside amongst residents. With the support of the Love Your Neighbourhood schemes and smaller-scale programmes under the three-year and annual programme of initiatives, such as road closures, ASB driving will be tackled to support Vision Zero.

iv. TLRN casualties

Main radial roads pass through some of the most deprived communities, creating environments that are not inclusive to all, with roads that are intimidating and difficult to cross. 80% of all deaths and serious injuries occur to people walking, cycling or

riding motorcycles in London[41]. 73% of collisions resulting in death or serious injury for those on foot, bike or motorbike in London take place at junctions. In Tower Hamlets, there is a clear pattern of more casualties occurring on the Transport for London Road Network (TLRN) as opposed to the local road network: This is illustrated on the crash maps for adult pedestrians (Figure 29), cyclists (Figure 30) and motorcyclists (Figure 31). Figure 29, Figure 30 and Figure 31 indicates casualties in a section of Tower Hamlets since casualties for the whole area are not legible at this scale.

	No. of pedal cycle casualties			
	Casualty severity			
Year	1 Fatal	2 Serious	3 Slight	Sum
2012	2	49	203	254
2013	4	24	226	254
2014	2	19	252	273
2015	0	13	209	222
2016	0	32	250	282
Sum	8	137	1140	1285

Table 5: Tower Hamlets Pedal Cyclist casualties 2012 – 2016

There were no cyclists killed on Tower Hamlets roads in 2015 and 2016 but the number of slight causalities rose in 2016 – see Figure 28.

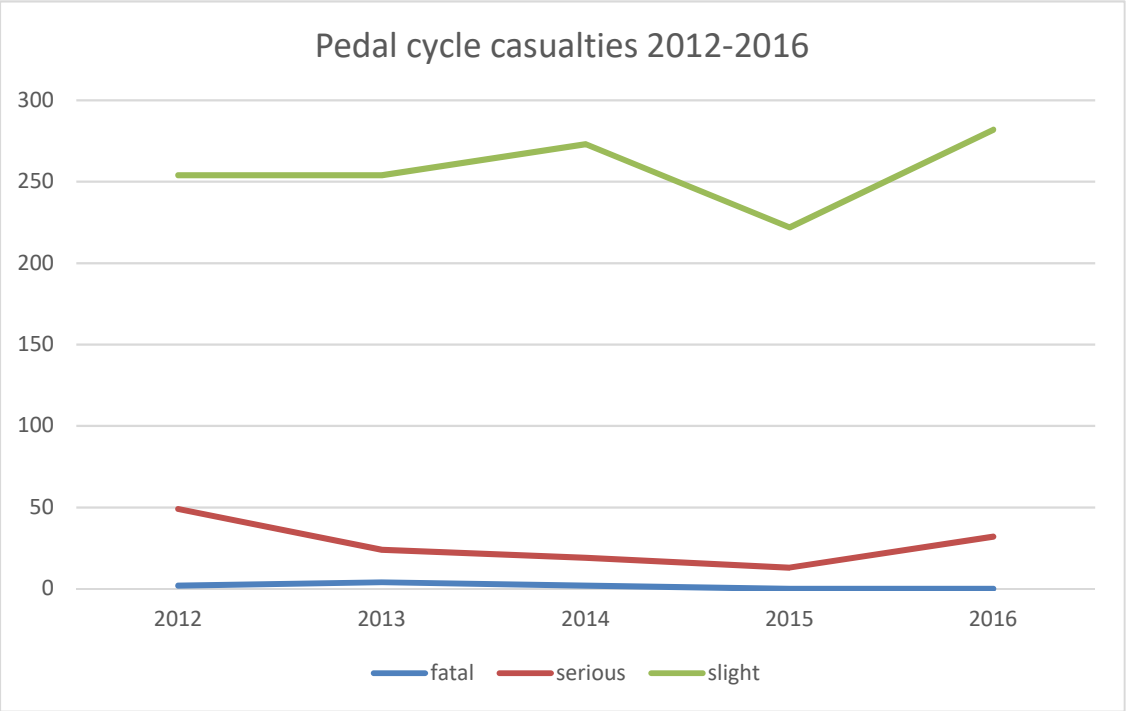

Figure 28: Tower Hamlets Pedal Cyclist casualties 2012 – 2016

[41] Vision Zero action plan: Taking forward the Mayor's Transport Strategy'. Transport for London, July 2018

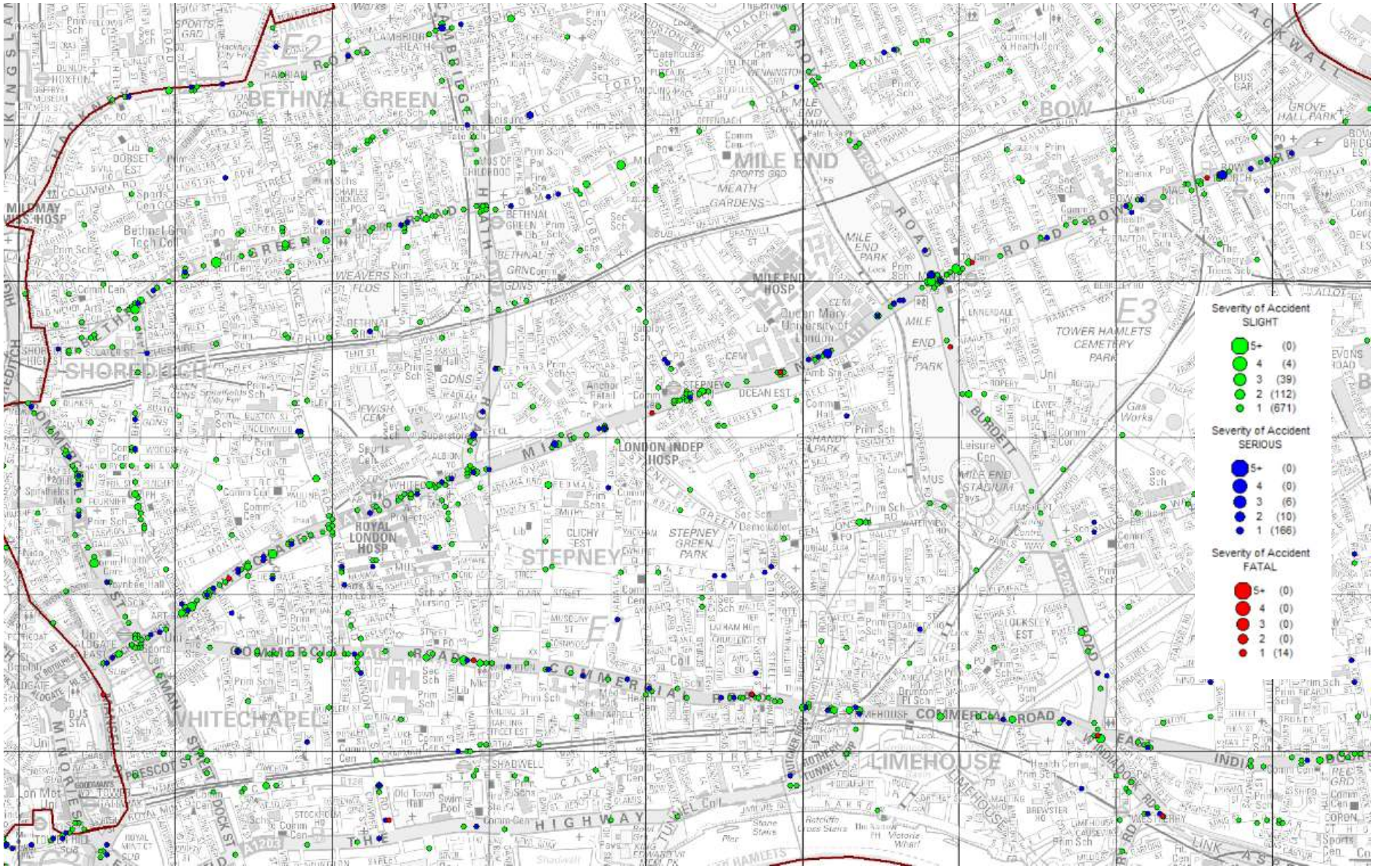

Figure 29: Pedestrian casualties in central Tower Hamlets. Years 2012-2016. Key not to scale

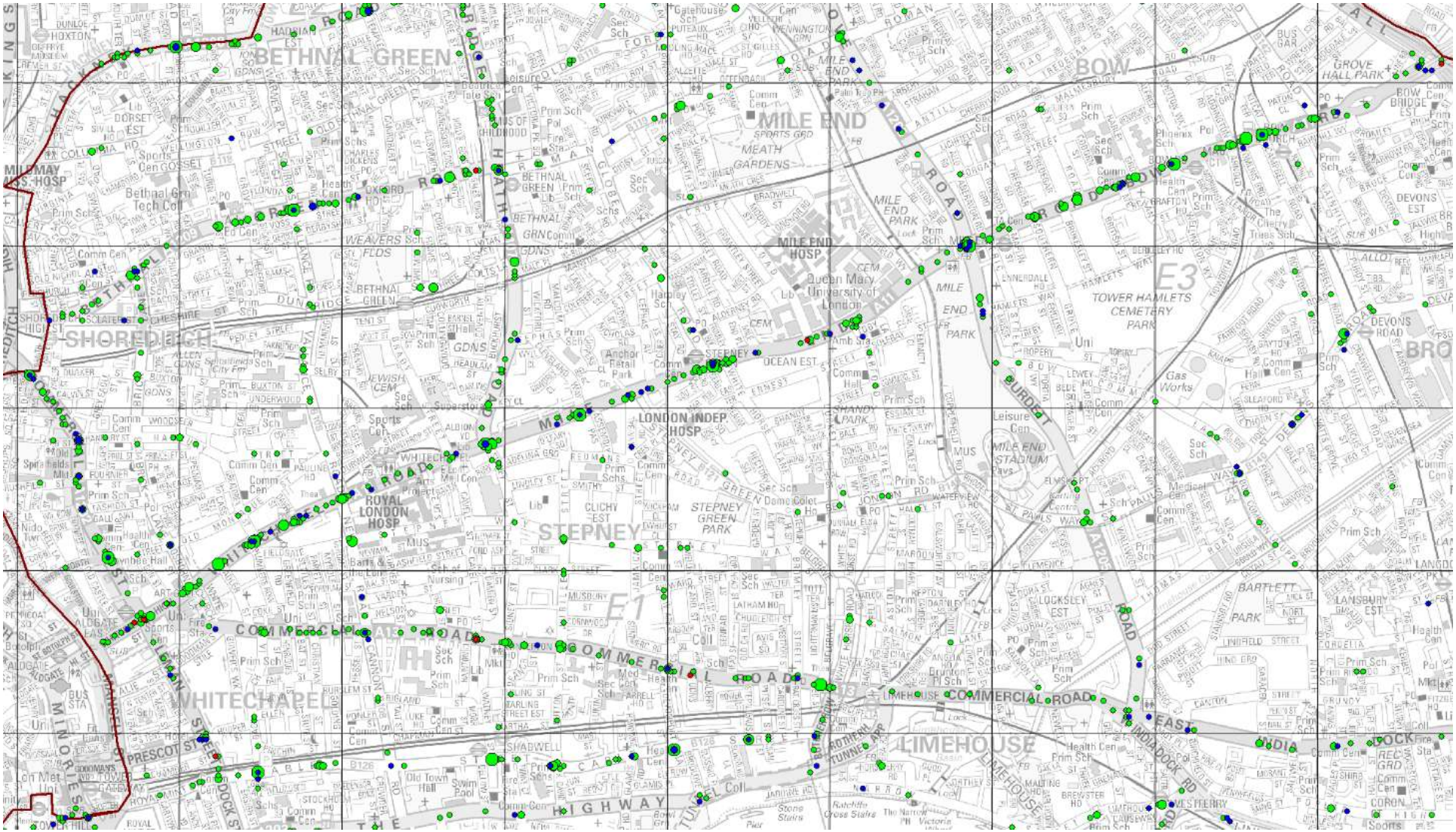

Figure 30: Cycle casualties in central Tower Hamlets. Years 2012-2016. Key not to scale.

From these maps, it can be seen that KSIs are scattered, however 'slights' are a lot more frequent and have increased significantly in recent years. This is an issue that can be tackled as part of Vision Zero, however, as TLRN roads are managed by TfL, we will rely on collaborative work with TfL to allow changes to be made to improve the safety of pedestrians and cyclists and to protect the most vulnerable road users. In particular we call on them to deliver the A13 safety scheme as soon as possible.

v. Powered-Two Wheelers

In Tower Hamlets PTWs are, when measured by trip, a source of more danger to pedestrians than any other mode including HGVs and cars. PTW drivers are a hazard to both pedestrians and cyclists and there is a notable problem of PTW drivers illegally using pedestrian/cycle only routes and participating in anti-social driving in the borough.

By allowing PTWs into bus lanes the aim is to reduce the danger they pose to people cycling. This approach shows safety benefits for PTW users but could be seen to encourage their use, which is not desirable given PTWs are polluting and are a cause of specific environmental annoyance for pedestrians when low background noise levels and sparse traffic flow allow identifying the PTW[42].

PTWs are also over represented in casualties. Of the 5955 casualties in Tower Hamlets between 2012 and 2016, 19% (1133 in number) were PTWs. See Figure 31.

	No. of casualties			
	Casualty severity			
Mode of travel	1 Fatal	2 Serious	3 Slight	Sum
1 Pedestrian	1	18	92	111
2 Pedal Cycle	0	1	33	34
3 PTW	2	94	848	944
4 Car	0	1	32	33
5 Taxi	0	0	3	3
6 Bus or Coach	0	0	1	1
7 Goods Vehicle	0	0	5	5
8 Other Vehicle	0	0	2	2
Sum	3	114	1016	1133

Table 6: All casualties from collisions involving a PTW Tower Hamlets 2012-16

[42] Paviotti, M. and Vogiatzis, K., 2012. On the outdoor annoyance from scooter and motorbike noise in the urban environment. *Science of the Total Environment*, *430*, pp.223-230.

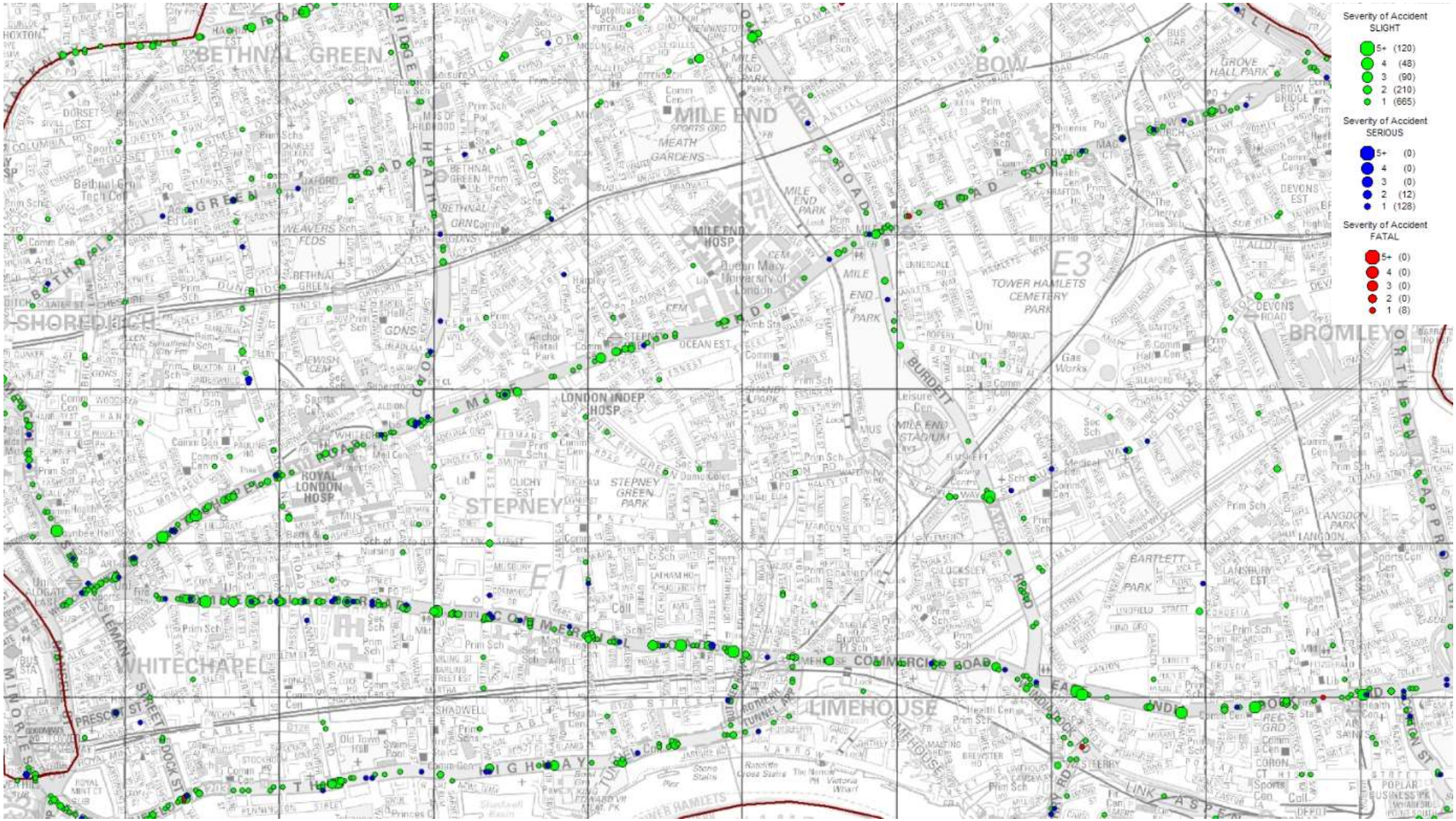

Figure 31: Collisions involving PTW injury, 2012-2016. Central Tower Hamlets. Key not to scale

Approximately 12% of PTW crashes involve no other vehicles (28 PTW casualties per year based on five-year average from 2013-2017). 64% of these PTW collisions involving no other vehicle result in serious or fatal injuries. Of the three PTW fatalities, one involved no other vehicle. This suggests a proportion of PTW injuries and fatalities are the result of the driving behaviour (rather than the result of behaviour of other road users) and could be addressed via campaigns or training.

	No. of casualties				
		Casualty severity			
Casualty sex	Casualty age (banded)	1 Fatal	2 Serious	3 Slight	Sum
1 Male	10-15	0	1	0	1
	16	0	1	2	3
	17	0	0	4	4
	18-19	0	3	31	34
	20-24	0	10	133	143
	25-59	2	66	596	664
	60+	0	3	5	8
	Unknown	0	2	25	27
	Sum	2	86	796	884
2. Female	18-19	0	0	2	2
	20-24	0	1	4	5
	25-59	0	7	44	51
	Unknown	0	0	2	2
	Sum	0	8	52	60
Sum		2	94	848	944

Table 7: Powered Two Wheelers casualties Tower Hamlets 2012-16 showing age banded and gender

Of the PTW casualties which occurred between 2012 and 2016, only 6% were women, and 94% were males. 70% of all PTW KSIs between 2012 and 2016 in Tower Hamlets involved PTW drivers who were male and in the 25 to 59-year age band.

Potentially, tested and targeted campaigns, and training to change PTW behaviour to reduce not only the injury to themselves, but also to other road users, would be of great benefit in reducing casualties in Tower Hamlets overall. Alternatively, campaigns to encourage PTWs drivers onto other types of more benign transport would benefit Tower Hamlets in terms of pollution and casualty reduction. Funding to this effect has therefore been included in the Delivery Plan under Supporting Measures.

vi. Danger posed by respective vehicles in Tower Hamlets

	Pedestrian casualties Tower Hamlets 2012-16 showing vehicle in conflict with pedestrians				
	Casualty severity				
Vehicle type (banded)	1 Fatal	2 Serious	3 Slight	Sum	Approx. % trip mode share
1 Pedal cycle	0	3	42	45	3.5%
2 PTW	1	18	92	111	0.4%
3 Car	4	93	446	543	18.2%
4 Taxi	0	6	37	43	1.0%
6 Bus/coach excluding minibus	1	8	20	29	12.7%
7 Goods vehicles	3	14	59	76	1.0%
8 Other	1	2	4	7	
Sum	10	144	700	854	

Table 8: Pedestrian casualties Tower Hamlets 2012-16 showing vehicle in conflict with pedestrians

Car drivers are involved in 64% (543 in number) of reported crashes which cause pedestrian injuries or deaths but only 18.2% of trips are made by car. Goods vehicles are involved in 8.9% (76 in number) of reported crashes which cause pedestrian injuries or deaths but only 0.5% of trips are made by van or lorry.[43]

One of the most striking aspects of the data is that PTWs are involved in 13% or approximately one in eight (111 in number) of all reported collisions which result in injury to pedestrians but represent only 0.4% of all trips.[44] That makes PTWs the greatest source of road danger to pedestrians per trip of all the types of road user in

[43] Transport for London on request
[44] Transport for London on request

the Borough of Tower Hamlets. PTWs are also more than twice as likely to be involved in collisions with pedestrians and six times more likely that cyclists to cause a serious injury to pedestrians than cyclists.

vii. Road danger by income, ability, age and gender

Low-income residents, disabled people and children suffer disproportionately when it comes to injuries caused by road crashes. A study based on the National Travel Survey showed that nationally, for every mile walked, a low-income pedestrian is three times more likely to be injured by a motor vehicle than someone from a high-income household. Disabled people are five times more likely to be injured than non-disabled people.[45]

People are most likely to be injured between the ages of 10 and 14. Speeds and traffic volumes on roads where children live or might live need to be substantially reduced through design and enforcement.

The Council's plans to reduce rat running, extend a Love Your Neighbourhood programme, along with School Streets and Play Streets and reduce speed by design are all aimed at enabling more active travel amongst children while reducing their exposure to road danger.

In Tower Hamlets, child pedestrian and cycle casualties (see Figure 32 and Figure 33) tend to be dispersed across the road network, presumably because children are making more local journeys to school, friends etc. (rather than commuting along the TLRN).

While training programmes can go some way to encouraging children to cross at crossings and so on, the approach should be that it is the road users who pose the harm whose activities should be curtailed though design and not the activity of benign road users. The nature of children will not change. Therefore, the approach we take in this strategy is that the road environment, and driver behaviour, must be adapted.

The age at which residents are most likely to be injured as pedestrians in Tower Hamlets is 10-15 years and 80-84 years as measured in five-year age bands based on 2017 population against the number of average annual casualties per 1000 population (see Figure 34).

