



Clear Zone Plan – 2010-2025



September 2010



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1) Introduction

Clear Zone Vision

The Tower Hamlets Council Clear Zone will help create healthier, more accessible, climate-friendly and liveable neighbourhoods in the west of the borough. This will be achieved through the introduction of innovative, sustainable transport and place shaping measures, in partnership with key stakeholders.

Challenges and Opportunities

The borough faces important challenges across a range of issues that affect the health, well being and opportunities of residents. Transport interventions can play a significant role in ameliorating these issues. The remainder of this section provides an overview of the key issues, summarised in Fig 1.1.

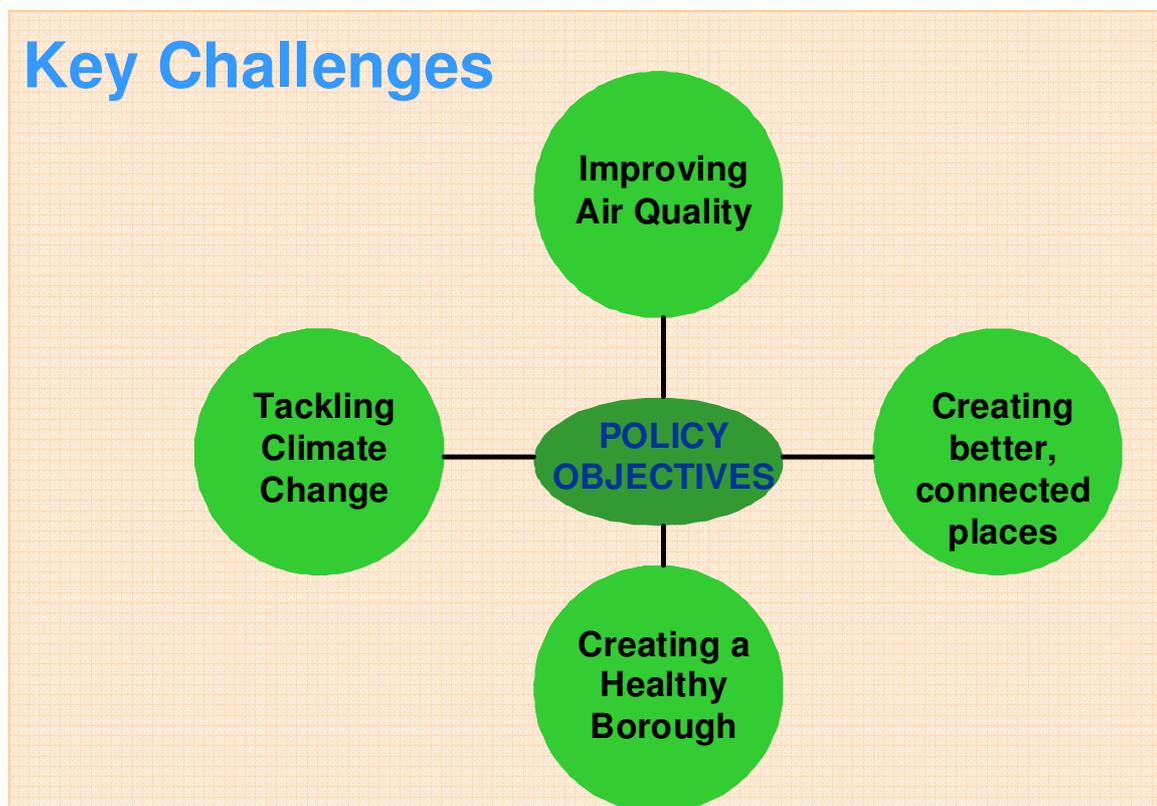


Figure 1.1: Key Policy Objectives for the Clear Zone

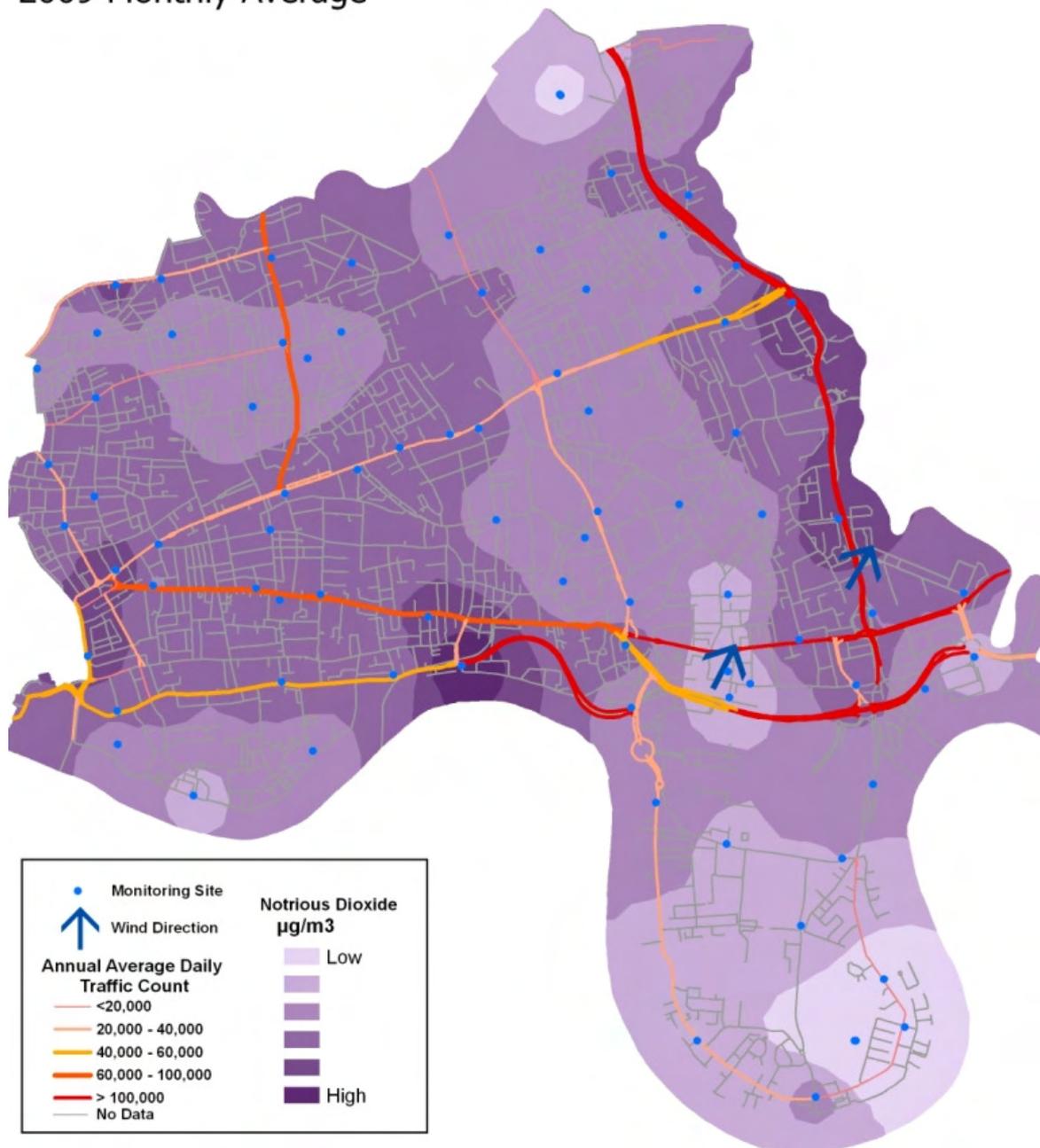
Air Quality

Review and assessment of air quality in Tower Hamlets under the UK Air Quality Strategy has identified road transport as the biggest source of emissions in Tower Hamlets. The borough is exceeding air quality objectives for Oxides of Nitrogen (NO + NO₂ - collectively referred to as NO_x) and particulate matter (PM₁₀) and the Council has a duty to be monitoring PM_{2.5} from 2015. It is estimated that poor air quality takes eight months off the average European person's lifespan. In addition, around 690,000 people in London have asthma, which is exacerbated by high levels of air pollution.