[45] Aldred, R. Road injuries in the National Travel Survey: under-reporting and inequalities in injury risk. Project Report. Department of Planning and Transport, University of Westminster, London. April 2018

Figure 32: Child pedestrian casualties (aged 0-15), Tower Hamlets, 2012-2016. Key not to scale

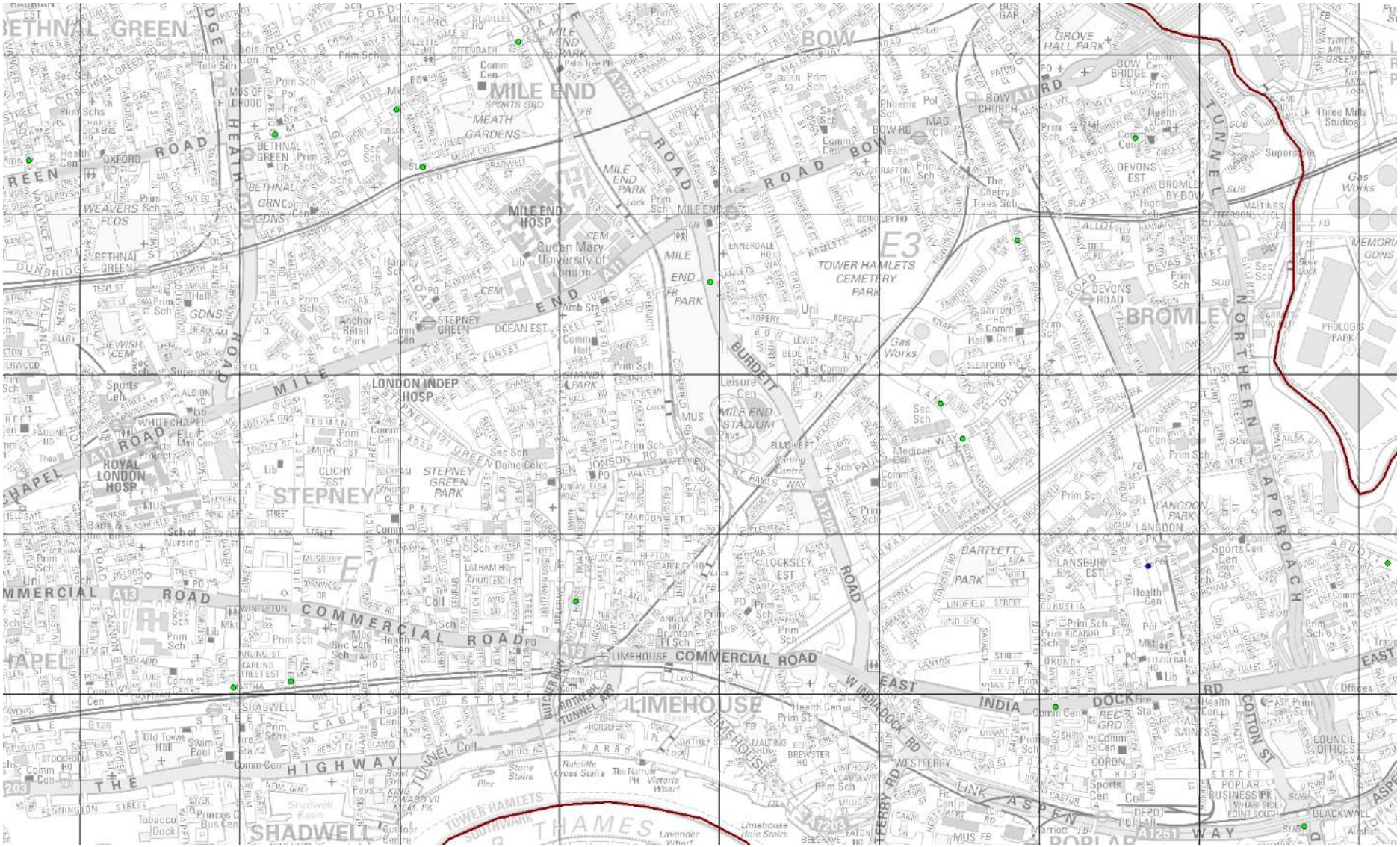

Figure 33: Child cycle casualties (aged 0-15), Tower Hamlets, 2012-2016. Key not to scale

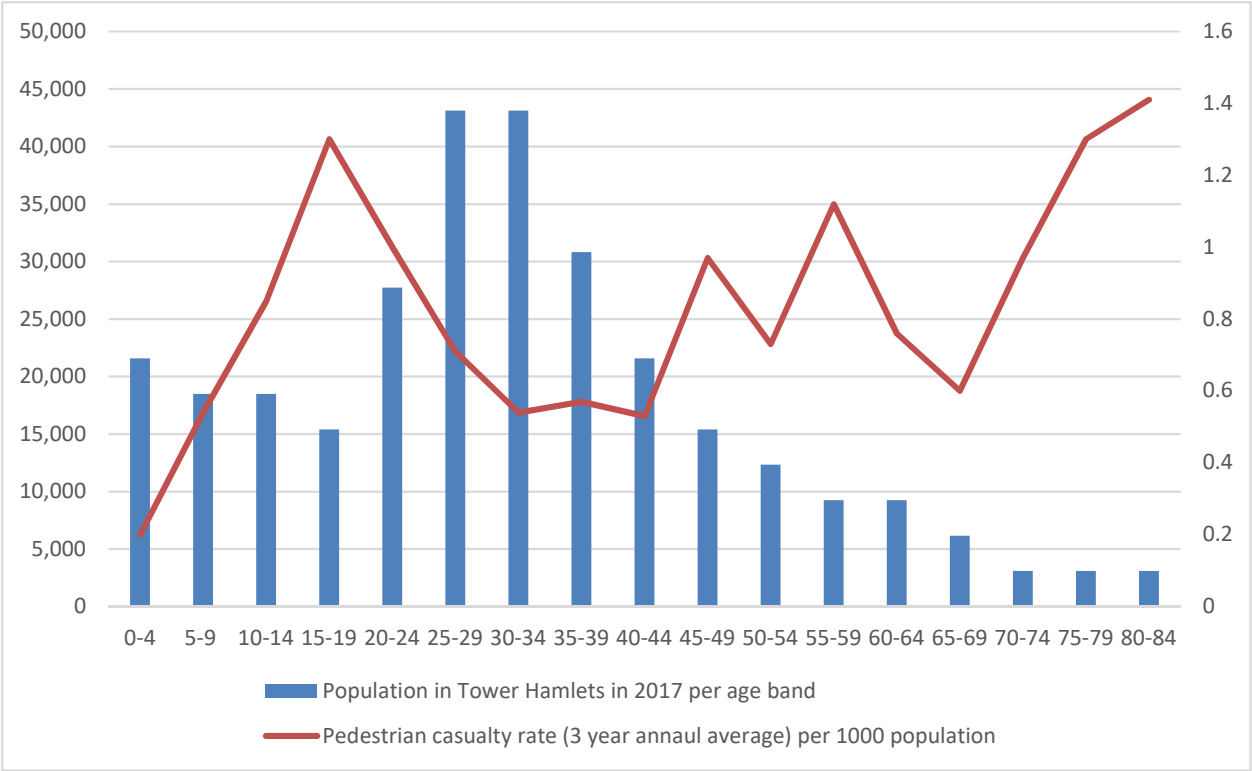

Figure 34: Pedestrian casualty rate (3-year average for 2015, 2016 and 2017) per 1000 population against the number of Tower Hamlets population in five-year age bands (as of 2017). Calculated based on data provided by TfL.

Perceptions of security also vary according to age, gender and ability. We recognise that feelings of security amongst residents holds a strong link to social inclusion. Those who feel vulnerable are less likely to go out, or travel by active modes. This eliminates opportunities for socialising and interaction with the local environment and can lead to residents feeling isolated, with older generations particularly at risk.

Individuals experience environments in different ways; women who cycle report more incidents of unsafe passes[46] and adult males are more likely to take physical risks [47]. Women also express stronger preferences than men for infrastructure separated from motor traffic[48] particularly if accompanying children, so protected cycle routes are crucial to increasing cycling uptake among women. In addition, by enabling people to

[46] Aldred, R. 2015. Investigating the rates and impacts of near misses and related incidents among UK cyclists. Journal of Transport & Health, Volume 2, Issue 3, September, pp 379–393.
[47] Byrnes, J., Miller, D., and Schafer, W. 1999. Gender Differences in Risk Taking: A Meta-Analysis. Psychological Bulletin, Vol. 125, No. 3, American Psychological Association, University of Maryland, pp 367-383.
48 R. Aldred, B. Elliott, J. Woodcock, A. Goodman. Cycling provision separated from motor traffic: a systematic review exploring whether stated preferences vary by gender and age Transp. Rev., 37 (1) (2017), pp. 29-55

cycle together and providing infrastructure which allows ‘side by side’ cycling, it can increase safety and accessibility for women, parents, children and other groups.

Tower Hamlets aims to be an inclusive Borough, and this is reflected in the Borough Mayor’s Strategic Pledges. The Council recognises the links between safety, security and social inclusion. It will make new developments, public spaces and refurbished train stations feel safe by ‘designing out crime’ with improved lighting, accessibility and dealing with vandalism.

The Borough is also trialling a Memory Lane project to provide public artwork to brighten railway arches and spur long-term memories of people suffering the early stages of dementia. This will improve the safety of public spaces enabling these people to feel socially included.

We have adopted the MTS Healthy Streets design approach to make our streets appealing places to spend time and assist people from all walks of life to feel safe and secure within the Borough’s transport network.

viii. Measuring ‘safety’

The traditional road safety approach is based on analysis of existing casualties. But the presence or absence of collisions is not necessarily a good barometer for safety. For example, if a road environment is excessively hostile that nobody cycles, there will be no cycle casualties.

Levels of harmful, polluting transport and levels of activity – walking, cycling, children playing, people talking to their neighbours – are needed for a clearer picture. (If nobody cycles, there will be no casualties, but it doesn’t necessarily mean the roads are safe.) The most accurate measure of a road’s safety is whether people, in all their diversity, can use their roads.

Tower Hamlets road casualty data will therefore be monitored alongside walking and cycling rates, including reviewing levels of walking and cycling by income, age, gender, and ability/disability.

In addition, safety is measured within the Borough through understanding people’s perception of risk and how safe they feel on the road, regardless of whether a collision has occurred. This can also help to identify where future collisions may occur so preventative measures can be put in place.

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

i. MTS Outcome Indicators

Outcome 3a: Reduce the volume of traffic in London

Measure: A 10-15 % reduction in vehicle kilometres by 2041 using the Love Your Neighbourhood schemes to cut rat running.

Metric: DfT road traffic statistics

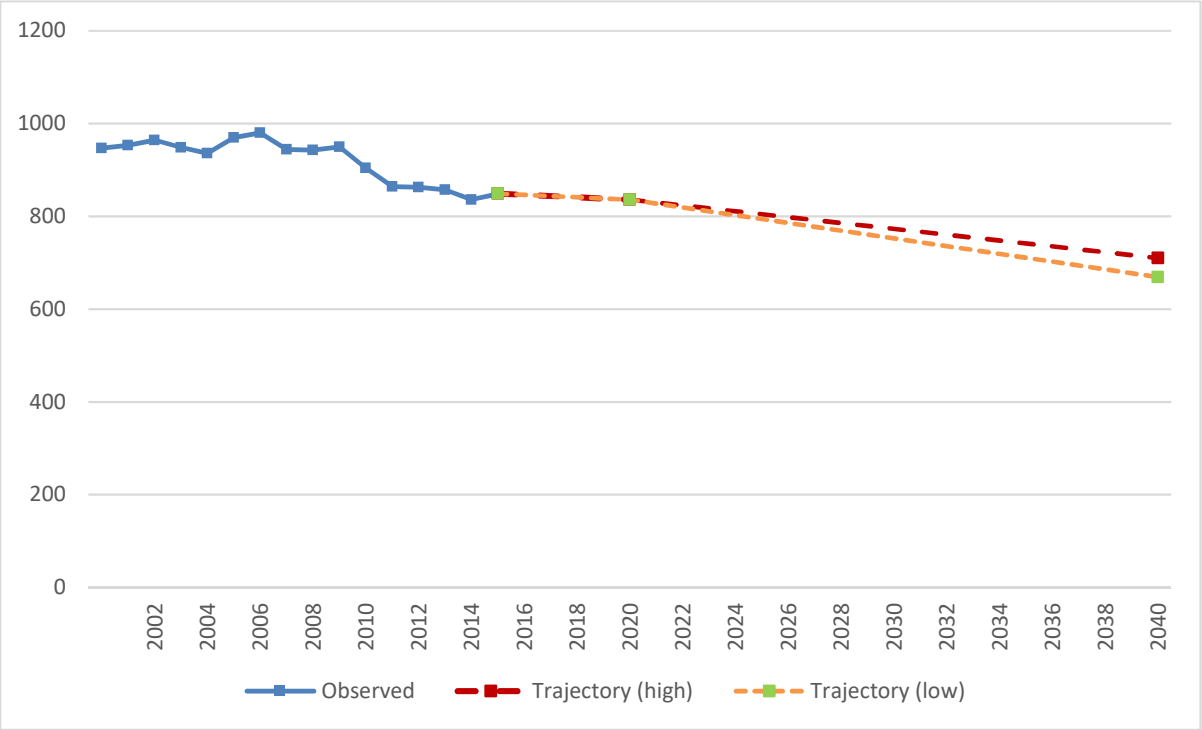

Figure 35: Annual Vehicle Kilometres (millions).
Source: LIP3 MTS outcomes borough data pack v1_1

Outcome 3c: Traffic will fall and congestion kept in check, allowing more efficient operations.

Measure: Household car ownership. 250,000 fewer cars owned in London by 2041.

Metric: Number of licensed vehicles by borough.

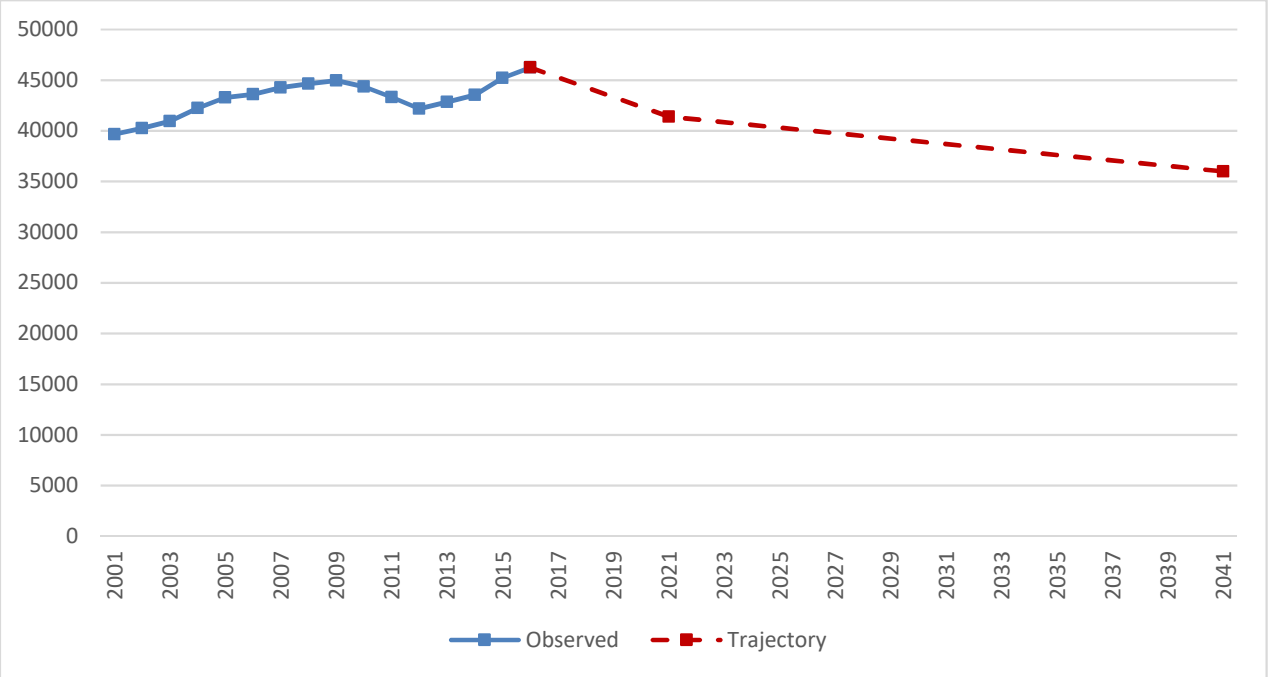

Figure 36: Number of cars owned.
Source: LIP3 MTS outcomes borough data pack v1_1

ii. Challenges and opportunities

Tower Hamlets annual traffic flows are around 873 million vehicle kilometres, travelled by all motor vehicles (2017) [49], of which 633 million vehicle kilometres are cars and taxis. However, given Tower Hamlets' position to the east of London, with the A12/A13 and A11 serving traffic cutting through the borough, the city and a proportion is attributable to through-trips starting and ending in other boroughs. Rat running and through traffic is a major issue in the borough, making the implementation of Love Your Neighbourhood schemes an important approach (see 3.2.3.iii).

There are people commuting into the borough using private motor vehicles, most notably those commuting from Redbridge and Newham. 18.4% of Newham commuters and 27.3% of Redbridge commuters to Tower Hamlets drive by car or van. See Table 9.

The Council has greater control over car journeys that begin and end in the Borough. Of those commuting within the Borough to work, a large proportion (40.4%) walk to work. 13.1% commute by car or van – a significant number given the journeys are likely to be shorter distances so highly likely to be walkable or cyclable. Around a third (30.4%) of Tower Hamlets commuters travelling to Newham do so by car or van, a

[49] Traffic Flows, Transport for London

surprisingly high number given the proximity of Newham to Tower Hamlets. See Table 10.

Top Mode of Travel

Rank	Local Authority	% of Commuters	Tube, Light Rail or Tram	Train	Bus, Minibus or Coach	PTW	Driving a Car or Van	Pedal cycle	On Foot
1	Tower Hamlets	14.1%	17.9%	3.4%	17.9%	0.4%	13.1%	5.1%	40.4%
2	Newham	5.4%	50.9%	12.6%	11.2%	0.8%	18.4%	2.5%	1.7%
3	Redbridge	4.1%	49.8%	15.3%	2.6%	0.8%	27.3%	1.6%	0.5%
4	Southwark	3.6%	49.4%	10.5%	12.7%	1.2%	6.8%	8.3%	6.8%
5	Hackney	3.4%	16.8%	6.5%	33.1%	1.1%	10.8%	20.1%	10.2%
6	Greenwich	3.2%	53.7%	17.8%	7.6%	1.1%	11.7%	4.4%	1.7%
7	Wandsworth	3.1%	64.8%	19.0%	1.7%	2.8%	4.9%	5.8%	0.3%
8	Lewisham	2.9%	56.5%	21.6%	4.6%	1.1%	8.6%	4.8%	1.0%
9	Westminster	2.7%	82.1%	1.8%	1.8%	2.1%	4.4%	3.0%	3.0%
10	Lambeth	2.6%	61.5%	13.3%	7.4%	1.8%	5.6%	8.9%	1.2%

Table 9: Top 10 Origins of Commuters to Tower Hamlets

Top mode of travel

Rank	Local Authority	% of Commuters	Tube, Light Rail or Tram	Train	Bus, Minibus or Coach	PTW	Driving a Car or Van	Pedal cycle	On Foot
1	Tower Hamlets	30.1%	17.9%	3.4%	17.9%	0.4%	13.1%	5.1%	40.4%
2	Westminster	29.0%	60.2%	3.9%	10.6%	0.8%	1.5%	7.5%	14.3%
3	Camden	6.2%	65.0%	4.7%	10.4%	1.1%	3.5%	10.8%	3.7%
4	Islington	4.8%	42.8%	3.3%	14.4%	1.0%	5.7%	15.0%	16.8%
5	Hackney	4.4%	18.0%	3.8%	24.7%	1.0%	12.0%	15.2%	24.0%
6	Southwark	4.0%	47.6%	4.9%	13.3%0	1.1%	7.1%	11.5%	13.0%
7	Newham	2.9%	32.8%	9.2%	14.8%	0.9%	30.4%	5.2%	4.4%
8	Kensington & Chelsea	2.2%	81.1%	5.3%	3.2%	0.7%	2.8%	5.1%	1.3%
9	Lambeth	1.7%	59.8%	6.0%	11.7%	1.4%	7.5%	9.3%	2.9%
10	Hammersmith & Fulham.	1.6%	79.9%	5.1%	2.8%	1.5%	3.8%	5.6%	1.1%

Table 10: Top 10 Destinations of Commuters from Tower Hamlets

This presents a challenge, as these types of journeys may be outside the Council's control and cannot be prevented without pushing issues of congestion into neighbouring boroughs or enabling people travelling through the borough to use sustainable transport. The Council will therefore work alongside other boroughs and TfL to take a holistic approach to traffic reduction, whereby the appeal and convenience of travel by car is reduced. If all London Boroughs work to and meet their objectives under Outcome 3 of the MTS, the levels of through-traffic and car-based commuting in Tower Hamlets will fall as a result.

iii. Love Your Neighbourhood

The Love Your Neighbourhoods scheme is a multi-faceted approach aimed at curbing through traffic that currently uses inappropriate residential routes. Public realm

improvements will aim to reallocate road space to essential traffic and active modes, slow motor vehicles, thereby encouraging changes in travel behaviour to improve health and wellbeing.

The Borough has an ambitious aim of starting the delivery of 20 Love Your Neighbourhood schemes in the next 3 years. Bethnal Green is one such scheme that is already under detailed review for consultation. The scheme is based upon traffic management with modal filters to prevent road racing and ASB driving, both of which are significant safety concerns for the community. Wapping is also in an advanced stage with construction due to start in March 2019. Modal filters and bus gates will be included in the scheme to reduce rat running increasing pedestrian safety.

These programmes provide examples of the measures to be put in place across the Love Your Neighbourhood schemes, all of which will help to reduce through traffic and make the streets safer and more pleasant for people to walk and cycle on.

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

i. MTS Outcome Indicators

Outcome 4a: A 72% reduction in carbon dioxide (CO_2) emissions from transport (excluding aviation) by 2041.

Measure: Reduction in CO_2 emissions (in tonnes) from road transport.

Metric: CO_2 emissions (in tonnes) from road transport within the borough, base year 2013.

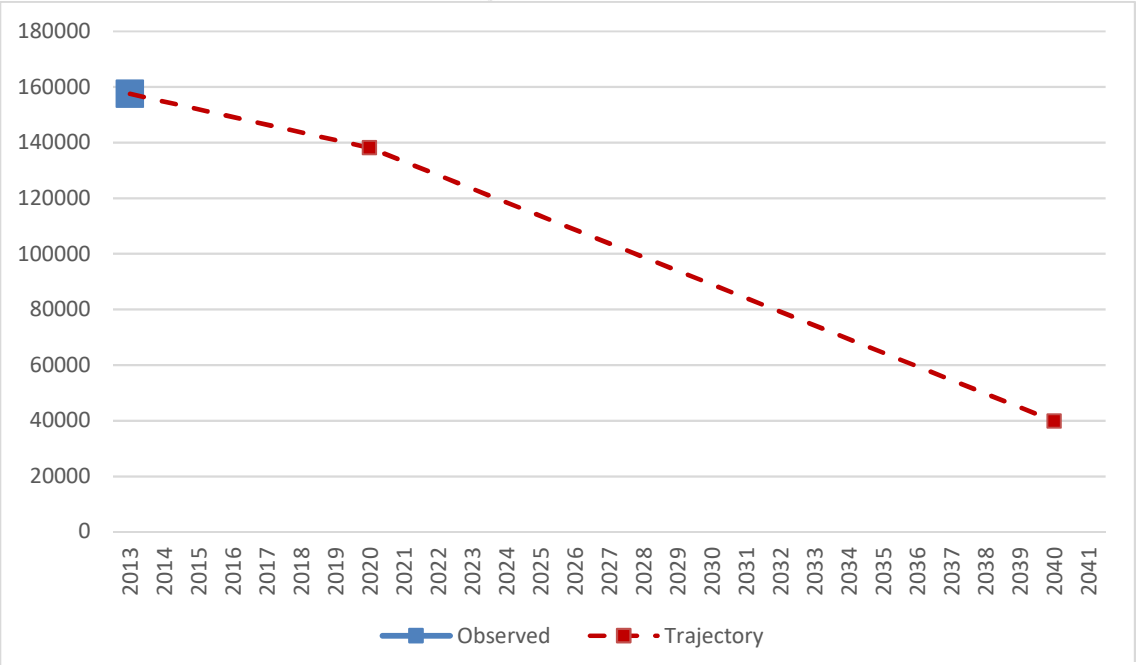

Figure 37: CO_2 emissions (in tonnes) from road transport. Source: LIP3 MTS outcomes borough data pack v1_1

Outcome 4b: A 94% reduction in road transport NOx emissions by 2041.

Measure: Reduction in NOx emissions (in tonnes) from road transport.

Metric: NOx emissions (in tonnes) from road transport within the borough, base year 2013.

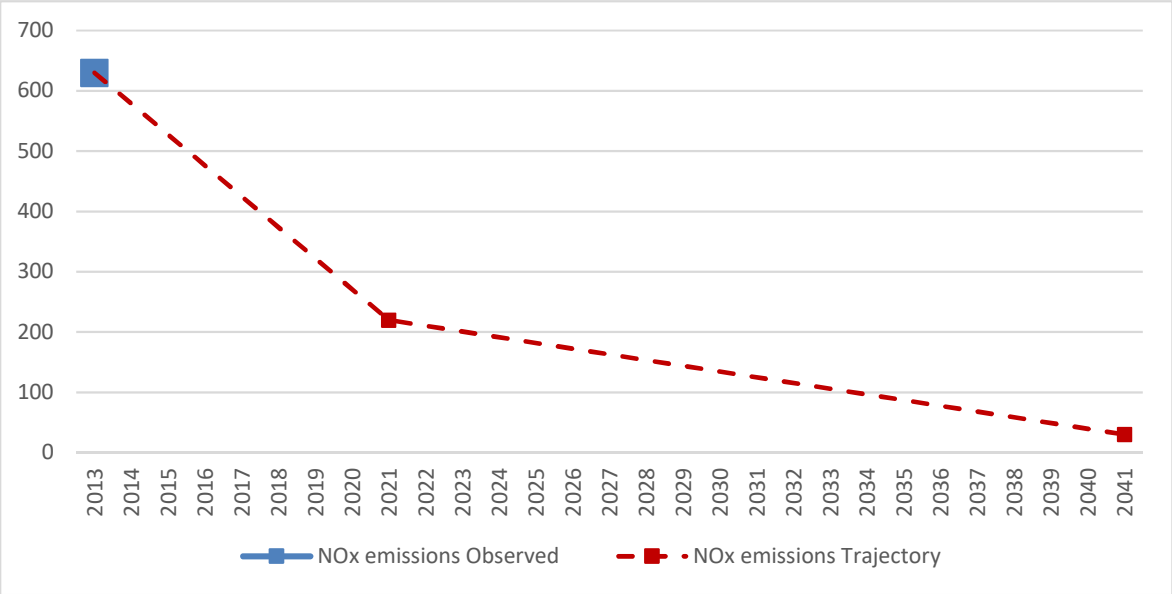

Figure 38: NO_x emissions (in tonnes) from road transport. Source: LIP3 MTS (TfL) borough data pack v1_1

Outcome 4c: A 45% reduction in road transport PM_{10} emissions by 2041.

Measure: Reduction in PM_{10} emissions (in tonnes) from road transport.

Metric: PM_{10} emissions (in tonnes) from road transport within the borough, base year 2013.

Outcome 4d: A 53% reduction in road transport $PM_{2.5}$ emissions by 2041.

Measure: Reduction in $PM_{2.5}$ emissions (in tonnes) from road transport.

Metric: PM_{10} and $PM_{2.5}$ emissions (in tonnes) from road transport within the borough, base year 2013.

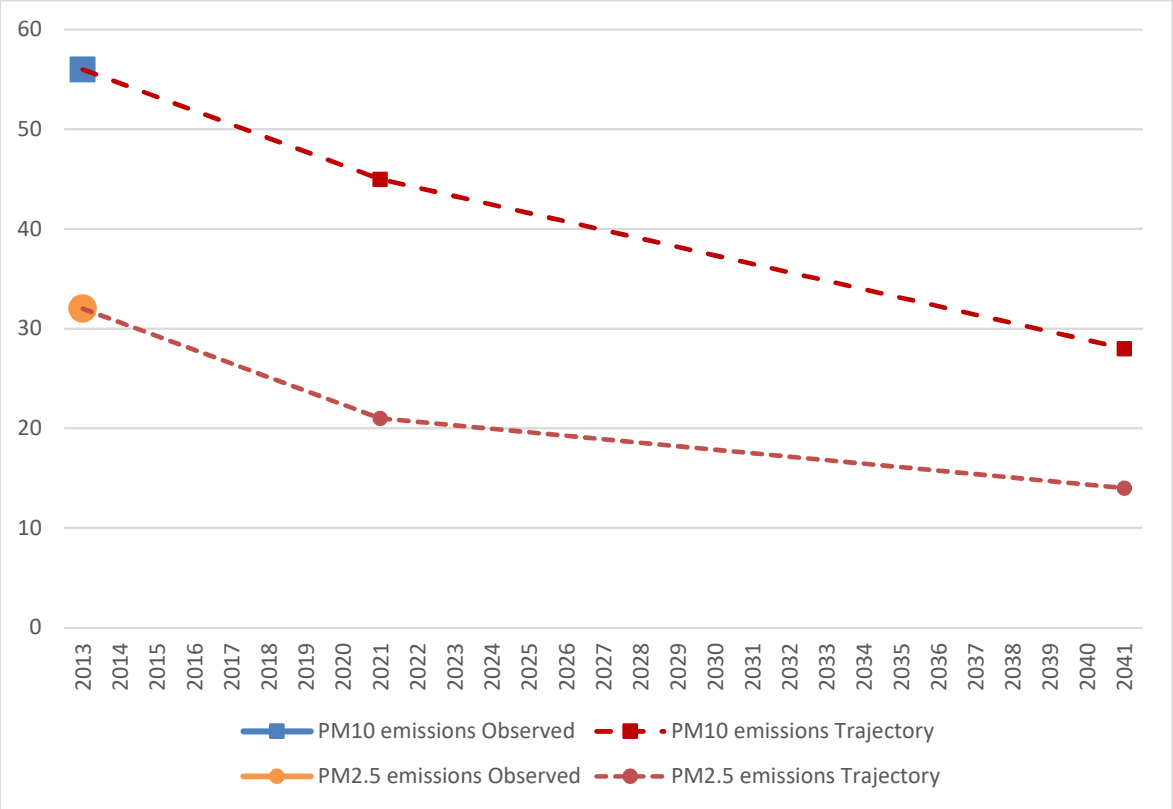

Figure 39: Reduced particulate emissions (in tonnes) from road transport.
Source: LIP3 MTS outcomes borough data pack v1_1

ii. Challenges

With Tower Hamlets having consistently poor air quality, the Tower Hamlets Health and Wellbeing Strategy (see 3.2.1.ii) supports the aim to reduce air pollution in the Borough.

iii. Local air quality

Air pollution in Tower Hamlets is currently the fifth worst in London and exceeds UK and European UK air quality levels (Tower Hamlets Campaign to Breathe Clean, March 2018). Most pollution comes from vehicles and it has the most detrimental impact on children, the elderly and those with underlying health concerns.

Around 40% of Tower Hamlets residents live in areas with unacceptable air quality, with the most deprived areas subject to the worst air quality[50]. This is partly because these areas are often near busy roads[51].

37 primary schools and 11 secondary schools are located in areas where air pollution exceeds legal limits. Studies, including one carried out in Tower Hamlets, show that children's health is being negatively affected living in highly polluted areas. Therefore, urgent action is required to reduce emissions and exposure to toxic air. (Electric Vehicle Charging Point Delivery Plan, London Borough of Tower Hamlets, 2017).

The whole borough of Tower Hamlets has been declared an Air Quality Management Area (AQMA) due to the high concentration of Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10}) caused largely by traffic on major roads in the borough. An AQMA is an area where the national air quality objectives (set by Defra) are not likely to be achieved.

Transport for London have identified a number of 'Air Quality Focus Areas' in Tower Hamlets. These areas are where the annual mean limit value for NO_2 was exceeded and there was high human exposure. The Focus Areas have been used by GLA, TfL and the boroughs to inform local air quality management, the development of air quality interventions and the planning process. See Figure 40.

Hotspots in Tower Hamlets are found in Aldgate, Limehouse and Bromley-by-Bow. See Figure 40. The A12 in the east of the borough records some of the highest level of pollutants (Green Grid Update June 2017, p14).

The AQMA has been declared for the following pollutants:

1. Nitrogen Dioxide (NO_2) - because we are failing to meet the EU annual average limit for this pollutant at some of our monitoring stations and modelling indicates it is being breached at a number of other areas across the borough.
2. Particulate Matter (PM_{10}) - because although we are now meeting EU Limits we are exceeding World Health Organisation air quality guideline for this pollutant and we have a formal responsibility to work towards reductions of $PM_{2.5}$, which is a fraction of PM_{10}. (Air Quality Action Plan 2017)

$PM_{2.5}$ is currently only measured at the Blackwall Tunnel portal monitoring station, run by TfL. The Council's monitoring network will soon be extended to include two new $PM_{2.5}$ monitors. Of the pollution that originates in the borough the main sources of NO_2 are transport and domestic emissions. The main sources of particulate matter are

[50] Tower Hamlets Campaign to Breathe Clean, March 2018. Accessed via internet.
[51] Tower Hamlets Health and Wellbeing Board (2013). Health& Wellbeing Strategy 2013-2016. Towards a Healthier Tower Hamlets

traffic emissions, resuspension of particles from traffic sources e.g. brake or tyre wear and emissions from construction machinery.

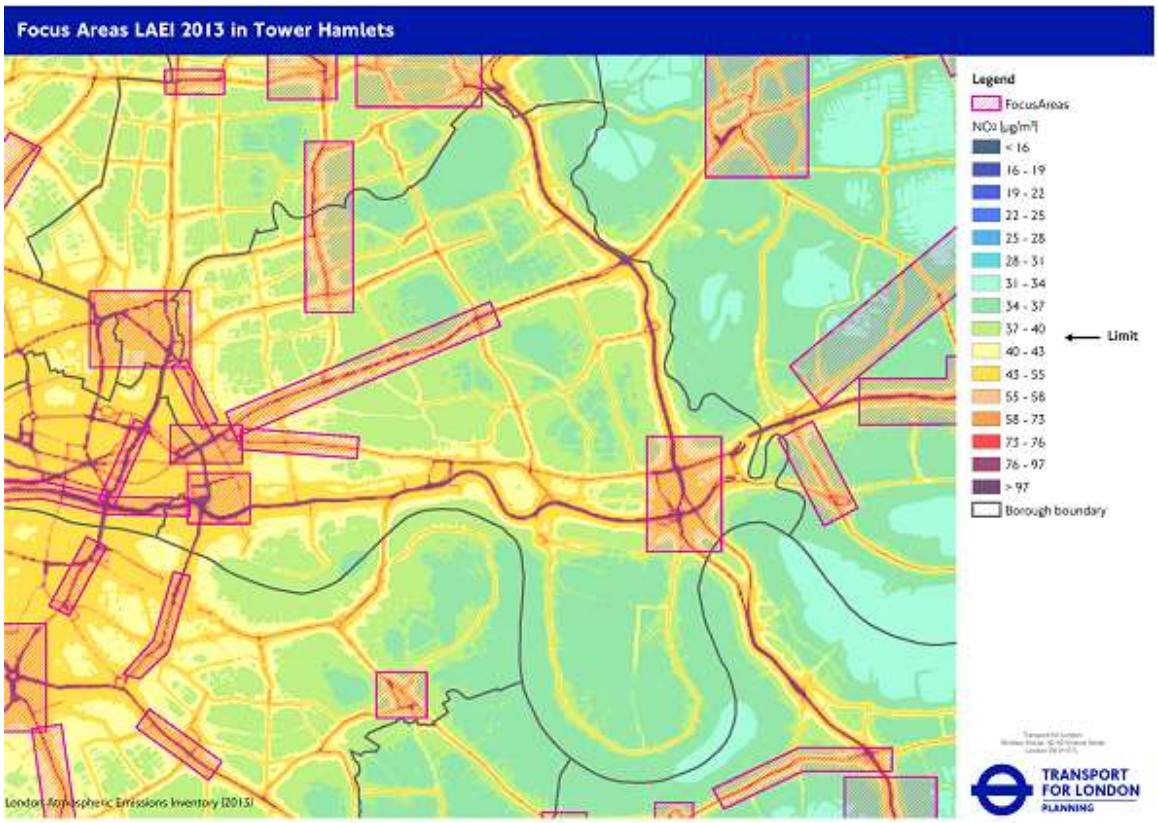

Figure 40: NO_2 levels in Tower Hamlets

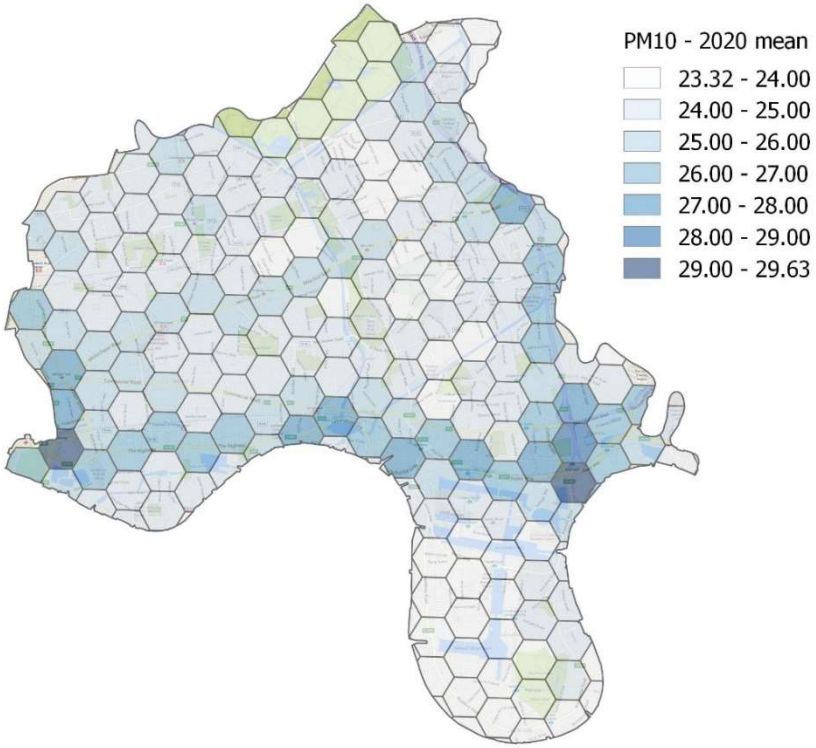

Figure 41: PM_{10} Modelled for 2020. Source: Transport for London. Modelled NO_2 2013 concentrations from the London Atmospheric Emissions Inventory (LAEI) April 2017.

iv. Opportunities

Existing borough policies present opportunities to promote clean, safe streets. The London Borough of Tower Hamlets Air Quality Action Plan 2017-2022 (AQAP) highlights successful projects already including:

- Delivered a sustainable development in the fringes of the Olympic Park
- Delivering Crossrail with reduced air quality impacts on residents and the environment
- Achieved targets for sustainable travel through the Staff Travel Plan and School Travel Plans
- Maintained the council's Ambient Air Quality Monitoring stations
- Managed emissions from council fleet through a Green Fleet Strategy and all fleet comply with the Low Emission Zone
- Successfully implemented all round one of the Mayor's Air Quality Fund projects including
- Zero Emissions Network and BARTS Health Project
- Implemented a cleaner air for schools' project at Marner and Cubitt Town Schools to engage pupils, teachers and parents on air pollution

The AQAP outlines how the Council aims to improve air quality during the next five years and includes:

- Raising awareness among businesses and schools to help reduce their own impact on air pollution
- Annual monitoring of air quality
- Encouraging the use of electric vehicles by installing 300 on street charging points
- Ensuring new developments across the borough do not adversely impact the local air quality – use planning systems to ensure charging points are provided where parking is offered, and ensure residents have access to a ULEV car club.
- Borough fleet / council contracted Fleet actions include accelerating uptake of new Euro VI vehicles in borough fleet and ending the purchase of diesel vehicles where feasible. Commitment to total fleet upgrade to meet ULEZ Standards in time for ULEZ implementation and monitoring of the fleet profile.

The Tower Hamlets Mayor's Strategic Pledges 2018 also commit to:

- Increased car club provision – including introducing point-to-point schemes across the borough - and support them to swap to electric vehicles and incentives for local residents to use car clubs.
- Lobbying others for, accessible transport improvements, and specialist transport for individuals and carers for those with a disability, including dedicated nearby parking.

- Phasing out all diesel vehicles from the borough's fleet and increase the number of electric, hybrid and cleaner vehicles in their place
- School Streets around 50 primary schools to reduce the traffic around our most polluted and congested schools at drop-off and pick-up times
- Ensuring the new bridges in Fish Island do not increase rat running and pollution in the area by establishing a bus- and cycle-only bridge
- Rolling out electric vehicle charging points across the borough to accelerate the take-up of electric vehicles, with an ambition to have 300 by 2025.

The Tower Hamlets Local Plan 2031 (Regulation 19) (to be reviewed at the end of 2018) includes policy on air quality. D.ES2, refers to new development (rather than specifically to transport). It states that "Development is required to meet or exceed the 'air quality neutral' standard, including promoting the use of low or zero emission transport and reducing the reliance on private motor vehicles." (Policy D.ES2, p.54)[52]

The main way to improve air quality is to reduce the use of polluting types of transport and encourage walking, cycling or public transport. As with the Road Danger Reduction approach which focuses on reducing the problem at source (rather than adapting the physical environment and behaviour of benign road users) so too this is the approach Tower Hamlets Council will take with air pollution; we aim to reduce air pollution in absolute terms at source.

Freight vehicles are typically some of the most polluting vehicles on our roads. Furthermore, the projected growth in the borough will lead to increased construction traffic and associated vehicles which tend to bring more pollution, noise and dust. The Tower Hamlets Local Plan 2031 (Regulation 19) seeks to address the challenges the borough faces in ensuring the efficient, safe, timely and sustainable movement of goods and materials across the borough, whilst seeking to improve air quality and reduce impacts arising from the freight network such as cycle casualties.

As part of the 'Mayor of London's School Air Quality Audit', the GLA has undertaken Air Quality Audits for two primary schools; Marner Primary School and Bonner Primary School. The reports have been written and reviewed by the schools. The schools are currently at the stage of choosing which recommendations they intend to carry out. The borough is also cooperating with the GLA to deliver further air quality audits to selected nursery schools in the borough.

The Council has also adopted the fixed penalty anti-idling powers available under the Road Traffic (vehicle emissions) (fixed penalty) (England) Regulations 2002.

[52] Appendix 1 Tower Hamlets Local Plan 2031 Regulation 19. Consultation October 2017

v. Behaviour Change and the Green Grid (see 3.2.1.ii)

The Tower Hamlets Green Grid Strategy outlines opportunities to mitigate and reduce the effects of air pollution in a number of ways. Firstly, provision of green, attractive walking routes away from main roads will encourage people to walk in areas of relatively higher air quality. Secondly, where quiet routes between facilities are not available, provision of well-designed green infrastructure such as along main roads in areas of poorer air quality can help to improve air quality as vegetation is recognised as being able to improve quality of the air by filtering and buffering pollutants. Thirdly, safe attractive walking routes provide a cheap, attractive alternative transport option individual from using motorised vehicles that contribute to poor air.[53]

As noted by the Mayor "We're one of the best boroughs in London for Transport Connections. We need to use those sustainable connections to reduce pollution levels, improve the environment and make Tower Hamlets a healthier place to live, work and visit."[54]

vi. Air quality campaigns

Borough-wide air quality campaigns are already underway. We are working with fleet businesses, young people (who are usually digitally literate and environmentally aware) with the support of the Global Action Plan. This follows collaboration with Barts Health NHS Trust, The City of London and the London boroughs of Newham, Waltham Forest and Tower Hamlets. Global Action Plan set out to reduce the impacts of pollution through a campaign in 2016.

Our 'Breathe Clean' campaign includes work by the council, the NHS, TfL and environmental charities to reduce pollution levels. So far, the campaign has launched education programmes in schools to raise awareness about pollution and its health impacts and put in place anti-idling initiatives outside schools. Idling can create twice as much air pollution as a car in motion and can be detrimental to children in the playground. Residents have been trained in air pollution monitoring. 70 volunteers now measure pollution levels throughout the borough. £200,000 of funding has recently been announced by Mayor Biggs to help monitor pollution levels around schools, introduce electric charging points for electric vehicles, and help raise awareness of the health implications of poor air. (Tower Hamlets New website, accessed 28 August 2018).

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[53] Mayor of London (2011) Green Infrastructure and Open Environments. The All London Green Grid. Supplementary Planning Guidance

[54] Tower Hamlets New website, accessed 28 August 2018

In addition, the Council is rolling out the AirTEXT[55] Londonwide service as part of the Breath Clean Campaign. AirTEXT is Londonwide: a free service for the public providing air quality alerts by SMS text message, email and voicemail and 3-day forecasts of air quality, pollen, UV and temperature across Greater London.

vii. Electric Vehicles

Electric vehicle ownership in Tower Hamlets is forecast to rise rapidly in the next eight years with an estimated 3500 plus electric vehicles registered to Tower Hamlets residents and businesses by 2025. This represents a huge rise in ownership levels in the borough from just 132 electric vehicles registered at the end of 2016 (of the 7,974 vehicles registered in London in 2016). 150 charging points would be required to serve these, but the ambition goes further with 300 charging points to be installed such that every household should have a charging point within 500 metres of their home by 2025 (Electric Vehicle Charging Point Delivery Plan, London Borough of Tower Hamlets, 2017).

All London vehicles are to have zero exhaust emissions by 2050 (MTS 2017). Motorised road transport is responsible for half of the main air pollutants, with cars contributing around 14% of nitrogen oxides (NOx) and 56% of particulate matter (PM) less than 2.5 microns in diameter ($PM_{2.5}$) emissions – some of the pollutants that are most harmful to human health. 33% of journeys are still being made by private transport (ULEV Delivery Plan, 2015). [56]

TfL's 'Electric Vehicle Charging Infrastructure Location Guidance for London' July 2017 identifies London's key EV user groups as

1. Residents and visitors without off-street parking
2. Services and deliveries
3. Local businesses
4. Car club EV fleets

However, EVs should not be seen as a mechanism for continuing car-dependence; they do not constitute an acceptable alternative to increasing walking, cycling and public transport use given the health, casualty reduction and efficiency advantages these modes offer which the private car does not.

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[55] https://www.airtext.info/

[56] Some evidence suggests electric vehicles may not reduce levels of PM as much as expected due to their increased weight (electric vehicles are 24% heavier than their conventional counterparts), electric cars produce about the same particle emissions as gas and diesel carsTimmers, V.R. and Achten, P.A., 2016. Non-exhaust PM emissions from electric vehicles. *Atmospheric Environment*, *134*, pp.10-17.

viii. Car clubs

Car club services provide an alternative to private car ownership, helping reduce pressure on kerbside parking space, reduce car dependency and unnecessary car use. TfL's ULEV Delivery Plan has a target for at least 50% of car club fleets in London to be electric by 2025.