Tower Hamlets is a declared Air Quality Management Area due to the high concentration of NO_x and PM₁₀ caused largely by traffic on major roads in the borough. Figure 1.2 shows the air quality 'hotspots', areas with extremely high concentrations of NO₂. The hotspots in Tower Hamlets are found in Aldgate, Limehouse and Bromley-by-Bow.

Interventions to reduce the sources of air pollution from transport are focussed on reducing the use of polluting vehicles through encouraging mode shift to public transport and to cycling and walking for shorter journeys, by more efficient delivery and servicing activity and through improvement to existing vehicle technologies.

Figure 1.2: Annual average emissions of NO₂ across Tower Hamlets - 2009
 2009 Monthly Average



Disclaimer:

The surfaces were interpolated using the Inverse Distance Weighting method. This method approximates values from each target point in an inverse square multiple - i.e. as the distance doubles, the value is quartered. The method employs a 500m fixed radius, which is based on an influence assumption, but also makes provision that at least 6 surrounding points are used in the calculation.

The z-values used in the calculation are averages of measured samples at specific locations, and in the case of the 6-month average map, they are averages of averages.

As with all interpolated surfaces, the values around the edges of the area of interest (the borough) are extrapolations based on a uni-directional interpolator and are thus subject to relatively high levels of potential inaccuracy.

Climate Change

Greenhouse gas emissions from transport account for 21% of national output, of which carbon dioxide (CO₂) is the dominant contributing pollutant. Tower Hamlets produces the second largest amount of CO₂ of the 33 local authorities in London, of which 14% comes from transport sources.

Current practice to reduce CO₂ from transport sources is largely focussed on reducing private travel by encouraging mode shift to forms of transport that produce less CO₂ and through improvements in vehicle technology.

Creating better, connected places

While the borough has a wide range of public transport options in the form of four Underground lines, much of the DLR network and national rail services, local connectivity issues persist in many places. Poor local connections and a low quality urban realm impair accessibility to local shops, services and transport facilities.

Better walking and cycling connections can play a role in addressing accessibility issues and create stronger physical bonds between the 'Hamlets' and their communities, bringing places and opportunities closer together.

Healthy Borough

Health issues are stark in the borough. The cancer mortality rate is the highest in London and circulatory disease deaths are second highest. There is also a high rate of obesity in the borough that is predicted to continue to rise.

Low levels of exercise and activity are linked to heart disease and obesity and this is where transport interventions can play their part. Encouraging and enabling people to make more walking and cycling ('active mode') trips can bring positive returns in tackling these health issues by increasing the average levels of exercise taken by local residents.

Policy Context

Air quality, climate change, accessibility and health challenges are being addressed at all levels of government, from European to local, through a range of policy instruments. The relevant legislation and documents are outlined below.

EU Air Quality Directive

In response to the growing imperative to address the detrimental health impacts of air pollution, the EU issued the Air Quality Framework Directive to member states, setting limits on emissions of NO₂, PM₁₀ and PM_{2.5}. These limits became legally binding in the UK through the 1995 Environment Act.

European policy has also focussed on driving down pollutant emissions from road transport through increasingly stringent standards for new vehicles sold in the EU.

Environment Act 1995

The Environment Act 1995 entrenched EU emissions limits and for the first time the UK Government developed a National Air Quality Strategy.