The Council is committed to increasing the proportion of electric, hydrogen and ultra-low emission vehicles in Car Clubs (AQAP). There are currently 126 car club bays within Tower Hamlets at 86 separate locations the majority of which can be converted to EVs which will add to the demand for on street charging (Electric Vehicle Charging Point Delivery Plan, London Borough of Tower Hamlets, 2017).

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

i. MTS Outcome Indicators

Outcome 5: Between 14 and 15 million trips will be made by public transport every day by 2041

Measure: Increased number of trips per day by public transport

Metric: Trips per day by borough of residence. Reported as three-year moving average. Base year 2013/14 – 2015/16.

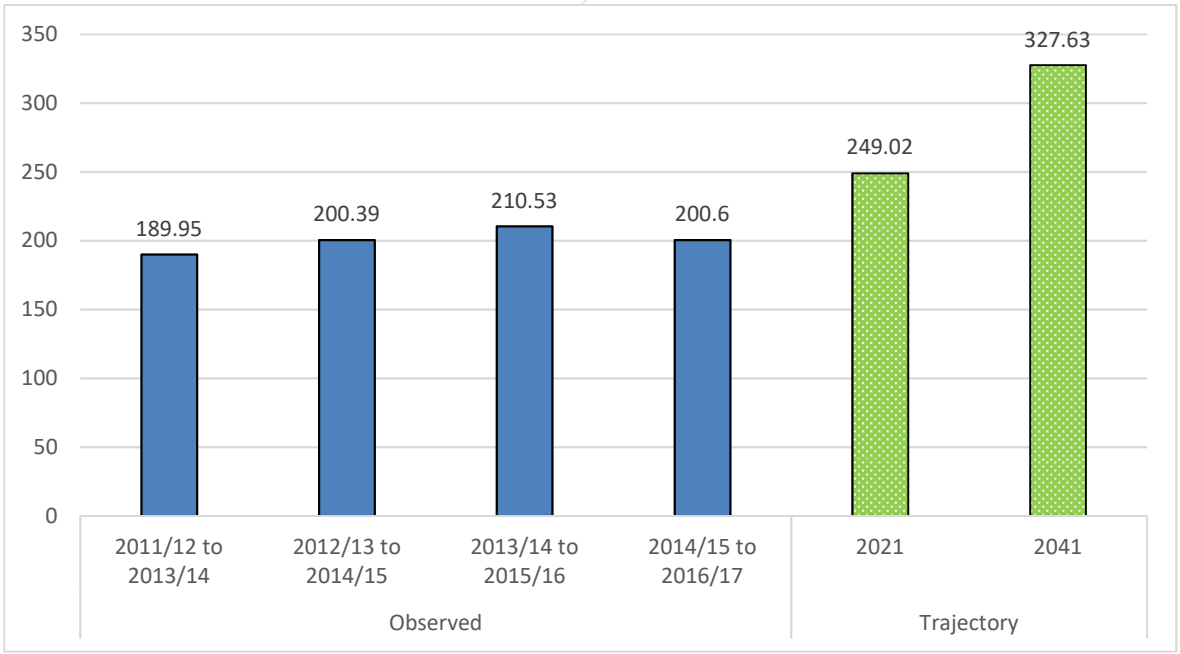

Figure 42: Public Transport (Rail, Underground/DLR, Bus/Tram) Trips per Day (000s)
Source: LIP3 MTS outcomes borough data pack v1_1

ii. Challenges and opportunities

Tower Hamlets enjoys good public transport connectivity, provided for via bus, train, Underground, DLR and river services. The Borough has 31 stations and 46 bus routes[57], with 39.2% of residents commuting to and from work by way of public transport. As the fastest growing borough in London, its transport network and infrastructure will be placed under even greater pressure to meet the growing demand. Careful management is required to ensure that this demand is met with sustainable transport solutions, rather than with private vehicle use.

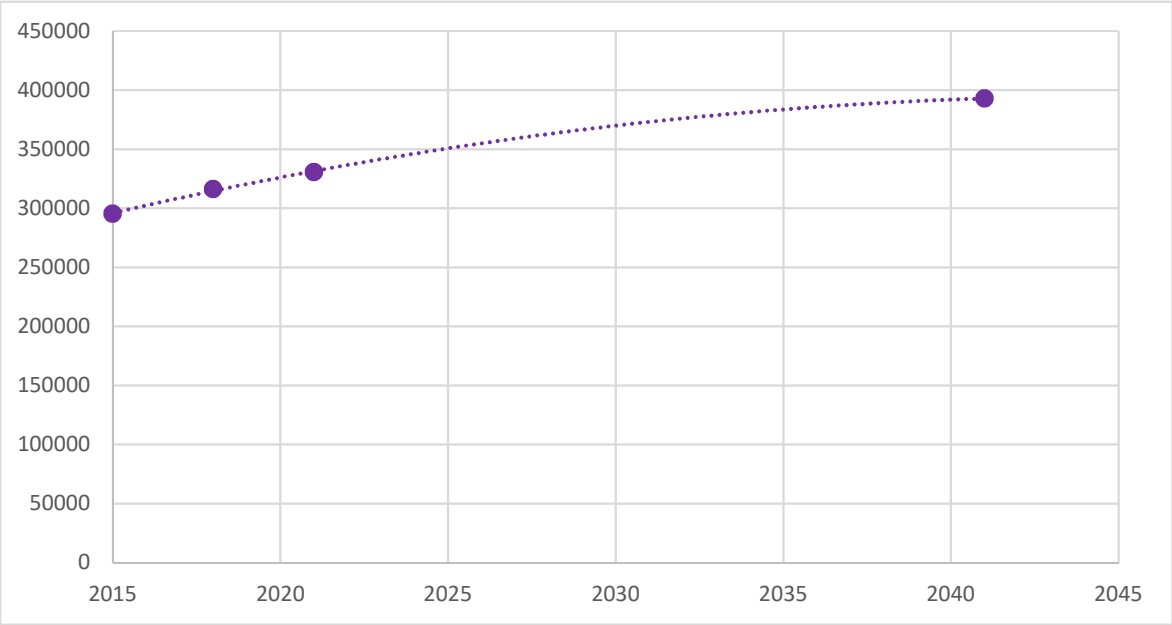

Figure 43: Forecast population growth for Tower Hamlets

Public transport infrastructure is already under stress with crowding and congestion frequently experienced. On the London Underground, crowding is particularly prevalent on the Central and Jubilee lines, serving Mile End and Canary Wharf respectively. The inbound routes to Canary Wharf regularly see crowding of more than 5 people standing per m^2 as demonstrated in Figure 44 below. In addition, several non-interchange stations experience peak period passenger congestion due to passengers being unable to board the first or second trains to arrive.

As private vehicle use reduces, more trips will be made by public transport. Continued housing development, economic development in places like Canary Wharf, and population growth will also likely contribute to transport demand.

Tower Hamlets Local Plan 2013 mirrors MTS Outcome 5 and the need to provide public transport infrastructure for the growing population. It outlines our vision for

[57] Tower Hamlets Strategic Plan 2018-21

Tower Hamlets to continue to be home to a wide range of diverse communities. We will support our existing communities and welcome new residents with healthy neighbourhood infrastructure which is green, safe and accessible to all, promoting walking, cycling and public transport.

With the completion of the new Crossrail line, improvements and large-scale upgrades will be available at Whitechapel station to accommodate some of the expected increase in patronage. Measures to encourage people out of cars and making active travel interchanges easier will increase patronage, e.g. Whitechapel Vision – direct crossings and cycle parking at Whitechapel.

iii. Docklands Light Railway (DLR)

The TfL Business Plan includes an upgrade of capacity on the DLR with new trains. According to the Isle of Dogs and South Poplar OAPF Transport Strategy, this will involve 'procurement of new rolling stock to enable additional capacity to be provided on the network. This will achieve more on train capacity and enable high levels of services to be provided (working towards achieving 30tph network-wide). Trains would be delivered from 2022 onwards'.

iv. New development and the Local Plan 2031

New development will be expected to prioritise the needs of pedestrians and cyclists as well as access to public transport, including river transport, before vehicular modes of transport. Development will be focused in areas with high levels of public transport accessibility and/or town centres, in respect of developments generating significant levels of trips. Where appropriate, development must support and safeguard land for transport and freight infrastructure enhancements to meet the demands arising from future growth, including improvement to capacity, connectivity, quality and interchanges across the network (Policy S.TR1).

v. Impacts on the transport network

Major development and any development that is likely to have a significant impact on the transport network will be required to submit a transport assessment or transport statement as part of the planning application. Development that will have an adverse impact on traffic congestion on the highway network and/or the operation of public transport (including crowding levels) will be required to contribute and deliver an appropriate transport infrastructure and/or effective mitigation (Policy D.TR2).

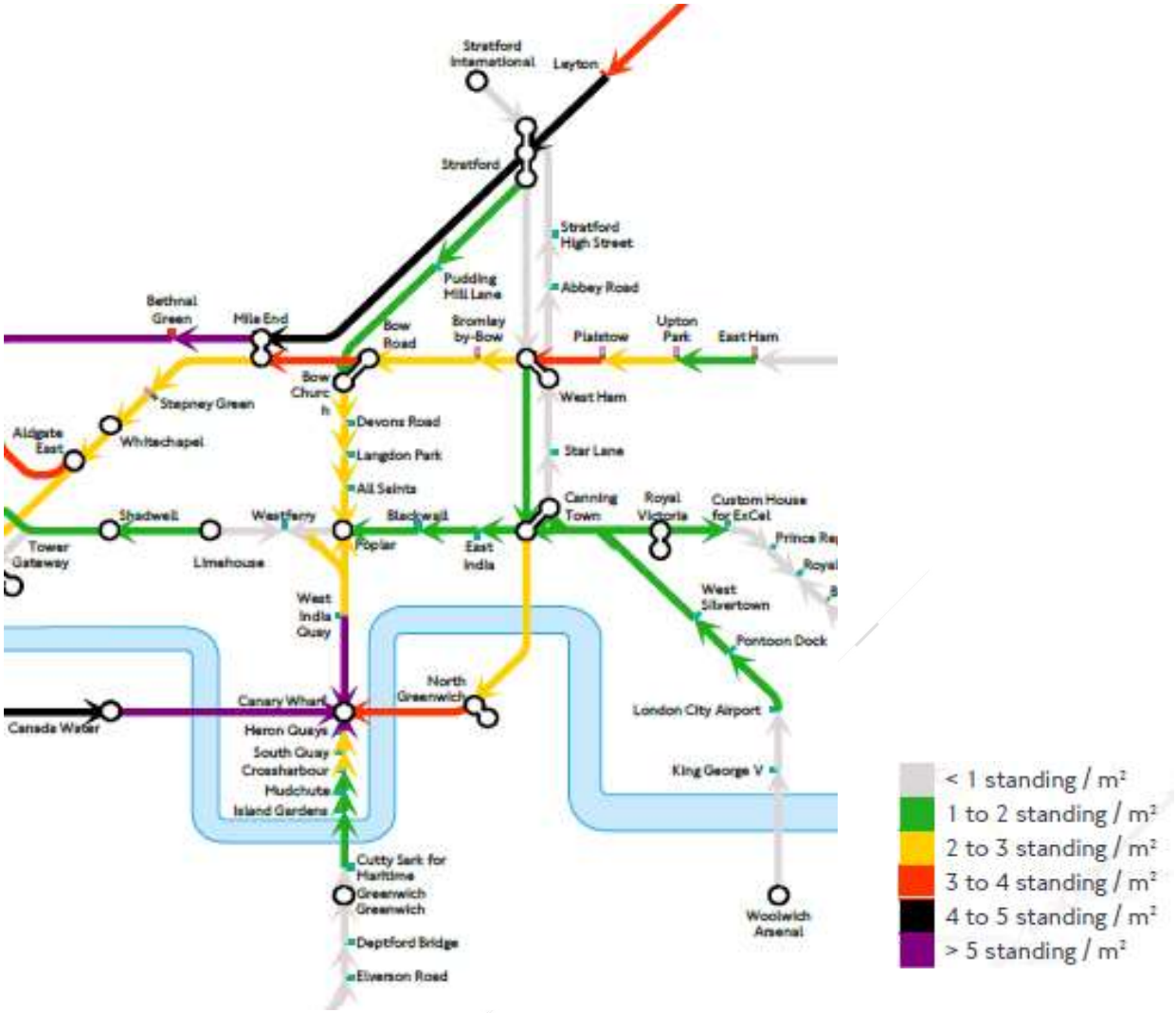

Figure 44: London Underground and DLR Crowding 2011. East and South-East London Sub-Regional Transport Plan, 2016 Update, TfL, p. 86

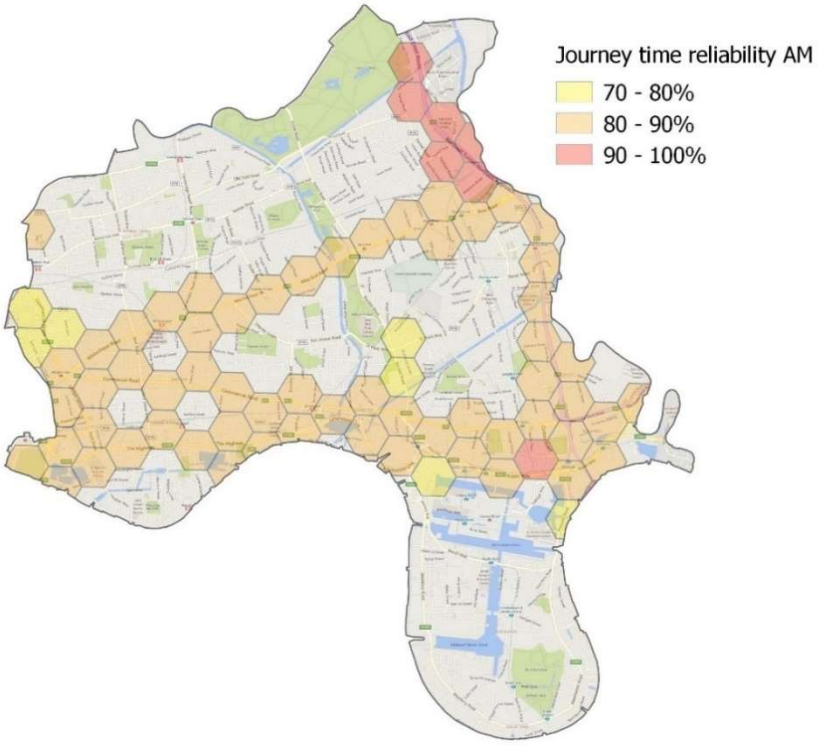

Figure 45: Journey time reliability, AM 2016/7. Source: Transport for London. Journey Time Reliability (JTR) measures the percentage of vehicle traffic journeys that fall within ~16% of an average journey time for a given Automatic Number Plate Recognition (ANPR)

vi. Measures to increase patronage

As well as increasing the overall public transport capacity, it is also important to encourage more use of services.

One way in which Tower Hamlets will achieve this is by making connections and access to stations more attractive, pleasant and easier to use. This will help entice individuals away from private motor vehicles. In addition, by implementing easy to understand wayfinding and improving bus reliability, people who use public transport less frequently will find it easier to use the network and navigate to local places of interest.

Tower Hamlets will work with London River Services where necessary to improve access to existing piers and to ensure any future pier proposals connect efficiently to the local transport network.

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

i. MTS Outcome Indicators

MTS Outcome 6: Everyone will be able to travel spontaneously and independently.

Measure: Reduce on average, the difference between total network and step-free network journey times by 50% by 2041.

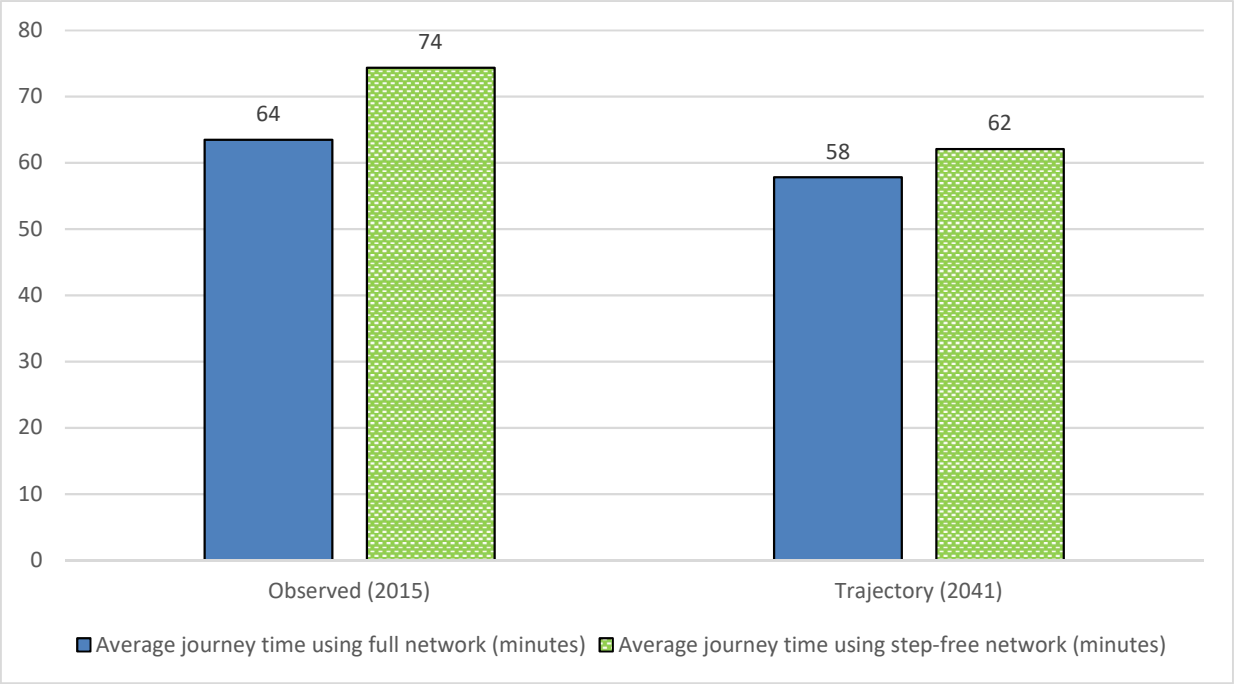

Figure 46: Average journey time using the full network versus the step-free network
Source: LIP3 MTS outcomes borough data pack v1_1

Metric: Average journey time using the full step-free network (minutes).

Observed 2015 Average journey time using full network (minutes)	Observed 2015 Average journey time using step-free network (minutes)	Observed 2015 Time difference (minutes)	Trajectory 2041 Average journey time using full network (minutes)	Trajectory 2041 Average journey time using step-free network (minutes)	Trajectory 2041 Time difference (minutes)	% change in travel time difference between 2015 and 2041
64	74	11	58	62	4	-61%

ii. Challenges and opportunities

Improving accessibility to public transport can contribute greatly to social inclusion. Those who don't own or cannot afford a car are reliant on alternative modes. When the alternative to private transport is impractical due to unreliability, cost or lack of

services, people can be left isolated and severely restricted in employment and education opportunities.

Those who struggle to afford fares, or are unable to access public transport because of disability, are most at risk of experiencing social exclusion.

The existing high Public Transport Accessibility Level (PTAL) is shown in Figure 47.

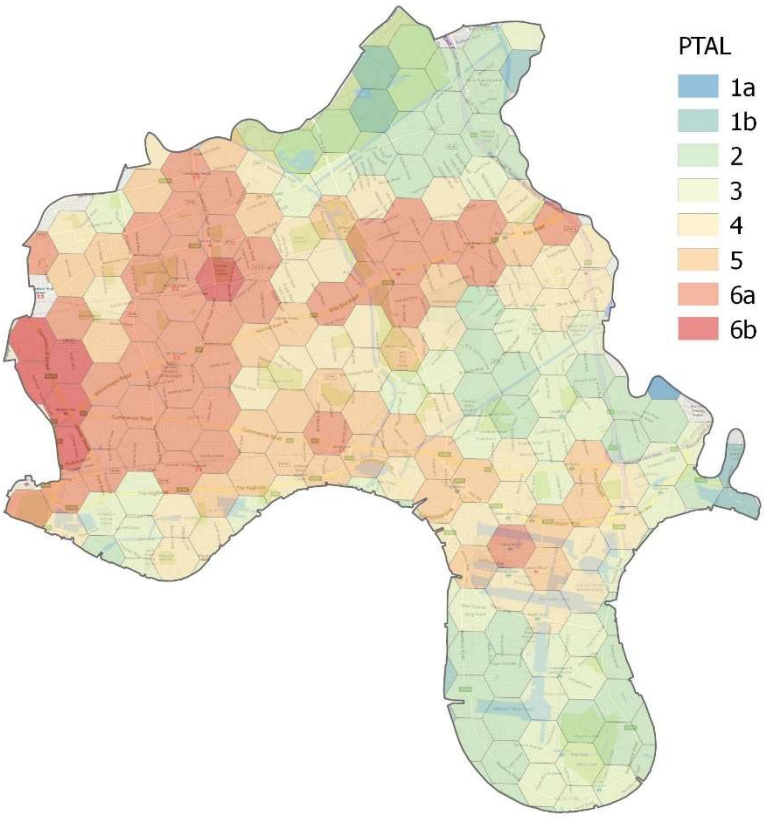

Figure 47: Public Transport Accessibility Level (PTAL) 2015 average. Source: Transport for London

Sustrans defines this as Transport Poverty[58], and highlights that the increasing lack of affordable housing in London is placing new importance on transport in tackling social exclusion.

Providing residents with transport choices forms part of the Mayor's pledge to support and lobby for accessible transport. The Council also recognises the need for a comprehensive accessible network within the Borough, as without this, stand-alone step-free stations do not bring much benefit.

[58] Locked Out: Transport Poverty in England, 2012, Sustrans

As stated in the Borough Mayor's Strategic Pledges 2018, we will complete our programme of making our bus stops more accessible and work with TfL to make bus routes more reliable. We will also lobby TfL to make more Tube stations step-free and to increase the Stratford to Canary Wharf DLR route to three car service, increasing capacity by 50%.

iii. Bus accessibility

Every London bus route is wheelchair accessible, with automatic ramps and designated wheelchair spaces. [59]

As a Borough, Tower Hamlets has already reached over 90% of bus stops being accessible. We aim to have 100% of our bus stops wheelchair accessible through completing stop-improvement programmes over the next 3 years.

iv. Step free stations

All stations on the Elizabeth line will have step-free access[60]. This includes the new stations in central London (currently being built by Crossrail Ltd.) and existing stations in east and west London, currently served by TfL Rail, that will become part of the line. All DLR stations in Tower Hamlets are step-free. Other step-free stations in Tower Hamlets include Canary Wharf (Jubilee Line station) and Shoreditch High Street.[61]

Tower Hamlets will aim to have more accessible stations, with the following list stating the stations which the Council considers should be prioritised for improvements:

- Mile End
- Bow Road
- Stepney Green

There will also be complementary measures around bus station interchanges to support these improvements. This includes dropped kerbs, raised tables and improved junctions.

[59] https://tfl.gov.uk/transport-accessibility/
[60] https://tfl.gov.uk/travel-information/improvements-and-projects/step-free-access
[61] http://content.tfl.gov.uk/step-free-tube-guide-map.pdf

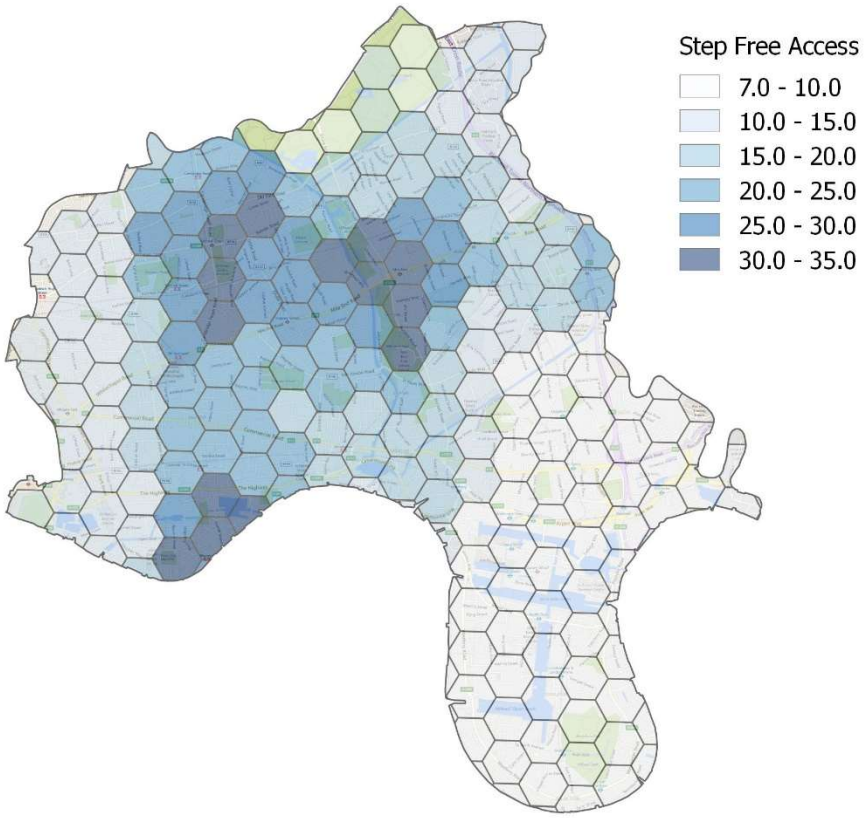

Figure 48: Population with step-free access, 2015. Source: Transport for London

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

i. MTS Outcome Indicators

Outcome 7: Bus journeys will be quick and reliable, an attractive alternative to the car.

Measure: Bus speeds will improve by approximately 5% to 15% London-wide by 2041, with particular improvements expected in inner London.

Metric: Average bus speeds from iBus in mph.

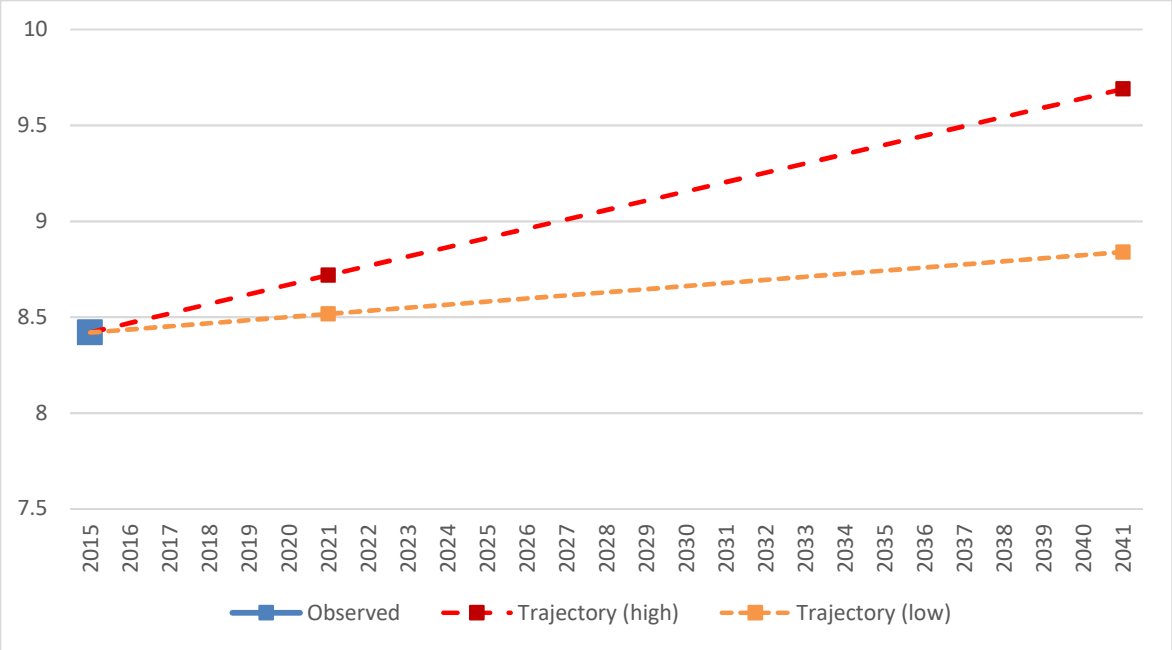

Figure 49: Bus Speeds (mph)
Source: LIP3 MTS outcomes borough data pack v1_1

ii. Challenges and opportunities

Travel choices vary with demographics and attitudes towards public transport, reason for travel and time of day[62]. However, the pleasantness, journey time and reliability are consistent influential factors in travellers' mode choices.

Journey time reliability for buses is often also subject to congestion and journey time conditions experienced by the rest of the vehicle network, especially when there is a lack of, or non-continuous, bus priority measures. Figure 50 and Figure 51 below demonstrate the bus network across the Borough, showing areas where peak hour bus lanes operate, as well as morning journey time reliability. The indicator for MTS Outcome 7 relates to an improvement in bus speeds. Whilst there is an interconnected nature of bus speeds with journey time and reliability, the Council aims to reduce speeds across the Borough. Therefore, to achieve this indicator, a focus on bus priority, optimising bus stop locations, and reducing dwell times is required to improve

[62] Exploring factors related to users' experience of public transport route choice: influence of context and users' profiles, E. Grison, V. Gyselinck and J-M Burkhardt, 2015

efficiency as a whole on the various routes. Some minor works such as parking bay relocation or changes to waiting and loading times can also reduce delays to buses.

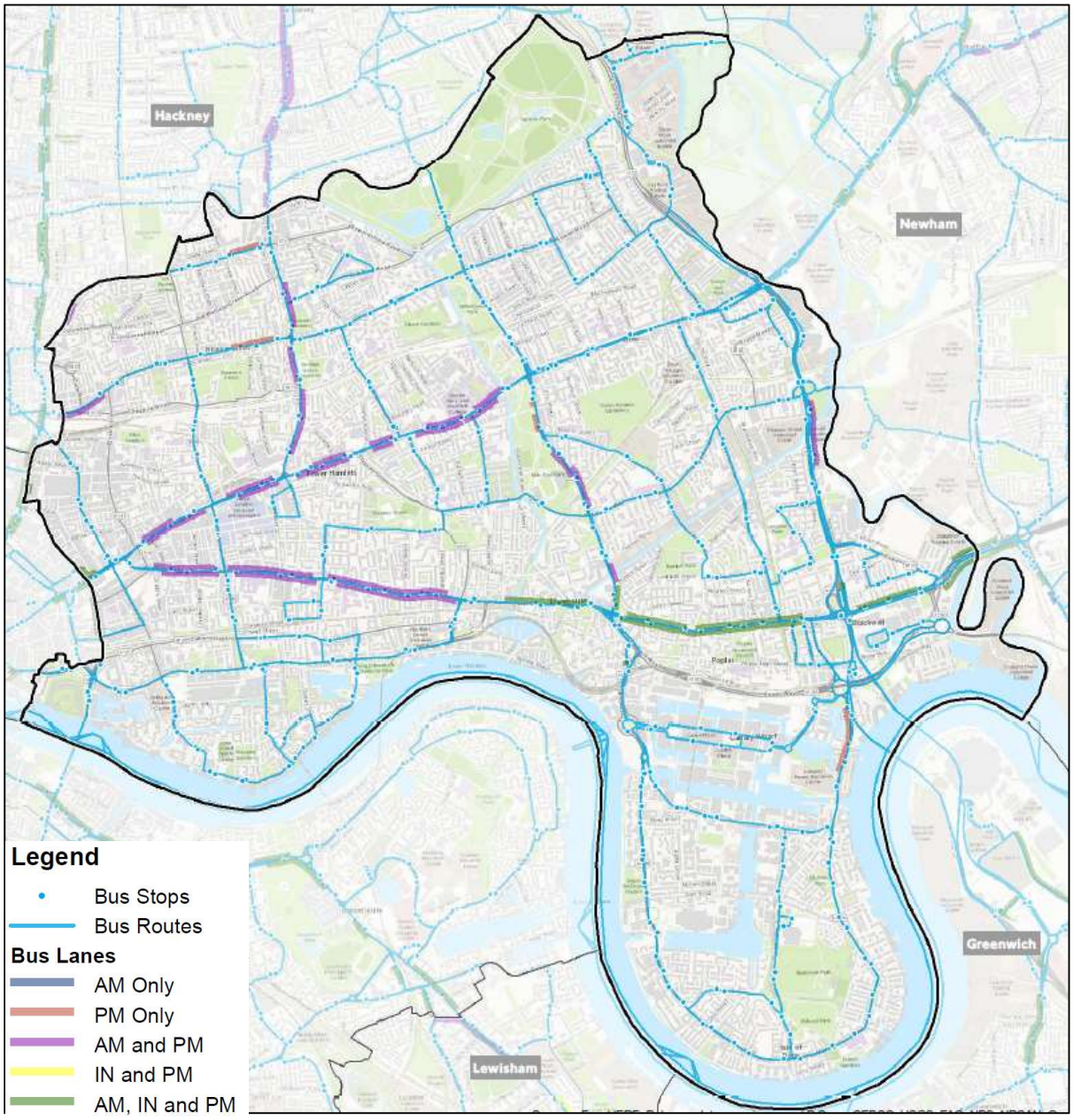

Figure 50: Existing bus network and bus priority, Tower Hamlets

Currently, for high frequency (non-timetabled) services, passengers are waiting on average 21% longer than intended, equating to one minute due to irregular services

or services that failed to run.[63] For low frequency (timetabled) services, the average percentage of services that depart on time was recorded to be 84%.[64]

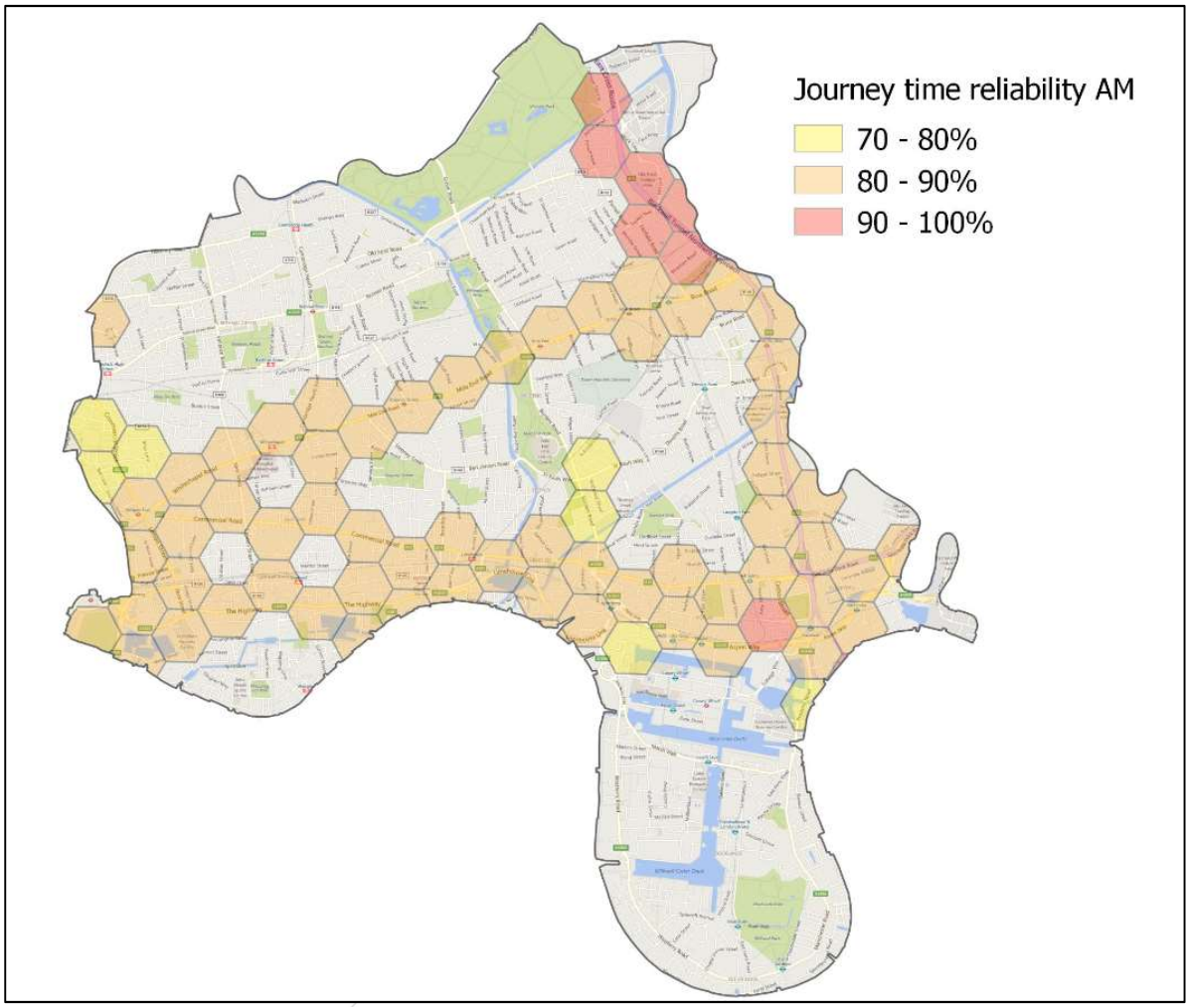

Figure 51: Journey Time Reliability AM 2016-17

As well as journey time reliability, frequency is also an important factor in the overall perception of quality of service. Better journey time reliability and routeings will accommodate more passengers, the utilisation of which will help to justify bus priority measures that will ultimately improve journey time reliability.

Bus routeings and journey time reliability could be improved to compliment the underground network, particularly in areas less well served by the underground and DLR. The relative flexibility of bus infrastructure provides greater scope for improvement and the opportunity for new bus routes where the need is identified.

[63] Route Performance Results for London Borough of Tower Hamlets, Quarter 1 2018/2019, TfL

[64] Route Performance Results for London Borough of Tower Hamlets, Quarter 1 2018/2019, TfL

However, this opportunity is restricted as there are currently a number of route changes and frequency reductions to bus services under consultation. TfL are planning these changes as a result of falling patronage and we are concerned about the negative impact on bus users and modal change policies.

A summary of the routes in scope for change and the change that TfL propose can be seen in Table 11.
Note: some routes appear in multiple categories.

Route changes	Central London route changes affecting TH services
Frequency reduction	205, N205, 388
Frequency increase	26, 35
Curtailment (shortening a route)	67, 388
Route restructuring	40, 55, 100, 205, N205
Withdrawal	48, RV1

Note: some routes appear in multiple categories
Table 11: Central London Route Changes proposed by TfL.Source: *https://consultations.tfl.gov.uk/buses/central-london/#Proposing*

In addition, we are working with TfL Buses on the diversion of the 339 through Fish Island.

We will work closely with TfL to improve bus access and reliability as advised by TfL Buses.

iii. Bus priority schemes

To help improve the accessibility and reliability of buses, the following bus priority schemes are planned:

- Ultra Low Emission Bus Corridor along the A11 – this is a TfL scheme that Tower Hamlets supports;
- Bow Liveable Neighbourhood Bid – including a junction improvement scheme involving prioritising bus routes 8 and 339;
- Wapping High Street bus gate – removing rat running traffic to improve performance on bus routes 100 and D3; and
- H14 bus-only bridge and approach route (Fish Island) – an LLDC scheme with Tower Hamlets working to ensure bus route 339 can operate efficiently.

There will also be other minor bus reliability improvements as advised to the Borough by TfL after route surveys have taken place.

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

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

i. Challenges and opportunities

As a borough, population growth is expected to vary greatly, with some wards expected to have a fall in population, and others expected to nearly double in the next decade (see 2.2.ii). As a result, the Borough must ensure these new residents have easy access to sustainable travel.

ii. Housing pressures

Tower Hamlets delivered the highest number of new homes in 2001-2011[65], however rapid growth within the borough means that the population growth continues to exceed the rate of housing delivery.

There is enormous pressure on social housing, with over 20,000 families on the housing waiting list (Tower Hamlets Partnership, Community Plan 2015). Despite the buoyant economy and a rising employment rate, Tower Hamlets continues to have high and persistent levels of unemployment, particularly amongst women and Bangladeshi and Somali residents. Increasing housing and reducing employment are cross-cutting priorities. The percentage of dwellings that are flats in Tower Hamlets is shown in the following figures – this has its own impacts on sustainable travel.

Housing Type[66]	Tower Hamlets	Inner London	London	England
Bungalow	0%	0%	2%	10%
Flat/Maisonette	86%	74%	53%	22%
Terraced house	11%	20%	27%	27%
Semi-detached house	0%	3%	13%	24%
Detached house	0%	1%	4%	15%
Other	2%	2%	1%	2%

Table 12: Housing type by area

[65] East and South-East London Sub-Regional Transport Plan, 2016 Update, Transport for London

[66] Valuation Office Agency, Dwellings by Property Type, 2014

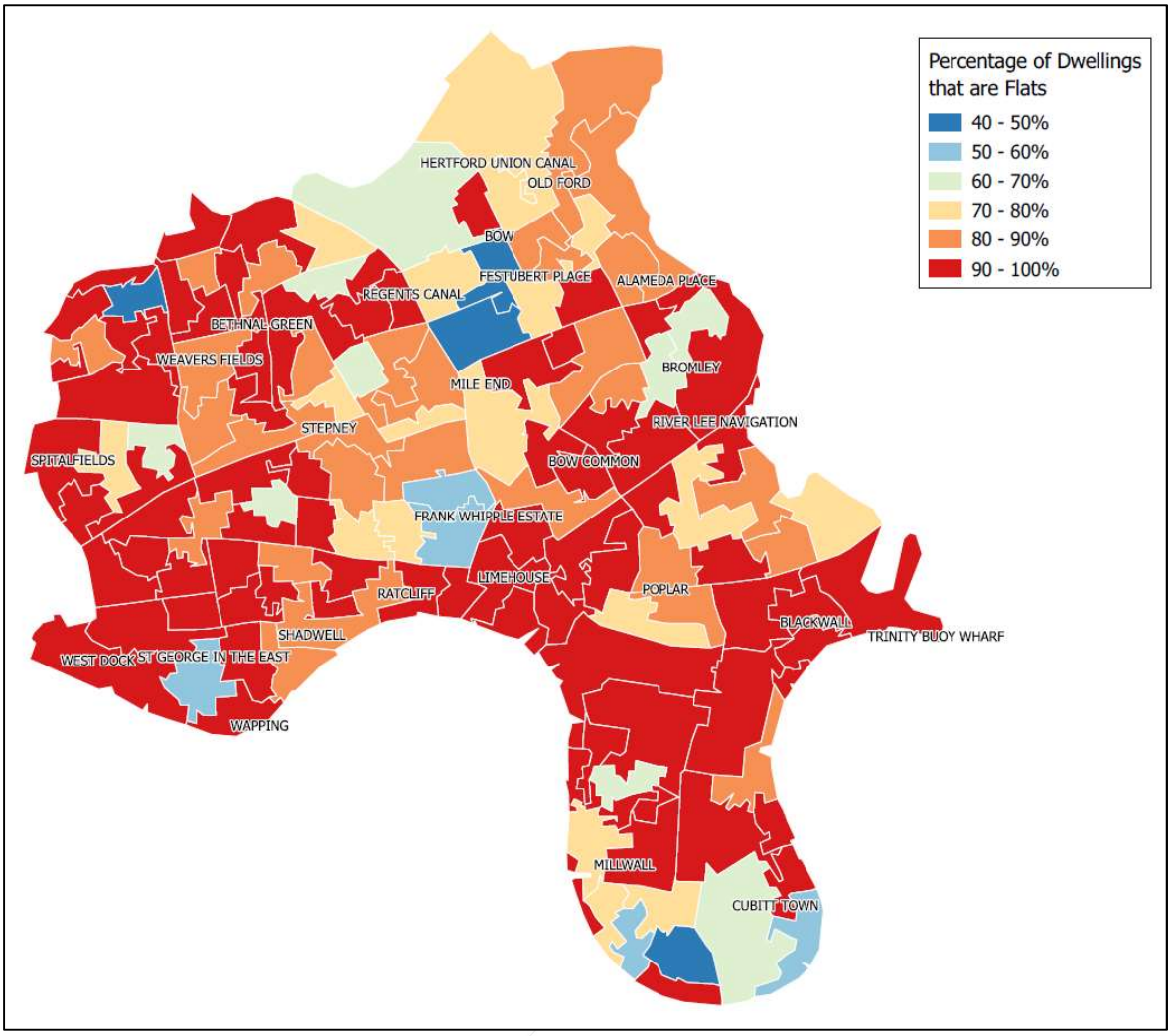

Figure 52: Percentage of dwellings that are flats

iii. Development and Local Plan, Open Spaces, Air Quality and The Tower Hamlets Green Grid Strategy

The Air Quality Action Plan 2017 and the Green Grid Strategy (see 3.2.1.ii) will be promoted and adhered to. All new developments, major planning applications and master planning must have appropriate, adequate and well-located green space and infrastructure, including for walking and cycling to provide low emissions routes. This will be monitored through the implementation of the Green Grid Strategy and the planning database.

For existing buildings, the Borough's Pollution Team is scoping out localised solutions including installing Green Infrastructure, such as green walls, green screens or living roofs at schools/residential developments in polluted areas, linking in with the Green Grid and Open Spaces Strategy.

iv. Emerging Local Plan 2031

The emerging Local Plan[67] has four policies on transport, all of which are in line with the LIP objectives:

- S.TR1, clauses 1a and 1b, support walking, cycling and public transport as priorities for the borough
- D.TR2(2) requires mitigation for any development that will increase congestion
- D.TR3(1) relates to parking standards, which are low for cars and quite high for bikes
- D.TR3(3) encourages electric vehicle charging points, cycle hire, cycle parking in general, and car-club spaces rather than individual car parking spaces
- D.TR4 focuses on sustainable freight (i.e. rail and water transport of freight)

In terms of housing unlocking new jobs, 'Policy S.SG1: Areas of growth and opportunity within Tower Hamlets' ensures new development will occur in opportunity areas and/or highly accessible locations along transport corridors namely:

- City Fringe;
- Lower Lea Valley;
- Isle of Dogs and South Poplar (see below).

For more information on these schemes, see the Delivery Plan (section 4.3).