The Strategy requires all local authorities to review and assess their jurisdiction for poor or declining air quality. Where it is identified that air quality limits are being, or will be breached, the local authority must declare an Air Quality Management Area and produce an Action Plan to ensure continuous improvement in air quality.

The Local Government White Paper ‘Strong and Prosperous Communities’, published in October 2009, committed to introducing a set of streamlined indicators that would reflect national priority outcomes for local authorities working alone or in partnership. One of the indicators includes reporting on air quality emissions from Local Authority operations:

- NI194: Air quality – % reduction in NO_x and primary PM₁₀ emissions through local authority’s estate and operations.

Local Authorities are also benchmarked on efforts to reduce their impact on climate change via:

- NI 185: Percentage CO₂ reduction from local authority operations
- NI 186: Percentage reduction of the per capita CO₂ emissions in the local authority area

Mayor of London’s draft Air Quality Strategy (MAQS)

The Mayor is obliged under the National Air Quality Strategy to produce a London wide strategy to meet Government targets. The draft¹ proposals to do so are split into two sections: transport and non-transport measures, reflecting the large proportion of emissions generated by the transport sector. The package of transport measures consists of:

- Encouraging smarter choices and sustainable travel behaviour
- Promoting technological change and cleaner vehicles:
- Targeting air quality hotspots through a package of localised measures
- Reducing emissions from particular sources in the public transport fleet
- Emissions control schemes (such as changes to the London Low Emission Zone)
- Air Quality Action Days and Special Measures

¹ Based on the draft Mayor’s Air Quality Action Plan published March 2010

The Clear Zone Plan will contribute to the delivery of the Air Quality Strategy through setting out a coherent package of measures designed to target localised air quality hotspots and promoting implementation of sustainable transport measures

Mayor of London’s Transport Strategy 2010-2031

The Mayor’s Transport Strategy sets out the Mayor of London’s transport vision and sets out how TfL and its delivery partners, which are in the main the boroughs, will deliver that vision. Of the Mayor’s six goals for the transport system, four directly relate to the issues described above. The goals, challenges and expected outcomes of the strategy are shown in Fig 1.3.

Figure 1.3 Mayor’s Transport Strategy – Goals, Challenges & Outcomes, sections in yellow relate to the ‘Key Challenges’ described above

Goals	Challenges	Outcomes
Support economic development and population growth	Supporting sustainable population and employment growth	<ul style="list-style-type: none"> Balancing capacity and demand for travel through increasing public transport capacity and/or reducing the need to travel
	Improving transport connectivity	<ul style="list-style-type: none"> Improving people’s access to jobs Improving access to commercial markets for freight movements and business travel, supporting the needs of business to grow
	Delivering an efficient and effective transport system for people and goods	<ul style="list-style-type: none"> Smoothing traffic flow (managing delay, improving journey time reliability and resilience) Improving public transport reliability Reducing operating costs Bringing and maintaining all assets to a state of good repair Enhancing use of the Thames for people and goods
Enhance the quality of life for all Londoners	Improving journey experience	<ul style="list-style-type: none"> Improving public transport customer satisfaction Improving road user satisfaction (drivers, pedestrians, cyclists) Reducing public transport crowding
	Enhancing the built and natural environment	<ul style="list-style-type: none"> Enhancing streetscapes, improving the perception of the urban realm and developing ‘better streets’ initiatives Protecting and enhancing the natural environment
	Improving air quality	<ul style="list-style-type: none"> Reducing air pollutant emissions from ground-based transport, contributing to EU air quality targets
	Improving noise impacts	<ul style="list-style-type: none"> Improving perceptions and reducing impacts of noise
	Improving health impacts	<ul style="list-style-type: none"> Facilitating an increase in walking and cycling
Improve the safety and security of all Londoners	Reducing crime, fear of crime and antisocial behaviour	<ul style="list-style-type: none"> Reducing crime rates (and improving perceptions of personal safety and security)
	Improving road safety	<ul style="list-style-type: none"> Reducing the numbers of road traffic casualties
	Improving public transport safety	<ul style="list-style-type: none"> Reducing casualties on public transport networks
Improve transport opportunities for all Londoners	Improving accessibility	<ul style="list-style-type: none"> Improving the physical accessibility of the transport system Improving access to services
	Supporting regeneration and tackling deprivation	<ul style="list-style-type: none"> Supporting wider regeneration
Reduce transport’s contribution to climate change and improve its resilience	Reducing CO2 emissions	<ul style="list-style-type: none"> Reducing CO2 emissions from ground-based transport, contributing to a London-wide 60 per cent reduction by 2025
	Adapting to climate change	<ul style="list-style-type: none"> Maintaining the reliability of transport networks
Support delivery of the London 2012 Olympic and Paralympic Games and its legacy	Developing and implementing a viable and sustainable legacy for the 2012 Games	<ul style="list-style-type: none"> Supporting regeneration and convergence of social and economic outcomes between the five Olympic boroughs and the rest of London Physical transport legacy Behavioural transport legacy

Source: Mayor of London’s Transport Strategy (2010)

Measures to improve air quality include proposals to promote uptake of low emission vehicles, develop the current Low Emission Zone (LEZ) and promote a cleaner public service fleet, including buses and taxis.

The Strategy also recognises that noise from transport can affect individual's health and wellbeing and includes measures to reduce noise from transport by encouraging use of quieter vehicles and driving techniques.

The impact transport has on improving health is recognised in the Strategy with proposals to encourage an increase in walking and cycling through travel planning, awareness campaigns and the Cycle Hire and Cycle Super Highways schemes.

As well as the 'cycling revolution', that the Strategy hopes to bring about, the Mayor is also promoting an electric vehicle revolution to help meet his target of reducing London's CO₂ emissions by 60% by 2025.

The Clear Zone Plan will work towards the goal of 'enhancing the quality of life for all Londoner's' by addressing the challenges of improving air quality, improving health impacts and enhancing the built and natural environment. The Plan will also contribute to meeting the Mayor of London's carbon reduction target of 60% by 2025 and the aim to improve transport connectivity.

Tower Hamlets Council's Community Plan: One Tower Hamlets - 2008-2020

The Tower Hamlets Community Plan sets out the vision for the borough in 2020. The over-arching aim of the Community Plan is to "improve the quality of life for everyone who lives and works in the borough".

To turn this vision into reality, the plan is split into four themes; each designed to meet the challenges and opportunities and deliver lasting improvements for the communities in Tower Hamlets.

The four themes are:

- A Great Place to Live
- A Prosperous Community
- A Safe and Supportive Community
- A Healthy Community

Under the 'Great Place to Live' section are several priority measures that address some of the issues raised in this section. There is a commitment to reduce the borough's CO₂ output by 10% by 2011, to be achieved partly through 'reducing energy use' including that from transport.

That the commitment 'to improve public transport networks and enable residents to walk and cycle' is found under a set of priorities under the title 'strengthen and connect communities

recognises the role transport can play in promoting social inclusion and healthy active lifestyles.

Tower Hamlets Council's Local Development Framework (LDF) Core Strategy - 2010-2025

The LDF Core Strategy aims to provide a spatial realisation of the themes and goals set out in the Community Plan. It provides a spatial vision for the borough, focussing on the concept of 'place making' and when adopted, its contents carry weight in both planning and legal terms.

Chapter 4 titled 'Strengthening Neighbourhood Wellbeing' contains a section on 'Creating Healthy and Liveable Neighbourhoods' and within it, measures to deliver the strategic objective:

SO10: To deliver healthy and liveable neighbourhoods that promote active and healthy lifestyles and enhance people's wider health and well-being.