"Development will be required to support the delivery of significant new infrastructure to support growth within the four sub-areas, including: improvements to the transport network (including Crossrail 2); green grid projects (including the Lea River Park and Whitechapel Green Spine);" (S.SG1)

v. Isle of Dogs & South Poplar Opportunity Area Planning Framework (OAPF)

The Mayor of London, and TfL, in consultation with Tower Hamlets Council, are preparing an Opportunity Area Planning Framework (OAPF) for the Isle of Dogs and South Poplar. These areas are experiencing intense development pressure, mainly because of new, very high-density housing. The Isle of Dogs has the potential to build many new homes and generate new jobs. A central aim is to build on the success of Canary Wharf as a world economic centre, and to ensure that local communities benefit from the growth.

One of the weaknesses of Canary Wharf is that the transport linkages to the surrounding residential areas are poor. Aspen Way acts as a barrier to Poplar. It's

[67] https://www.towerhamlets.gov.uk/Documents/Planning-and-building-control/Strategic-Planning/Local-Plan/Appendix_1_Tower_Hamlets_Local_Plan_2031_Regulation_19.pdf.

proposed that major developments address this with new pedestrian accesses to Canary Wharf (Tower Hamlets Town Centre Strategy 2017 to 2022, p35).

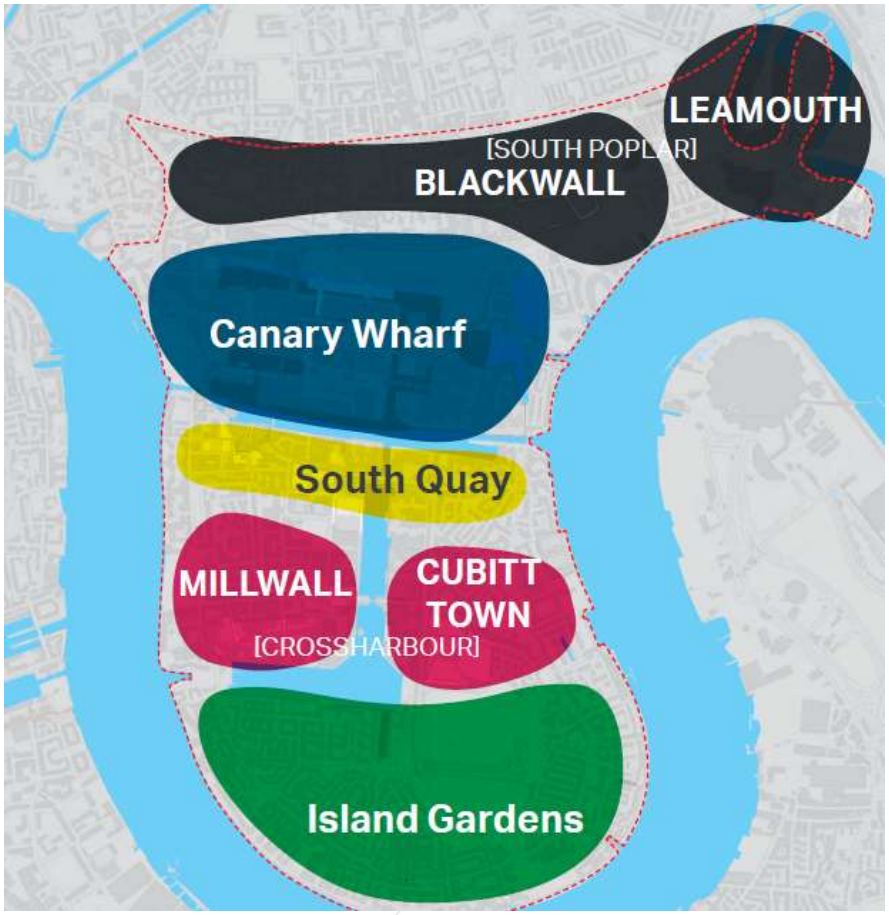

Figure 53: Isle of Dogs and Poplar Opportunity Area

To address existing and future transport challenges in the area, the following are being brought forward:

1. Elizabeth Line (Crossrail) (opening delayed)
2. Higher capacity trains at more regular frequencies on the tube and DLR – determined by TfL
3. Night Tube on the Jubilee Line
4. Station improvements across the area, such as Crossharbour and Poplar – linked to development planning with TfL
5. Enhanced bus services – to be confirmed by TfL – and a new bus interchange at Crossharbour – linked to development planning with TfL
6. New pier to the east with services to North Greenwich to improve river transport – awaiting TfL update

Walking, cycling and freight improvements at street level include:

1. New and improved bridge crossing at South Dock, between Canary Wharf and Marsh Wall – first stage of consultation is complete; changes will only be on the bridge crossing, not public highway

2. As outlined in The Mayor's Strategic Pledges 2018, a new link between Rotherhithe and Canary Wharf – links to CFR5 being considered in liaison with TfL
3. Improved junctions, including Preston's Road Roundabout – S106 funded
4. A major new decked connection over Aspen Way between Poplar and Canary Wharf – development-related and TfL led

vi. Car Free Development

The Council has sought to ensure new development in the borough does not generate significant traffic growth. A key element of this strategy has been to restrict on-site car parking in new development to minimal levels (based on public transport accessibility) and to prohibit residents of new development from obtaining on-street parking permits (with the exception of Blue Badge holders and those eligible for the permit transfer scheme). The maximum levels of car parking proposed in the new Local Plan would be amongst the lowest in London.

vii. Walking and cycling

Walking and cycling will be prioritised in new developments. Specific objectives to meet this aim will be covered in Tower Hamlets' Local Plan policies, Transport Strategy, SPD and Planning documents. Tower Hamlets will work with developers to ensure there is sufficient attractive and convenient cycle parking in new developments (see 3.2.1.x).

3.3 Other Mayoral Strategies

i. London Environment Strategy, May 2018

The Environment Strategy outlines the Mayor's aspiration to turn London into a zero-carbon city, and to have the best air quality of any major world city by 2050.

With road traffic being the biggest contributor to air pollution, this LIP's aspiration to reduce car ownership and use will support other local strategies in achieving these aims.

ii. London Housing Strategy, May 2018

As part of the Mayor's vision for good growth, the Housing Strategy outlines five priorities:

- Building homes for Londoners
- Delivering genuinely affordable homes
- High quality homes and inclusive neighbourhoods
- A fairer deal for private renters and leaseholders
- Tackling homelessness and helping rough sleepers

The objectives set through this MTS will contribute towards the first three priorities, as Tower Hamlets works to unlock opportunities for new development through investment in its walking and cycling network and creating new links and capacity on its public transport network.

The Council aims to make Tower Hamlets' streets accessible to all, supporting new development in creating inclusive neighbourhoods, and creating a Borough where pleasant, reliable and attractive transport options are available without the need to own a car. This will create an inclusive network where everyone can access the goods, services and opportunities they need to thrive.

iii. Draft London Economic Development Strategy, December 2017

The Draft Economic Development Strategy centres on a vision to create a fairer and more inclusive economy, where 'no one finds themselves locked out from opportunity'.

This vision will be supported in Tower Hamlets, where the Council aims to tackle social inequalities by creating better links from the Borough's most deprived areas to town centres and services. This will help in tackling levels of 'Transport Poverty', where residents may feel cut off from services, employment or education opportunities through lack of transport options.

The Strategy recognises the role that London's transport plays in encouraging economic growth, and the pressures this growth puts on the network. It identifies the current capacity and crowding constraints on the public transport network, and the requirement to encourage a modal shift from private vehicle use. Solving these issues will aid in supporting economic growth in London and the objectives set out within this LIP will support in achieving this.

iv. Draft London Culture Strategy, March 2018

The Mayor's Vision for culture is based on four priorities:

- Love London: more people experiencing and creating culture on their doorstep
- Culture and Good Growth: supporting, saving and sustaining cultural places and spaces
- Creative Londoners – investing in a diverse creative workforce for the future
- World City – maintaining a global powerhouse in a post-Brexit world

Tower Hamlets aims to create a street network that is appealing to active travel, which is more social and socially inclusive than alternative transport modes. These modes enable people to experience their surroundings at a more intimate level and engage with local cultural places and spaces.

v. Draft Health Inequalities Strategy, August 2017

One of the Mayor's key ambitions for this Strategy is to create Healthy Places. The Strategy aims to create healthy, pleasant streets and green spaces with good air quality.

This directly aligns with both the MTS outcomes and those of this LIP, which aims to make Tower Hamlets streets clean and green with reduced air pollution from road traffic and more street trees.

CHAPTER FOUR

DELIVERY PLAN

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4. The Delivery Plan

4.1 Introduction

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

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

4.2 Linkages to the Mayor's Transport Strategy priorities

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

Table 13 demonstrates how the core projects achieve this.

Table 13: Linkages between LIP projects and programmes and the Mayor's Transport Strategy Outcomes

Delivery Plan Project / Programme	MTS mode share	MTS outcomes							
	Improving active, efficient and sustainable mode share	No 1:-Active	No 2:- Safe	No 3:-Efficient	No 4:- Clean & Green	No 5:- Connected	No 6:- Accessible	No 7:- Quality	Nos 8 & 9 Sustainable Growth/Unlocking
Corridors, Neighbourhoods and Supporting Measures									
Love Your Neighbourhoods	✓	✓	✓	✓	✓				✓
Vision Zero	✓	✓	✓						
School Streets	✓	✓	✓	✓	✓				✓
Implementing Cycle Strategy	✓	✓		✓	✓				✓
Improving Air Quality	✓			✓	✓				
Legible London	✓	✓		✓		✓	✓	✓	✓
Ben Jonson Road Area			✓	✓					
Chrisp Street Corridor	✓	✓	✓	✓	✓				✓
Tackling ASB Driving			✓						
Sustainable Drainage Schemes				✓	✓				
Secure Motor Cycle Parking/Road Safety PTW Campaigns			✓	✓					
Improving Local Accessibility	✓	✓	✓				✓		✓
Local Transport Funding	✓	✓	✓	✓	✓				✓
Supporting Measures	✓	✓	✓	✓	✓				✓
Liveable Neighbourhoods									
Bow Area Liveable Neighbourhood Bid	✓	✓	✓	✓	✓				✓
Principal road renewal			✓	✓					

Bridge strengthening			✓	✓					
Traffic signal modernisation			✓	✓					
Strategic Funding									
Bus Priority	✓			✓		✓	✓	✓	✓
London cycle grid – 4 routes	✓	✓	✓	✓	✓				✓
Crossrail complementary works	✓			✓		✓	✓	✓	✓
Mayor's Air Quality Fund	✓			✓	✓				
Low Emission Neighbourhoods	✓			✓	✓			✓	✓
GLA Good Growth Funds	✓	✓	✓	✓	✓	✓	✓	✓	✓

4.3 TfL Business Plan

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

The overarching aim of the Mayor's Transport Strategy (MTS) is that 80 per cent of trips will be made on foot, by cycle or public transport by 2041. The following projects have been prioritised according to the aims of the MTS and will have implications for the Borough of Tower Hamlets.

The following TfL projects have implications for the borough.

Opportunity Areas (see Figure 54)

- City Fringe Opportunity Area: supporting financial and business services and the expanding 'Tech City'
- Isle of Dogs and South Poplar Opportunity Area: build new homes and generate new jobs to continue the success of Canary Wharf and support local communities
- Lower Lea Valley Opportunity Area: support the Olympic Legacy through intensifying existing activities, upgrading facilities and buildings, and increasing the range of land use

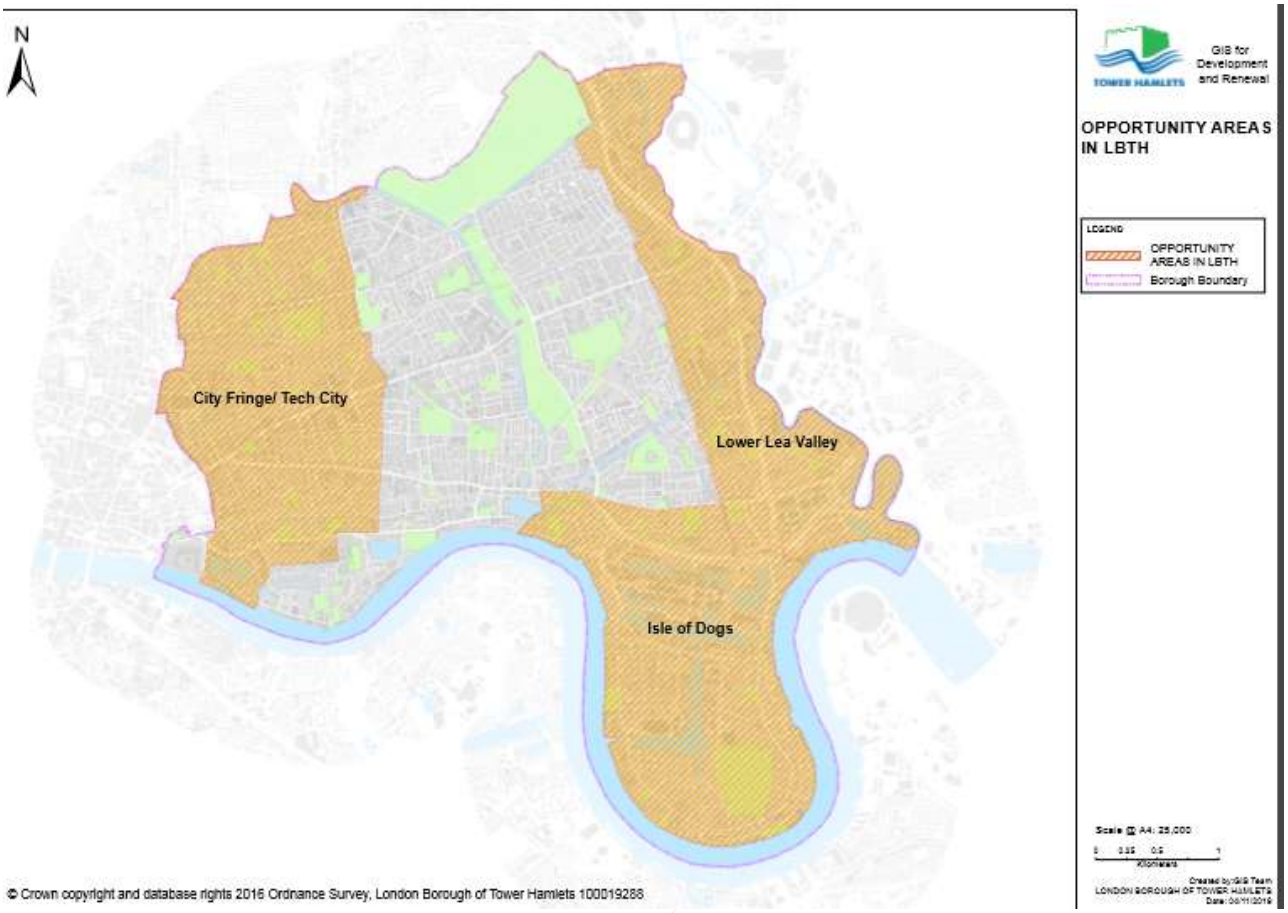

Figure 54: Location of Tower Hamlets' Opportunity Areas
Source: Tower Hamlets Draft Local Plan 2031: Managing Growth and Sharing the Benefits (2016)

Healthy Streets:

- Cycleways: legible and safe protected cycle routes accessible to all
- Liveable Neighbourhoods programme: borough schemes to reduce motor vehicle trips, improve health and air quality
- Vision Zero – reducing road danger and ensuring that, by 2041, nobody is Killed or Seriously Injured (no KSIs) as a result of road collisions
- Rotherhithe to Canary Wharf crossing
- Improved junctions, including Preston's Road Roundabout
- New and improved bridge crossings at South Dock, between Canary Wharf and Marsh Wall
- A major new decked connection over Aspen Way between Poplar and Canary Wharf.
- A new link between Rotherhithe and Canary Wharf
- A13 safety improvements and A12 Bow Vision – new junction improving access for vehicles and buses. £12m scheme targeted for 2021 delivery to support Lower Lea Valley growth at Bromley-by-Bow.

Buses:

- Addressing air pollution, supporting low emission bus zones
- Reducing bus services in Central and Inner London
- Bus priority investments providing high quality infrastructure required for reliable public transport network sustaining a growing city
- Enhanced bus services – to be confirmed by TfL – and a new bus interchange at Crossharbour
- New services through Silvertown Tunnel by 2024
- Ultra Low Emission Zone (ULEZ) by 2021

Train and tube:

- Elizabeth Line (Crossrail) opening in 2019 (delayed)
- Higher capacity trains at more regular frequencies on the tube and DLR

Highway infrastructure:

- Silvertown Tunnel – construction to start late 2019 / early 2020 with a view to opening from 2024
- Rotherhithe to Canary Wharf crossing – cycle and pedestrian crossing with Transport & Works Act application expected by end of 2019

i. Implications for borough

The walking and cycling improvements are supported in principle by the borough but will bring short term disruption during construction. There may be implications for motor vehicle capacity, but these are likely to be more than off-set by the increased people movement capacity overall given the space efficiency benefits of walking and cycling over and above private vehicle use. Better crossings and public spaces will be welcomed by residents and the visiting day time population.

The new River Thames crossing between Rotherhithe to Canary Wharf for pedestrians and cyclists will provide an environmentally friendly alternative travel option for people in the surrounding area and alleviate congestion on existing routes[68], providing it proves financially viable.

In terms of air pollution there is a risk that the Silvertown Tunnel's increase in traffic volumes will reduce air quality and increase KSIs in Tower Hamlets. Although TfL made some minor changes to the scheme proposals in response to the consultation, the above concerns still remain. However, TfL now plans to implement the scheme,

[68] Rotherhithe to Canary Wharf crossing Consultation Report, 2018, TfL

with DfT approval acquired in May 2018, TfL is now working with local boroughs and land owners to agree details of land acquisitions, constructions plans and access arrangements. A contractor is in the process of being procured, with construction anticipated to commence from mid-2019

The Council recognises the potential for the Silvertown tunnel, (accompanied by charges on the Blackwall and Silvertown tunnels) to reduce the traffic congestion and associated air pollution currently experienced in the borough on the Blackwall tunnel approach. We secured significant concessions via the Development Consent Order process including: extensive new bus connections serving the borough, concessions on charging for local residents, support for local businesses to adapt to the new charging. However, the Council remains concerned about the forecast impacts of the scheme. The Council will need to be closely monitored with appropriate mitigation implemented as necessary and will take an active role in the Silvertown Tunnel Implementation Group to steer this process.

Tower Hamlets falls within the boundary for the extended Ultra Low Emission Zone (ULEZ) which will come into force on the 25th October 2021. This will assist in tackling London's poor air quality issues. This extension is welcomed and supported by the Council, and we remain committed to changing Council fleets to low emission electric vehicles and the roll-out of electric charging points though this infrastructure will need to be considered against other schemes and funding.

ii. Complementary works to be carried out by the borough

Love Your Neighbourhoods, Slower by Design and better enforcement of 20mph speeds, pocket parks, public realm improvements are some of the list of works which are outlined in our Delivery Plan which will complement TfL projects.

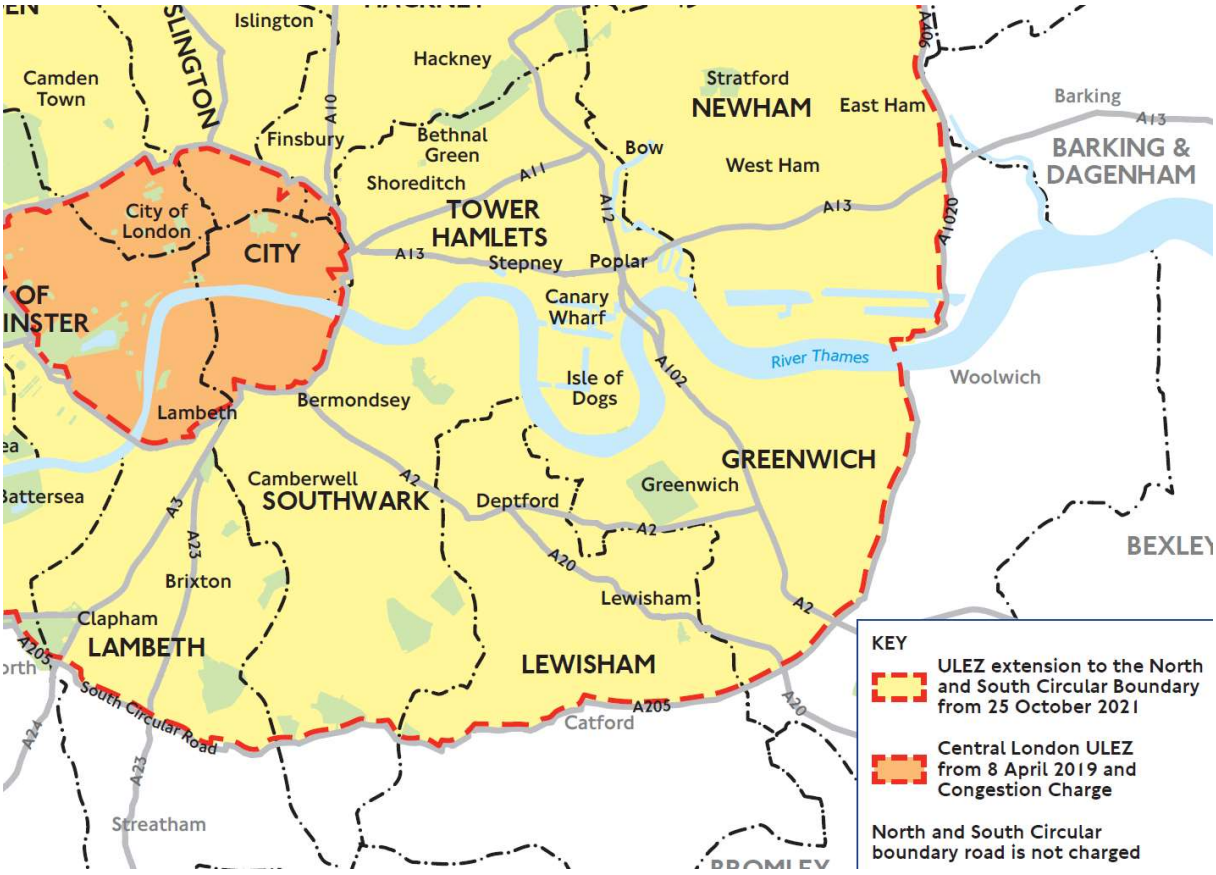

Figure 55: London Ultra Low Emission Zone and the Extension to the North/South Circular Boundary http://content.tfl.gov.uk/ulez-boundary-map-from-25-october-2021.pdf

4.4 Sources of funding

Table 14 below identifies potential funding sources for implementation of our LIP, including LIP funding allocation from TfL, contributions from the borough's own funds, and match funding from other sources.

So far, as the LIP allocation is concerned, figures provided by TfL indicate that the borough can expect to receive £6,600,000 over the three-year period 2019/20 to 2021/22. This allocation is based on the 2018/19 formula funding and is not guaranteed. The key source of funding to develop an ambitious delivery plan for the first 3 years to meet both the Council's and MTS outcomes with little certainty of the funding values will however be the Council Capital allocation.

Furthermore, the lack of principal road maintenance [PRN] funding over the last two years has placed an additional burden on other funding sources to meet the shortfall and continue the approved planned maintenance programme. The borough has had to apply for emergency PRN LIP funding for 18/19 to deliver on essential works and add its own resources to ensure that the Principal Road Network remains in a safe and serviceable condition.