The policies to deliver this recognise the impact transport interventions can have in 'Creating Healthy and Liveable Neighbourhoods' and the need for a focussed strategy to tackle air quality is represented through the strategic policy to implement a Clear Zone in the borough

SP03 2e: Address the impact of noise and air pollution in the borough by implementing a Clear Zone in the borough to improve air quality.

In addition, the Clear Zone will also contribute to achieving SO10 through tackling health and environmental issues by:

SP03 1d: Support opportunities for healthy and active lifestyles through providing high quality walking and cycling routes.

SP03 2c: Address the impact of noise and air pollution in the borough by continuing to promote the use of public transport and reducing reliance on private motor vehicles.

SP03 2c: Address the impact of noise and air pollution in the borough by managing and improving air quality along transport corridors and traffic congestion points by working with TfL.

Tower Hamlets Council's Air Quality Action Plan - 2003

The Review and Assessment process under the Local Air Quality Regime concluded that we are exceeding Air Quality Objectives for NO_x and PM₁₀. The whole borough was therefore declared an Air Quality Management Area in 2001. The Council subsequently produced an Air Quality Action Plan in 2003 setting out the borough strategy to address air quality and works towards meeting the air quality objectives.

The plan is currently being reviewed, and it is intended that this Clear Zone Plan will form a key part of the new action plan.

Tower Hamlets Council's Sustainable Transport Strategy: Making Connections - 2008-2033

Making Connections describes Tower Hamlets Council's vision for the development of a transport network that is environmentally, climate and people friendly.

The introduction of a Clear Zone, as an initiative "to improve air quality and reduce CO2 emissions by encouraging a shift to walking, cycling and public transport and to make our streets more liveable" is included within the 'Climate Change – Towards zero carbon travel' section of the document.

Clear Zone Objectives

The Objectives for the Clear Zone have been derived from the issues and policies identified in this section and have been shaped to respond to the challenges and opportunities extant in the proposed Clear Zone.

The Tower Hamlets Clear Zone Objectives

Implement a phased package of sustainable transport interventions to improve the environment within the Clear Zone

- 1) Reduce air pollution from transport sources to improve air quality in the Aldgate area and across the Clear Zone;
- 2) Improve the urban realm and management of the road network to ensure better connections and increased accessibility within the Clear Zone;
- 3) Reduce noise pollution from transport sources;
- 4) Reduce greenhouse gas emissions from transport sources to help tackle climate change; and
- 5) Ensure future development within the Clear Zone contributes to achieving the Council's Clear Zone objectives.

2) The Clear Zone

The Clear Zone covers an area of approximately 9km² in the west of the borough (see Fig 2.1). It borders the City of London in the west and Cambridge Heath Road, Sidney Street, Watney Market, Watney Street, Dellow Street and Wapping Street in the east. The Clear Zone covers the places, as defined in the Core Strategy, of Aldgate, Spitalfields, Shoreditch, Tower of London, and Whitechapel and partially includes Bethnal Green, Shadwell and Wapping.

The A11, A13, The Highway and Commercial Street are all heavily trafficked, strategic roads. Much of the traffic they carry is travelling through the borough to and from central London. Traffic levels have increased along Commercial Street since the introduction of the central London Congestion Charging Scheme (LCCS) as it is a boundary road and its use incurs no charge. The high density of heavily trafficked roads is the main cause of the air quality hot spot extending around Aldgate East station.

The Clear Zone largely consists of high density residential districts and includes the busy commercial areas along Whitechapel Road and Bethnal Green Road as well as the popular leisure destinations of Spitalfields Market and the Brick Lane area.

The Tower Hamlets Clear Zone will adjoin the City of London, itself part of the Central London Clear Zone Partnership along with Camden and Westminster. This presents a new opportunity for cross borough working and knowledge sharing.

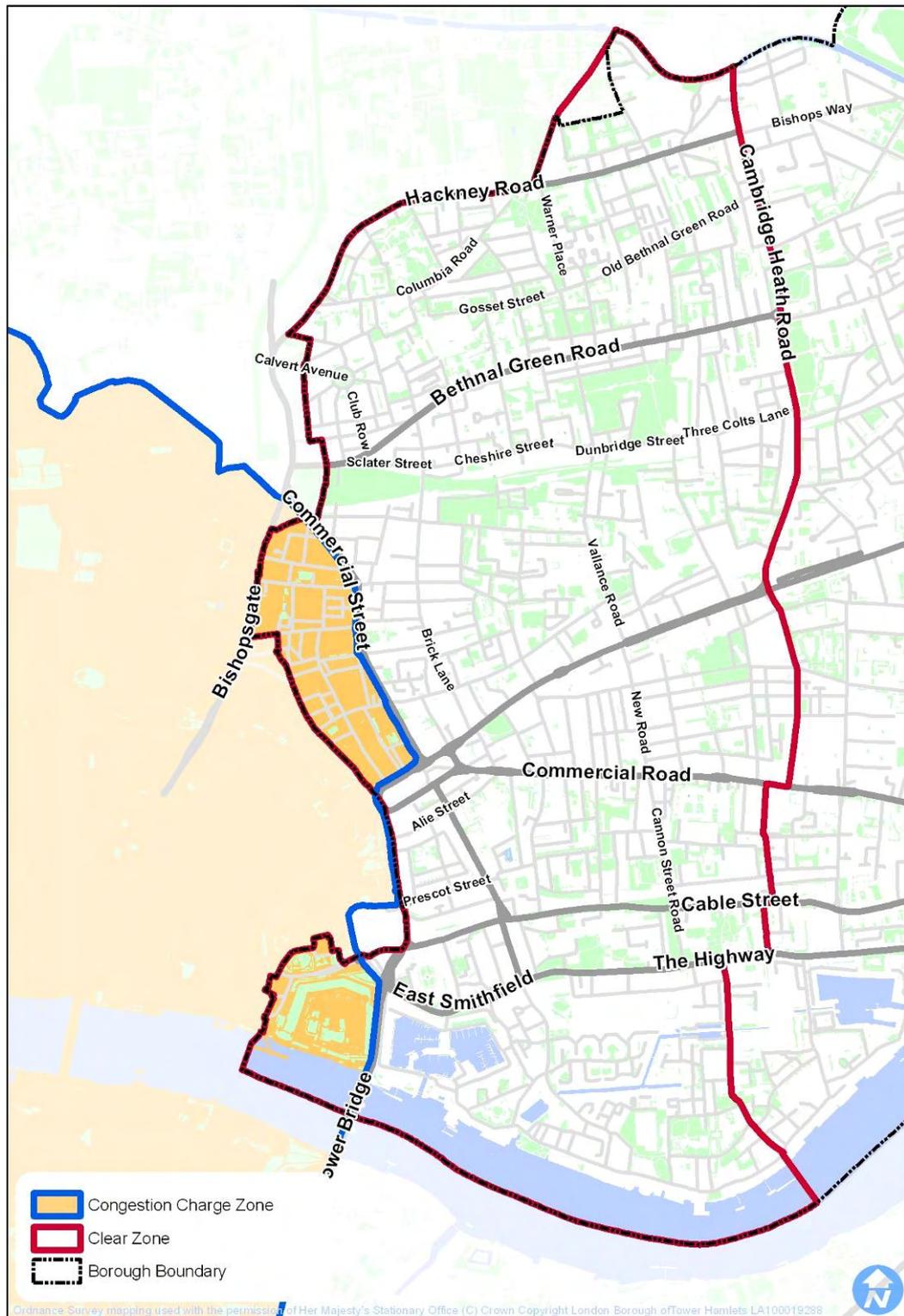
Existing and Planned Future Schemes

Tower Hamlets Council and other partners are working hard to improve the transport systems and networks that serve the borough, planning and implementing a wide range of schemes and measures from brand new railway lines and stations to secure cycle parking on housing estates.