In addition to the above, the borough is hoping to receive considerable additional funding from TfL and the GLA between 2019/20 and 2021/22 in response to the following TfL-led strategic projects and GLA bid opportunities:

- CFR5
- Central Cycle Grid [x4]
- Good Growth Fund
- Mayors Air Quality Fund 3

The council is investing an unprecedented £15m of its own capital funding in sustainable transport projects over the next three years. The low traffic neighbourhood programme (as detailed in Table 18) is in its development stage and public engagement on the programme is expected to start in early 2019. A Liveable Neighbourhood bid for one of our first areas is aiming to secure additional match funding to spearhead this initiative.

Table 14: Potential funding for LIP Delivery

Funding source	2019/20	2020/21	2021/22	Total
	£k	£k	£k	£k
TfL/GLA funding				
LIP Formula funding – Corridors & Supporting Measures	2200	2200	2200	6600
Discretionary funding				
Liveable Neighbourhood 2	TBC	TBC	TBC	TBC
Principal Road Maintenance	250	250	250	750
Strategic funding				
Bus priority	30	30	30	90
CFR5	TBC	TBC	TBC	TBC
Grid	TBC	TBC	TBC	TBC
GLA funding				
Good Growth Fund	TBC	TBC	TBC	TBC
Mayors Air Quality Fund 3	TBC	TBC	TBC	TBC
Sub-total	2480+	2480+	2480+	7440+
Borough funding				
Capital funding	5000	5000	5000	15000
Revenue funding	500	500	500	1500
Parking revenue	116	1100	1885	2045
Workplace parking levy	0	0	0	0
Sub-total	5616	6600	7385	19601
Other sources of funding				
S106	24	20	20	64
CIL	10	30	50	90
European funding	0	0	0	0
Sub-total	34	32	52	154
Total	8130+	9112+	9917+	27159+

4.5 Local Infrastructure Fund

The Annual Infrastructure Statement[69] sets out the Mayor's overall approach to investing Community Infrastructure Levy (CIL) funding up until 31st March 2019 into infrastructure to support the development and growth of Tower Hamlets. The Annual Infrastructure Statement includes Local Infrastructure Fund (LIF) themes and guidance on amounts collected by percentage up to April 2019. CIL collected to the Neighbourhood Portion. It was agreed by Cabinet on the 6th of December 2016 to allocate 25% of received CIL funds in all circumstances to the Neighbourhood Portion. Furthermore, this portion of CIL monies collected will be referred to as the Local Infrastructure Fund. LIF allocations are up until the 31st March 2019.

Consultations shows that for LIF areas 1 and 2 walking and cycling are one of the top three priorities. All four LIF areas include walking, cycling and the public realm and public transport is one of the five top priorities of LIF Area 3.

Table 15: Current level of collection: Total payments received by LIF area

LIF Area	No. of payments received	Sum received by LBTH	Amount for LIF (25%)
1	45	£3,912,193	£978,048
2	19	£817,113	£204,278
3	14	£20,979,819	£5,244,955
4	5	£13,770,829	£3,442,707
Grand Total	**83**	**£39,479,955**	**£9,869,989**

[69] https://democracy.towerhamlets.gov.uk/documents/s120638/5.7a%20Appendix%20A%20-%20Annual%20Infrastructure%20Statement.pdf

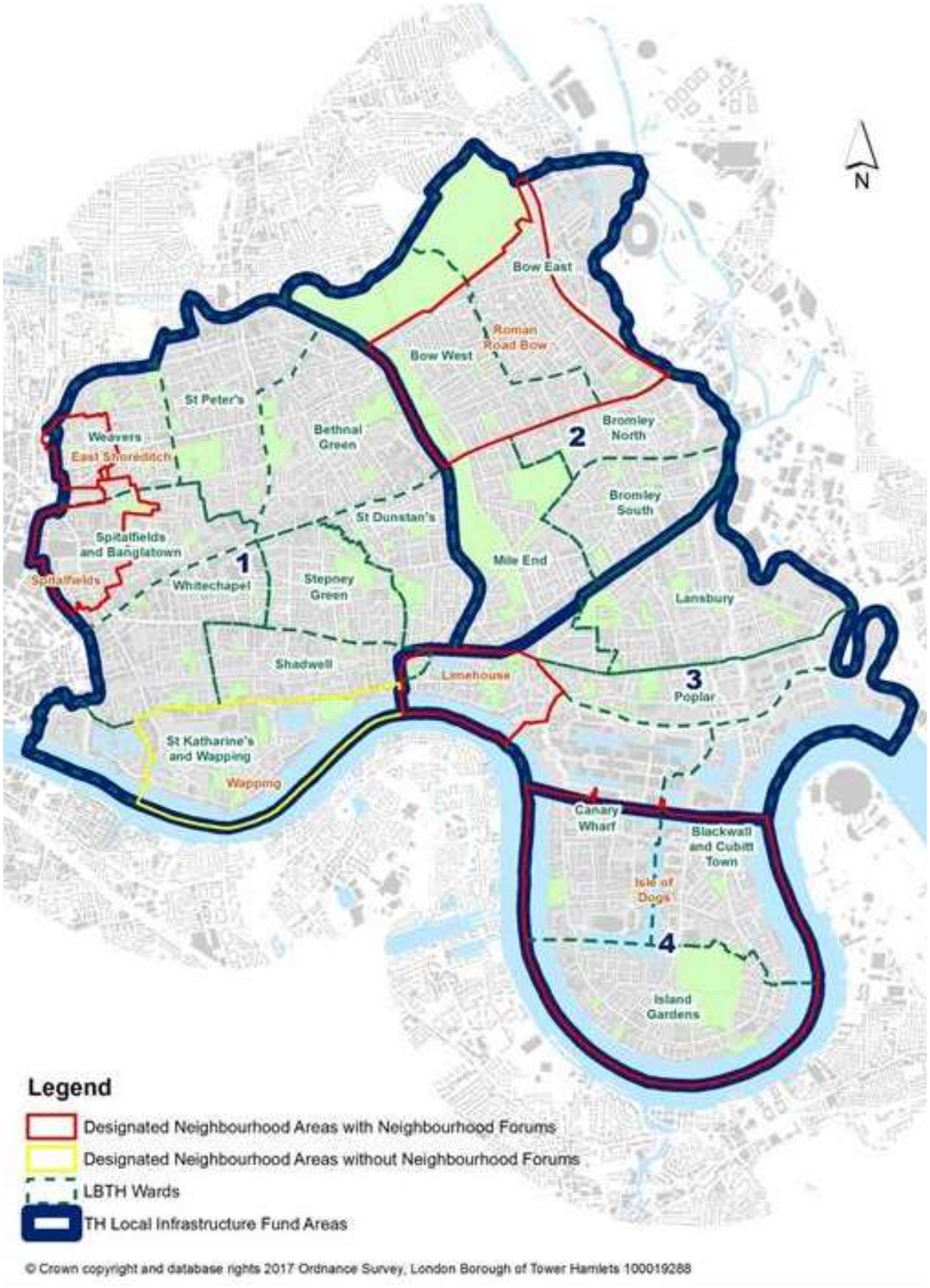

Figure 56: Local Infrastructure Fund Areas (LIF) in Tower Hamlets

4.6 Long-Term interventions to 2041

In the medium- to long-term, the borough believes a number of significant, but currently underfunded, investments will be required to ensure the economic and social vitality of the borough. Table 16 below details these programmes with indicative funding and indicative, but uncommitted, timescales. Our current Strategic Pledges align with growth area scenarios plus major projects as currently shown.

These projects have been taken from Tower Hamlets' Local Plan and developed through the cross departmental officer workshops dedicated to the development of this LIP. They are not assigned to a LIP outcome or objective as such as no LIP funding is sought at this stage, however they are all deemed to be essential in delivering the wide-ranging benefits and targets set out in the MTS.

Table 16: Long-term interventions up to 2041

Project	Approx. date	Indicative cost	Likely funding source	Comments
New connection to Greenway	2019	£100k	LLDC	Pedestrian link from Wick Lane
Prestons Road roundabout	2020-2025	£10m	LBTH, TfL	Redesign of roundabout to provide improvements to pedestrian access and connectivity
Tower Hill junction improvements	2020-2030	£20m	TfL	Modifying traffic management [possible fly-under]
DLR improvements	2020-2030	£718m	TfL	Additional rolling stock and capacity enhancements across whole network
Crossharbour station	2019-2022	£10m	TfL	Redevelopment of station to increase capacity and integrate with new development
Bus service enhancements – medium and long term	2020-2030	£44m	TfL, developers	To support growth in opportunity areas
Bus priority – Western Approach	2019-2025	£1.5m	TfL, developers	West India Dock Road and Westferry Road

Bus priority – South Poplar East-West Link	2019-2025	£1m	TfL, developers	East India Dock Road and Cotton Street
Bus priority – Isle of Dogs circular	2019-2025	£1m	TfL, developers, LBTH	Westferry Road, Manchester Road, East Ferry Road and Marsh Wall
Bus standing interchange at Canary Wharf	2019-2025	£500k	TfL, developers, Canary Wharf Group	Additional standing to support continued development of bus network
Blackwall Connections	2019	£5m	LBTH	Public Realm improvements
Millwall Cut Bridge	2020-2030	£10m	TBC	New bridge to connect South Dock and Thames Quay
East Ferry Road	2019-2021	£5m	LBTH, developer	Improved pedestrian and cycle improvements
Glengall Quay bridge	2020-2030	£1m	PRIVATE	Upgrade to existing bridge
Millharbour transport and connectivity infrastructure	2019-2025	£1m	LBTH	Cycling improvements
Spindrift Avenue	2019	£500k	LBTH	Signage and wayfinding improvements
Limehouse and Leamouth walking route	2019-2025	£300k	PRIVATE	Upgrade to Thames path
Connections to CS3	2020-2030	£5m	TfL, developers, LBTH	Upgraded cycling facilities
DLR station public realm upgrades	2019-2025	£10m	TfL, developers	To potentially include Mudchute, Crossharbour, South Quay, Poplar, Westferry and Blackwall
East India basin footbridge	2020-2030	£5m	PRIVATE, LVRP	Upgrade of existing bridge

4.7 Three-year Indicative Programme of Investment

The Three Year Indicative Programme of Investment has been completed in Table 17 below. The table summarises, at a programme level, the borough's proposals for the use of TfL borough funding in the period 2019/20 – 2021/22.

Table 17: Three-year indicative programme of investment for the period 2019/20 to 2021/22

London Borough of Tower Hamlets TfL BOROUGH FUNDING 2019/20 TO 2021/22	Programme budget		
	Allocated 2019/20	Indicative 2020/21	Indicative 2021/22
Local Transport Initiatives	100	100	100
CORRIDOR, NEIGHBOURHOODS & SUPPORTING MEASURES	£k	£k	£k
Love Your Neighbourhoods	800	850	850
Vision Zero	350	420	450
School Streets	100	200	250
Implementing Cycle Strategy	100	200	250
Improving Air Quality	50	150	150
Legible London	50	0	0
Ben Jonson Road Area	100	0	0
Chrisp Street Corridor	100	150	0
Tackling ASB Driving	40	50	50
Sustainable Drainage Schemes	15	10	10
Secure Motor Cycle Parking/Road Safety PTW Campaigns	10	10	10
Improving Local Accessibility	15	25	25
Local Transport Funding	100	100	100
Supporting Measures	450	450	400
Sub-total	2280	2615	2545
DISCRETIONARY FUNDING	£k	£k	£k
Bow Area Liveable Neighbourhood Bid	TBC	TBC	TBC
Principal road renewal	264	200	200
Bridge strengthening	TBC	TBC	TBC
Traffic signal modernisation	TBC	TBC	TBC
Sub-total	264	200	200
STRATEGIC FUNDING	£k	£k	£k

Bus Priority	n/k	n/k	n/k
London cycle grid – 4 routes	tbc	tbc	tbc
Crossrail complementary works			
Mayor's Air Quality Fund	TBC	?	?
Low Emission Neighbourhoods	TBC	?	?
GLA Good Growth Fund	TBC		
Sub-total	?	?	?
All TfL borough funding	£2280k	£2615k	£2545k

4.8 Supporting commentary for the three-year and annual programme

The supporting commentary incorporates both the three-year and 2019/20 annual programme.

The programmes set out in the indicative programme of investment seek to deliver the outcomes of the MTS alongside the Tower Hamlets objectives. Where possible, LIP funding will be supplemented with developer funds and in some cases these funds can deliver entire projects without the need to rely on TfL or council funding.

The programme maintains the principles of the Healthy Streets approach and has used geographic principles from the Air Quality Management Plan, Cycle Strategy and Road Safety collision data to develop a programme to deliver traffic reduction benefits to both key transport links in the borough and wider environmental improvements to its distinct and unique neighbourhoods.

These programmes have been developed in explicit consideration of the MTS outcomes to ensure they are in support of them.

i. Love Your Neighbourhoods – See Table 18

Love Your Neighbourhood schemes are cells of residential streets, bordered by main roads (the places where buses, lorries and lots of traffic passing through should be), or by features in the landscape such as canals or trainlines. Active travel will be encouraged in each area while rat runs will be restricted. Modal filters, pocket parks, cycle parking, crossings, protected cycle route and continuous footways are typical Love Your Neighbourhood scheme features and will enable local residents to re-inhabit their area from through traffic impacts. These projects will be delivered under the 'Love Your Neighbourhood' branding which is used to establish a pride in the local public realm. The Mayor of Tower Hamlets has set an ambitious target to start delivery on 20 areas in the next 3 years.

The first phase projects are:

- Bow Liveable Neighbourhood;
- Wapping area; and
- Bethnal Green area.

The Mayor has given priority to the Love Your Neighbourhood schemes due to their comprehensive nature. This will incorporate all green initiatives with additional match funding from Tower Hamlets' capital.

The LIP funding allocated is £800,000 in year 1 and £850,000 for both years 2 and 3.

This scheme is in strong support of MTS outcome 1 and 3 by encouraging active travel and ensuring London's streets are used more efficiently with less motor traffic on them.

Figure 57: Tower Hamlets ‘Love Your Neighbourhoods’ Schemes

Table 18: Love Your Neighbourhoods Schemes and Programme

Area No	Location	Current Status	Programme	Issues
1	Weavers North (Jesus Green surroundings)	Traffic review and street design proposals complete; public consultation and MNR Community Street Audit complete; Mayor Biggs approved works proceed to implementation starting 2018/19 with £85k LIP funding available 18/19 for first phase of works	Delivery on site Dec 18 – Jun 19	Good level of public support in consultation due to ASB issues needing tackling. Proposed interventions include: Road closure Ravenscroft / Quilter; Banned right Baxendale into Barnet Grove; Ropley St one-way working; Durant St Pocket Park consolidation road closure to prevent mopeds; Entry narrowed from Columbia Rd into Barnet Grove; Enhanced ped routes on desire lines; reduced rat running and ASB potential; additional traffic calming to slow speed.
2	Arnold Circus / Boundary Estate	Work at Calvert Ave junction and Virginia St – Columbia Rd cycle route completed. Traffic management in rest of area now under detailed review for consultation in Q4 2018/19 and implementation 2019 onwards. Within the LEN partnership area so target for cycle parking and EVs, etc.	Design Dec 2018 towards implementation starting 2019/20	Good level of resident's support already indicated through Planning Forum proposals

3	Cheshire St area	Traffic review and street design proposals complete; public consultation and MNR Community Street Audit complete; Mayor approved proposals for implementation starting Q4 2018/19 - £87k LIP 18/19 funding available now with funding allocated in 2019.	Delivery on site from December 2018 to July 2019.	Includes greening of buildouts and accommodates street market more safely. More cycle parking and closure of Bacon St W to improve pedestrian space. Strong positive response to consultation. Could offer additional Central London Cycle grid extension subject to TfL prioritisation of proposals.
4	Bethnal Green Middleton Green / Pundersons Gardens area	Traffic management in remaining area now under detailed review for consultation in Q4 2018/19 and implementation 2019 onwards.	Design Dec 2018 – Feb 2019 prior to consultation. Build 2019/20 – onwards with funding in LBTH vapitland possible LIP allocation	Community Safety request for road closures to prevent road racing and ASB driving will be basis of stopping through traffic.
5	Collingwood Estate – Vallance Rd – Cambridge Heath Rd / A11 / Dunbridge St	Crossrail commissioned LBTH to deliver approved reinstatement works to improve Durward St central area and rest of Durward St improvements to continue with S106 Whitechapel Vision funding. Complementary new cycle parking hub station to seek planning approval to modify Crossrail proposals. Funded by Crossrail and LIP 19/120 Cycle funding.	October 2018 designs started to submit planning application. Due to delay on Crossrail opening, target delivery is now late 2019.	Ties in with Whitechapel Vision TfL A11 study work. Possible closure of Brady St and further works to north of area to be commissioned. Enhances Crossrail plans for delivery of planning condition to provide 180 secure cycle parking spaces.
6	Cephas St area including John Scurr School	John Scurr school scheme ready to be issued for consultation subject to Mayor's approval. Realignment of road to reduce 3 point turns causing congestion, and greening of larger open space. Rest of area includes potential TfL Central	Subject to outcome of consultation and streetworks approvals, potentially deliver John Scurr scheme in	Pressure from local members for John Scurr school and agreement with UKPN to partially demolish substation creating a blockage to pedestrian movement.

		Grid Cycle Routes and local streets will need to start from scratch with assessment, outline design and consultation.	summer school holidays 2019 for 16 weeks. Cycle routes targeted for 2019/20. Low Traffic Neighbourhood Phase 2 scheme will commence with surveys and community consultation 2019/20 and delivery 2020/21.	
7	Globe Town between Globe Rd / Canal/ A11 / Roman Rd	Already part of GGF bid to GLA by Town Centre team. Increased walkability and integration with Queen Mary University.	If GGF approved, we will move quickly onto detailed design, consultation and delivery of enhanced scheme in 2019 with works completed by mid-2020/21.	Links to other existing and proposed cycle routes and already some cycle / pedestrian only access from E and S across critical barriers.
8	Antill Rd area	Traffic review and street design proposals complete; public consultation and MNR Community Street Audit complete; Mayor approved implementation of works to start December 2018 with £104k LIP funding for first works.	Construct of initial works Nov 2018 – July 2019 therefore propose this as next Liveable Neighbourhood Bid to TfL by Nov 2018 for first phase work 2019/20.	Mayor's Neighbourhood Refresh street audits and consultation raised more ambitious aspirations for Low Traffic Neighbourhood which has led to submission of LTN Liveable Neighbourhood bid. The scheme in the bid extends scheme across rest of Bow in phases so would incorporate elements of scheme 9 below also.

9	MEOTRA area	Apparent support for measures to introduce experimental closure of Coburn Rd under bridge creating a cell to south of the railway with left turns into Aberavon and Rhondda banned to prevent cyclists being caught in left hook; complementary out only on Tredegar Sq. with potential then to green entries on all three. Requires experimental closure to support consultation. Already done preliminary consultation on Harley Grove School streets transformational scheme with the pupils engaged on the project throughout. Intend to progress to more detailed public consultation on key elements in December to deliver work here early 2019.	Harley Grove – early 2019 construction with LIP and LBTH capital funding. If TfL agree could introduce banned turns 2019 and experimental closure under bridge but more permanent works would come later and need to coordinate with other changes in bid. Funding available in LIP or possibly TfL A11 ULEV bus corridor.	Strong residential support due to rat running to A12 junction. .
10	Fieldgate St area between A11/ A13 / New Rd	New project outline concepts in Whitechapel Vision and need to tie into development programming. Links to TfL / LBTH Whitechapel high street vision immediately to east.	Late start 2021-22	Links to Whitechapel Vision; tired streetscape needs refreshing and a few residents' concerns and traffic and walking routes.
11	Cable St area / Shadwell	Traffic review and street design proposals complete; public consultation and MNR Community Street Audit complete; Mayor approved move to implement Tranche 1 proposals from Dec 2018.	Delivery October 18 – Mar 19 with LIP funding; extend schemes to tranches 2 and 3 with further consultation March 19 – 20.	Provides reduction in traffic rat running and conflicts with cyclists / pedestrians. Complex scheme being introduced gradually in 3 phases enabling effects of stage to be assessed with residents. Tranche 1 provides new zebras, one way working to ease traffic conflicts and cuts out two rat run routes.

12	Wapping	Traffic review and street design proposals complete; Mayor approved to consultation to commence November 2018.	Consultation December / January with delivery from March 2019 onwards. .	Reducing rat runs with closures and bus gate at a few strategic points – remaining traffic is access only; to transform Wapping Lane village area; complimentary enforcement of coaches and HGV's and scheme to cut out rat running in Pennington St.
13	Mile End / Southern Grove / Ropery St	To complement CFR5 proposals for cycle lanes along Burdett Rd: initial quick win to green "utilitarian site open road closures" and add additional points to prevent new rat runs.	Link to TfL consultation 20019 and delivery 2020 – hope to secure TfL strategic funding for complementary measures to accommodate the cycle route without impacting negatively on local residential areas.	Protecting essential access whilst restricting rat running.
14	Thomas Rd / St Pauls Way / Burdett Rd / Upper North St	To complement potential changes to traffic management in Thomas Road with TfL as part of Strategic Cycle route CFR5. Seeking review of St Pauls Way / Bow Common Lane as part of that scheme and will add environmental street scene improvements.	Initial Thomas Road changes 2019/20 with assessment of other streets, outline design and consultation in late 2019/20 for delivery 2020/21	Tesco servicing and rat run complaints relating to Thomas Rd.
15	Bartlett Park area	Parks working to close Cotall St creating change to traffic patterns through the area. Can review impact and assess outline design for further changes once that closure can be observed.	Cotall St closure 2018/19 – in hand. 2019/20 commission assessment of rest of	Safety on Upper North St and Stainsby Rd of concern to residents along with school access.

			area for delivery 2012/22	
16	Teviot and Brownfield estates	Traffic management review to commence 2020/21 to address major rat run problems given access to A12.	20/21 delivery at earliest	Affected by Chrisp St market changes.
17	Aberfeldy Estate	Traffic management review to commence 2020/21 to address major rat run problems given access to A12.; links into HARCA development programmes	20/21 delivery at earliest	
18	Barkantine Estate IOD	Traffic review and street design proposals complete; public consultation complete; subject to Mayor's approval in January, will proceed to implement 2019/20.	LBTH capital and LIP funding	Construction issues – this is quite urgent to stop HGV's taking rat run through unsuitable streets of Alpha Grove. Great potential to increase local cycling to DLR stations and increase Cycle Hire usage – compatible with CFR5 and Isle of Dogs OAPF.
19	Spindrift Ave area IOD	Traffic review and street design proposals complete; public consultation complete; subject to Mayor's approval in January, will proceed to implement 2019/20.	LBTH capital and LIP funding.	Bus route needs protection but lot of road width to play with to reduce traffic speed – northside accesses are largely private. Big potential to increase local cycling to DLR stations and increase Cycle Hire usage: compatible with CFR5 and Isle of Dogs OAPF
20	Castalia Square area / Eastferry Rd N IOD	Traffic review and street design proposals complete; public consultation complete; subject to Mayor's approval in January, will proceed to implement 2019/20	LBTH capital and LIP funding	Great potential to increase local cycling to DLR stations and increase Cycle Hire usage

ii. Vision Zero

This will involve reviewing areas where further signage and traffic calming measures are required to increase driver's compliance with speed limits. By focussing on underperforming pre-existing 20 mph zones and designing new 20 mph roads to slower speeds Vision Zero compliance will be enabled. Programmes include:

- Slower by Design projects being taken forward – Cotton St / Prestons / Manchester;
- Working with LLDC on Wick Lane Slower by Design schemes; and
- Targeting collision hotspots.

There is £350,000 allocated in year 1, £420,000 in year 2 and £450,000 in year 3.

This scheme is in strong support of MTS outcome 2 by focussing on the safety of streets for all using them.

iii. Play Streets

Provision of non-dedicated play spaces for children and young people in their local environment.

This will be revenue funding only as it is free for residents to apply for a road closure in their area and delivery of the play day itself is also free.

This scheme supports MTS outcomes 1 and 3 by encouraging streets to be used healthily.

iv. School Streets

The Mayor's Strategic Pledge supports the reduction of traffic around schools at drop-off and pick-up times. We will aim to cover half of our primary schools with the initiative. There are plans for 50 School Streets including exploring:

- The feasibility of timed closures outside schools; or
- More transformational projects such as John Scurr School, Central Foundation Harley Grove (danger reduction and public realm improvements) and a soon to be commissioned Harry Gosling school Traffic Management scheme supported by S106

There have already been preliminary consultations on Harley Grove School Streets transformational scheme with the pupils engaged on the project throughout.

There is £100,000 of funding allocated in year 1, £200,000 in year 2, and £250,000 in year 3.

This scheme supports MTS outcomes 1 and 3 by encouraging children to use active modes of travel to get to school, reducing traffic levels on roads around schools.

Figure 58: Example of school street. Salmon Street, Tower Hamlets

v. Implementing Cycle Strategy

Tower Hamlets will work to develop and refresh its cycle strategy including:

- Cycle parking: Sheffield stands, 70 cycle hangers, car-shaped bike ports, residential on-street cycle hangars, real-time cycle counters;
- Strategic Cycle Route West India Dock / Westferry delivery. (TfL Strategic Project);
- Pedestrian and cycle improvements to Cable Street area Tranche 2;
- 4 Central London Grid routes (TfL Strategic Projects);
- Local permeability through Love Your Neighbourhood schemes; and
- Whitechapel Station: Cycle parking and proposed new cycle hub.

Allocated budget currently stands at £100,000 in year 1, £200,000 in year 2 and £250,000 in year 3.

This scheme is in support of MTS outcomes 1 and 3 but encouraging people to cycle more and reduce car usage.

vi. Improving Air Quality

Specific schemes focussed on improving air quality include:

- Installation of 100 on-street Electric Vehicle Charging Points per annum including matching GULCS funding; and

- Mobile Parklet design and construction.

Both of these schemes support the Air Quality Management Plan and initiatives to create healthier streets.

The funding levels are £50,000 for year 1 and £150,000 for both years 2 and 3.

This scheme supports MTS outcome 4 by encouraging the use of cleaner and greener vehicles.

vii. Legible London

The continuing extension of the Legible London signage programme which helps visitors find local centres and places of interest as well as including approximate walking times. The programmes for Tower Hamlets include:

- Map-based wayfinding system and improved way-finding;
- Progressing installation in Stepney, Wapping, Whitechapel then Bow and Bromley-by-Bow.

Year 1 funding stands at £50,000 with none yet allocated for years 2 and 3.

This supports MTS outcomes 1 and 6 by encouraging people to walk from bus and train stations to nearby destinations by increasing the accessibility and ease with which this is possible.

viii. Ben Jonson Road Area

Installation of new signals at Harford Street to complement Stepney Area traffic management changes. This will seek to prioritise pedestrian safety and reduce rat running through residential streets.

Year 1 funding stands at £100,000 with none allocated for years 2 and 3.

This scheme supports MTS outcomes 1, 2 and 3 by ensuring streets are easier to use and safer for pedestrians to reduce vehicles on the road.

ix. Chrisp Street Corridor (£200,000)

Delivery of Phase 2 and 3 of Streetscene improvements including pedestrian crossing improvements on Chrisp Street and side roads, greening and traffic calming. Also in support of Love Your Neighbourhood and Vision Zero programmes.

This supports MTS outcomes 1, 2, 3 and 4 by improving the public realm to increase safety for pedestrians and reducing traffic on the Borough's roads.

x. Tackling ASB driving

ASB driving is an issue that urgently must be dealt with outside of the current schemes proposed in the Love Your Neighbourhood areas. These may require non-standard traffic measures to tackle night-time road racing, speeding and cars congregating. Measures include road blocks, road closures, junction remodelling and traffic calming.

The budget allocation for year 1 is £40,000 with £50,000 per annum thereafter.

This is in strong support of MTS outcome 2 by improving the safety and security of Tower Hamlets' roads.

xi. Sustainable Drainage Scheme (SuDs)

A SuDs scheme is to be created, with the location to be confirmed. Rain Gardens, Stockholm tree pits and swales all address issues in the Local Flood Risk Management strategy.

The allocated budget stands at £15,000 for year 1, and £10,000 for both years 2 and 3.

This is in explicit support of MTS outcome 4 through greening the local environment and improving its accessibility.

xii. Secure Motor Cycle Parking/Road Safety PTW Campaigns

Addition of points in existing parking bays to secure motorcycles which are subject to theft in some hot spot areas. Campaigns to improve the safety of PTWs on local roads.

Funding stands at £10,000 for all three years respectively.

This supports MTS outcome 2 by increasing the security of local areas.

xiii. Improving Local Accessibility

Minor works for dropped kerbs or decluttering to assist passage of people in mobility scooters, wheelchairs or those pushing buggies and shopping trolleys.

The allocated budget for the scheme is £15,000 for year 1 and £25,000 per annum thereafter.

This is in support of MTS outcome 1 by increasing the ease with which people can use the local for active modes of travel.

xiv. Principal Road Maintenance

Resurfacing works to A-roads is prioritised from annual condition surveys. Hackney Road is still our current priority for 2019/20 and we may need to apply for additional emergency funding to complete.

The requirement currently stands at £264,000 for year 1 and £200,000 for both years 2 and 3.

xv. Local Transport Funding

Provision of funding for preliminary feasibility and strategy development (allocation to be confirmed):

- Transport Strategy;
- Bike Life Support;
- Road Safety Plan Review; and
- Cycle Strategy Refresh.

This scheme has allocated funding of £100,000 per annum.

This variety of schemes are in support of MTS outcomes 1, 2, and 3 by improving the safety of the Borough's streets to encourage active travel.

xvi. Supporting Measures

Other measures to support these programmes include:

- Schools, adult and special needs cycle training, cycle and pedestrian safety, and road safety education and training – this is in support of Vision Zero;
- Working with schools to develop school travel plans to encourage children to walk and cycle to school – this will support MTS outcomes 1 and 3 by encouraging active travel, removing traffic around schools and improving safety;
- Community engagement to encourage changes in residents' travel behaviour to ensure they are involved in the process; and
- Bus priority and walking routes to stations (in the Love Your Neighbourhood schemes) will support the delivery of a good public transport experience.

These measures are in support of the Love Your neighbourhoods scheme.

The allocated budget is £450,000 in years 1 and 2 and £400,000 in year 3.

This is in strong support of MTS outcomes 1 and 3 through encouraging more walking and cycling, reducing traffic on roads.

xvii. Bus Priority

Major and minor schemes are proposed to provide the high-quality infrastructure necessary to support bus priority:

- Ultra Low Emission Bus Corridor – this is a TfL scheme that Tower Hamlets supports;
- Bow Liveable Neighbourhood Bid – a Tower Hamlets scheme involving prioritising bus routes 8 and 339;
- Wapping High Street bus gate – a Tower Hamlets scheme focussed on bus routes 100 and D3; and
- H14 bus-only bridge and approach route (Fish Island) – an LLDC/TfL scheme supported by Tower Hamlets involving bus route 339.

Tfl are expected to advise on a number of these schemes.

The funding levels are currently unknown for these schemes.

These schemes support the delivery of MTS outcomes 5 and 7 by providing a reliable transport network that meets the needs of a growing London.

xviii. Bow Area Liveable Neighbourhood Bid

A major mini-Holland style improvement scheme for the Bow area to:

- Encourage more walking and cycling;
- Improve compliance with the 20mph speed limit;
- Reduce noise and traffic nuisance from rat running vehicles; and
- Enhance the sense of place.

It must be noted this is a competitive process separate to the main LIP programme, so we are currently awaiting an outcome of a bid for £2.35 million. This will enable the scope of the Love Your Neighbourhood scheme to be extended to incorporate more significant interventions.

This scheme is in support MTS outcomes 1, 2, 3 and 4 by having a strong focus on improving the safety of streets to encourage active travel.

xix. Bridge Assessment & Strengthening Programme

There will be ongoing bridge asset management work involving condition surveys and remedial works. The funding for this programme is to be advised by LOBEG.

Funding is currently unconfirmed for this work.

4.9 Risks to the delivery of the three-year programme and annual programme

Error! Not a valid bookmark self-reference. below shows the principal risks associated with delivery of the LIP together with possible mitigation actions for the three-year and annual programme. The risk register summarises the strategic risks identified that could impact on the three-year and annual programme of schemes/initiatives.

Table 19: LIP Risk Assessment for three-year programme 2019/20-2021/22 and annual programme 2019/20

Risk	Likelihood			Potential mitigation measures	Impact if not mitigated
	H	M	L		
Financial					
Reduction in scheme funding due to budget restrictions.		X		Consider implementing lower cost options if permissible. Spread implementation over more financial years	LIP objectives not met or non-progression of project due to reduction in project scope.
Increase in unforeseen project costs due to environmental factors.		X		Undertake judicious project management to ensure funding is used efficiently and justifiably. Include contingency in estimates	LIP objectives not met or non-progression of project due to budget redistribution, limiting programme effectiveness.
Statutory / Legal					
Tower Hamlets is required to implement the LIP under s151 of the GLA Act without sufficient external funding support.			X	Explore possibility for legal challenge, if possible jointly with other affected bodies.	May only deliver on LIP outcomes if LIP funding available.
Third Party					
Stakeholders and/or third party support decreased or withdrawn.		X		Keep public and Members, and other partners informed through clear communication of planned projects and emerging issues.	LIP objectives not met or non-progression of project due to delay in programme.

Public / Political					
Change in policy or political direction.		X		Ensure that Members are frequently engaged in a variety of schemes through various different policy areas.	Non-progression/reduction in scope of project so reduced programme effectiveness.
Individual projects are not supported by Members.			X	Ensure that Members are involved at the early stage of project development, so that fundamental issues can be addressed and incorporated into the design.	Non-progression/reduction in scope of individual projects.
Individual projects are not supported by the public at the consultation stage.		X		Undertake appropriate consultation at an early stage to ensure public support. Redesign project to resolve objections. Maintain strategic principles.	Non-progression/reduction in scope of individual projects.
Programme & Delivery					
Insufficient staff resources to develop designs	X			Recruit temporary/fixed term staff or use consultants.	Non-progression or late delivery of project.
Projects undertaken are not successful.		X		Schemes are to be carefully monitored and reviewed to identify non-delivered outputs early within the work programme.	LIP objectives not met.
Delays to progress of work	X			Consult with statutory undertakers as early as possible. Engage with contractors as early as possible to ensure resources. Reprogram or transfer budget to support the next highest priority scheme.	LIP delivery programme extended or non-progression of projects delaying achievement of LIP objectives and outcomes.

4.10 Annual programme of schemes and initiatives

The annual programme of schemes has been submitted to TfL via the Borough Portal and approval received subject to approval of the LIP. The programme of schemes will be updated annually. The funding has been modified according to approved allocation. The supporting commentary can be found in section 4.8 above.

Table 20: Annual programme of schemes and initiatives

London Borough of Tower Hamlets TfL BOROUGH FUNDING 2019/20 to 2021/22		**Allocated 2019/20**
Local Transport Initiatives		100
CORRIDOR, NEIGHBOURHOODS & SUPPORTING MEASURES	COMMENTARY	£k
Love Your Neighbourhoods	Fundamental changes to the infrastructure on the street to influence the travel behaviour of residents, businesses and visitors to Tower Hamlets, encouraging more walking and cycling and restricting rat running. These projects will be supported by soft measures to promote active travel. The first priority areas being delivered in 2018/19 and 2019/20 are Bethnal Green, Wapping and Bow. Work will also commence on the next tranche which include Old Ford West, Mile End West, Shadwell and Brick Lane.	800
Vision Zero	Reviewing areas where further signage and traffic calming measures are required to increase driver's compliance with speed limits: focus on underperforming pre-existing 20 mph zones and new 20 mph roads being designed to slower speeds: • Slower by Design projects being taken forward – Cotton St./Prestons/ Manchester • Work with LLDC on Wick Lane Slower by Design schemes.	350

	• Targeting collision hotspots	
School Streets	50 School Streets including: - • Feasibility of timed closures outside schools or • More transformational projects such as John Scurr School, Central Foundation Harley Grove (danger reduction and public realm improvements) and a soon to be commissioned Harry Gosling school Traffic Management scheme supported by S106	100
Implementing Cycle Strategy	In addition to working with TfL on 5 new routes, we propose to implement other priorities in the Cycle Strategy as follows: • Cycle parking: Sheffield stands; 70 cycle hangers, car-shaped bike ports, residential on street cycle hangars. • Real-time cycle counters • Pedestrian and cycle improvements to Cable Street area Tranche 2 • Local permeability through Love Your Neighbourhood schemes • Whitechapel Station: Cycle parking and proposed new cycle hub	100
Improving Air Quality	• Installation of 100 on-street Electric Vehicle Charging Points per annum including matching GULCS funding. Mobile Parklet design and construction	50
Legible London	Improving key pedestrian links to town centres by introducing wayfinding in Stepney, Wapping, Whitechapel	50
Ben Jonson Road Area	New signals to complement Stepney area traffic management changes and seek to control the newly emerged rat run from A11 to A13, at same time as prioritising pedestrian safety.	100
Chrisp Street Corridor	Delivery of Phase 2 and 3 of Streetscene improvements to complement the scale of development along this corridor incorporating improvements to pedestrian crossings of	100

	Chrisp Street itself and side roads, greening and traffic calming. Building on Love Your Neighbourhood and Vision Zero	
Tackling ASB Driving	Monitoring and stopping ASB issues associated with driving: restricting access to discourage drug dealers, circuit racing and kerb crawling for instance (thereby meeting the Council's duties under Section 17 of the Crime & Disorder Act and LIP3 Guidance para. 2.27)	40
Sustainable Drainage Scheme	Rain gardens, Stockholm tree pits or swales to address issues in Flood Risk Management strategy – sites to be determined	15
Secure Motor Cycle Parking	Targeting provision in hotspot areas for P2W theft (thereby meeting the Council's duties under Section 17 of the Crime & Disorder Act and LIP3 Guidance para. 2.27) and helps address an issue particularly affecting delivery riders.	10
Improving Local Accessibility	Minor schemes such as dropped kerbs or raised tables to address issues raised at Accessible Transport Forum. Trial Memory Lane project to provide public artwork to brighten railway arches and spur long term memories of people suffering the early stages of Dementia.	15
Local Transport Funding	Funding for preliminary feasibility and strategy development (allocation to be confirmed • Transport Strategy • Bike Life Support • Road Safety Plan Review • Cycle Strategy Refresh	100
Supporting Measures	Increased focus on school cycle training, road safety education, school travel plans and community engagement to support Love Your Neighbourhood scheme achieving changes in travel behaviour by residents.	450
Sub-total		2280

DISCRETIONARY FUNDING		£k
Bow Liveable Neighbourhood Bid	Major mini-Holland style improvement scheme for the Bow area	BID
Principal road renewal	Hackney Road phase 2	264
Bridge strengthening	-	LOBEG to advise
Traffic signal modernisation	-	TfL to advise
Sub-total		264
STRATEGIC FUNDING		£k
Bus Priority (Route 8)		To be advised by TfL
London Cycle Grid – 4 routes		To be advised by TfL
Mayor's Air Quality Fund	Whitechapel LEN to be the focus tying in with TfL design work on Whitechapel Road and market area.	BID
Low Emission Neighbourhoods	LBTH are partners with Hackney and Islington in an existing LEN led by Hackney; we are also submitting an MAQF bid for a further LEN in Whitechapel as above.	To be advised by LEN lead borough TBC
GLA Good Growth Fund	A bid has been prepared for the Roman Road west town centre area seeking to improve pedestrian and cycle links to the south as well to Queen Mary University.	BID
Sub-total		TBC
All TfL borough funding		£2280k

CHAPTER FIVE

MONITORING DELIVERY

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

5.1 Overarching mode-share aim and outcome Indicators

Table 21 outlines the targets for Tower Hamlets against the MTS overarching mode-share aim and outcome indicators.

The Borough's progress against the outcome targets and mode-share aim will be measured through strategic data collected by TfL on behalf of the Boroughs.

None of these indicators can be achieved without the cooperation and support of TfL – especially those linked to public transport services and it is a cause for some concern that recent falls in public transport patronage and associated reductions in frequency on bus services in particular are counter to the modal share changes the MTS and LBTH LIP are trying to achieve.

5.2 Delivery indicators

The delivery indicators are set by TfL and relate to each of the nine MTS Outcomes. These provide a reference for the delivery of the Mayor's Transport Strategy at a local level. The borough will monitor and record the delivery indicators and report to TfL once a year in June using Proforma C.

Table 21: Tower Hamlets outcome indicator targets

Objective	Metric	MTS Borough target	Target year	Commentary
Overarching mode share aim – changing the transport mix				
Londoners' trips to be on foot, by cycle or by public transport	Active, efficient and sustainable (walking, cycling and public transport) mode share (by borough resident) based on average daily trips. Base period 2013/14 - 2015/16.	84% 89%	2021 2041	To be achieved by LBTH by implementing LIP Outcomes 1-4
Healthy Streets and healthy people				
Outcome 1: London's streets will be healthy and more Londoners will travel actively				
Londoners to do at least the 20 minutes of active travel they need to stay healthy each day	Proportion of London residents doing at least 2x10 minutes of active travel a day (or a single block of 20 minutes or more).	44% 70%	2021 2041	To be achieved by LBTH by implementing LIP Outcomes 1 & 4
Londoners have access to a safe and pleasant cycle network	Proportion of Londoners living within 400m of the London-wide strategic cycle network.	43% 96%	2021 2041	96% of Tower Hamlets residents will be within 400m of the London-wide strategic cycle network by 2041. This aligns with LIP Objectives 1 and 2
Outcome 2: London's streets will be safe and secure				
Deaths and serious injuries from all road collisions to be eliminated from our streets	Deaths and serious injuries (KSIs) from road collisions, base year 2005/09 (for 2022 target)	57 45	2021 2022	We will seek to work with TfL to accelerate the overall decrease in KSIs and focus on reducing Slights in line with LIP Objective 2

	Deaths and serious injuries (KSIs) from road collisions base year 2010/14 (for 2030 target).	32 0	2030 2041	
Outcome 3: London's streets will be used more efficiently and have less traffic on them				
Reduce the volume of traffic in London.	Vehicle kilometres in given year. Base year 2015. Reduce overall traffic levels by 10-15 per cent.	836 669-710	2021 2041	LIP Objectives 1 and 3 align with this MTS Outcome
Reduce the number of freight trips in the central London morning peak.	10 per cent reduction in number of freight vehicles crossing into central London in the morning peak period (07:00am - 10:00am) by 2026.	N/A	N/A	N/A
Reduce car ownership in London.	Total cars owned and car ownership per household, borough residents. Quarter of a million fewer cars owned in London. Base period 2013/14 - 2015/16.	41,400 36,000	2021 2041	LIP Objectives 1 and 3 support this MTS objective
Outcome 4: London's streets will be clean and green				
Reduced CO_2 emissions.	CO_2 emissions (in tonnes) from road transport within the borough. Base year 2015/16.	138200 39,900	2021 2041	All our LIP Objectives support this MTS clean and green Outcome
Reduced NO_x emissions.	NO_X emissions (in tonnes) from road transport within the borough. Base year 2013.	220 30	2021 2041	
Reduced particulate emissions.	PM_{10} and $PM_{2.5}$ emissions (in tonnes) from road transport within borough. Base year 2013.	45 PM_{10} 28 PM_{10} 21 $PM_{2.5}$ 14 $PM_{2.5}$	2021 2041 2021 2041	

A good public transport experience				
Outcome 5: The public transport network will meet the needs of a growing London				
More trips by public transport - 14-15 million trips made by public transport every day by 2041.	Trips per day by trip origin. Reported as 3yr moving average. Base year 2013/14 - 2015/16.	249 328	2021 2041	LIP Objectives 2 and 4 support this MTS Outcome despite reductions in public transport service frequency by TfL (ass to RISKS?)
Outcome 6: Public transport will be safe, affordable and accessible to all				
Everyone will be able to travel spontaneously and independently.	Reduce the difference between total public transport network journey time and total step-free public transport network	-61% change in travel time difference between 2015 and 2041	2041	LIP Objectives 2 and 4 are intended to create a more accessible public transport network. This will be achieved through collaboration with TfL and Network Rail to increase the number of step-free rail and tube stations in the Borough
Outcome 7: Journeys by public transport will be pleasant, fast and reliable				
Bus journeys will be quick and reliable, an attractive alternative to the car	Annualised average bus speeds, base year 2015/16	8.7-8.5 9.7-8.8	2021 2041	This will be achieved with LIP Objectives 1,2 and 3
New homes and jobs				
Outcome 8: Active, efficient and sustainable travel will be the best options in new developments **Outcome 9: Transport investment will unlock the delivery of new homes and jobs**				

6. Glossary

AQAP	Air Quality Action Plan	A document outlining actions to improve air quality.
AQMA	Air Quality Management Area	Areas where national air quality objectives are not being achieved.
DEFRA	Department for Environment, Food & Rural Affairs	The government department responsible for environmental protection, food production and standards, agriculture, fisheries and rural communities.
DLR	Docklands Light Railway	Automated light rail metro system serving East London.
EV	Electric Vehicle	A vehicle operated by a plug-in electric motor.
GLA	Greater London Authority	The regional government of Greater London, headed by the Mayor of London.
KSI	Killed or Seriously Injured	Collisions involving a casualty that has been killed or seriously injured.
LIP	Local Implementation Plan	Each London borough is required to develop a LIP to set out how the borough will deliver the Mayor's Transport Strategy (MTS) at local level.
LP	Local Plan	A planning document that sets out plans and policies for how new development will take place within the Borough.
MTS	Mayor's Transport Strategy	A document that sets out the Mayor of London's policies and proposals to reshape transport in London up to 2041.
PTAL	Public Transport Accessibility Level	A measure from 0 (worst) to 6b (best) of connectivity to the public transport network in London, combines information about how close public transport services are to a site and how frequent these services are.
PTW	Powered Two-Wheeler	A term covering all two-wheeled motor vehicles, such as mopeds, scooters and motorcycles.
SCN	Strategic Cycle Network	A network of high-quality Cycle Superhighways and Quietways to be delivered with TfL as part of the MTS.
TfL	Transport for London	A GLA body responsible for the transport system covering Greater London.
TLRN	Transport for London Road Network	A network or roads for which TfL are responsible for the maintenance, management and operation.
ULEZ	Ultra Low Emission Zone	A zone within Central London which requires vehicles to meet a minimum set of exhaust emission standards or pay a daily charge to travel within the area.