Many of these schemes will, and are already beginning to, work towards the objectives for the Clear Zone set out in the first section of this document. The range of schemes within the Clear Zone are unique, in borough terms, and present a fantastic platform from which to add new Clear Zone measures and turn the Clear Zone vision into reality.

This section describes the existing, planned schemes within the Clear Zone and the opportunities they present.

Figure 2.1: The Tower Hamlets Clear Zone



Rail

The Clear Zone has extensive public transport connections with four Underground stations, two national rail stations and two stations serving the DLR.

The recent opening of London Overground services on the East London Line has opened up north-south travelling opportunities within the west of the borough and further afield to North East and South East London. Stations in the Clear Zone include the re-opened and enhanced facilities at Shadwell, Whitechapel and Wapping and the new Shoreditch High Street station. The line could function as a local railway, allowing many short trips currently taken by car to be taken by rail and may encourage mode switch to public transport from car for longer journeys.

The Crossrail service is scheduled to open in 2017 with a new station connecting with existing services at Whitechapel. Crossrail will provide enhanced new connections to Canary Wharf and central London.

Active Travel

Walking Routes to Schools

Implementing walking routes to schools as part of school travel plans is encouraged by the Council. These routes aim to promote safer, more environmentally friendly and healthier ways for children to get to and from school. The 19 primary and five secondary schools in the Clear Zone all have travel plans and Clear Zone measures could complement those already in place to help maximise the potential of the travel plans.

Healthy Towns Initiative

In 2008, the borough received funding from the Department of Health as part of their *Healthy Towns* Initiative. This funding enables the borough to encourage healthy lifestyles through increasing the opportunities to be more physically active and make healthy food choices. A holistic approach to promoting physical activity both in the community and through improvements to infrastructure is central to the initiative. The Borough was one of nine towns in England to receive funding from a £30m pot with £4.68m awarded to Tower Hamlets.

Measures planned for the initiative to encourage walking include personalised travel plans, travel planning, awareness campaigns, strategic walking projects and active travel evaluation.

Green Grid in Tower Hamlets

The Green Grid is a project to provide a network of high quality, multi functional open spaces, rivers and other corridors across the borough. Existing open space will be enhanced and walking routes between open spaces will be 'greened' and enhanced by removing 'obstacles' and improve their accessibility. Green Grid routes in the Clear Zone include the Thames path

from the Tower of London to Wapping and a north-south route along Vallance Road and Cannon Street Road.

High Street 2012

There are a number of walking measures planned and funded as part of the High Street 2012 scheme - a series of linked urban realm improvements along the A11 from Aldgate to Stratford; to be delivered in time for the Olympics. The two areas that lie within the Clear Zone area are Aldgate and Whitechapel. New pedestrian links have been planned for both areas. Features of schemes in both areas include de-cluttering, installation of way finding and high quality lighting and landscaping.

The High Street 2012 programme provides an excellent opportunity to build on state of practice urban realm improvements by incorporating the upgraded streets into larger scale schemes and by setting a design standard for the borough.

Awareness Campaigns

The borough has developed walking campaigns, for example 'Get Walking Keep Walking' - an urban walking project aimed at getting more people walking for health, wellbeing and fun. Walk tours such as Healthy Walks in Tower Hamlets are also promoted. These are lead by volunteers and are a sociable way to start walking on a regular basis.

TfL London Cycle Hire scheme

Since commencing operation in July 2010, the London Cycle Hire scheme, providing Cycle Hire stations every 300m across fare Zone 1 has proved extremely popular. There are 17 cycle hire stations within the borough (shown in Figure 2.2), all falling into the Clear Zone.

The cycle hire scheme will provide a step change in cycle provision in the Clear Zone and has the potential to promote cycling as a viable option for many short trips in turn reducing the number of short car journeys in the Clear Zone.

Cycle Superhighways

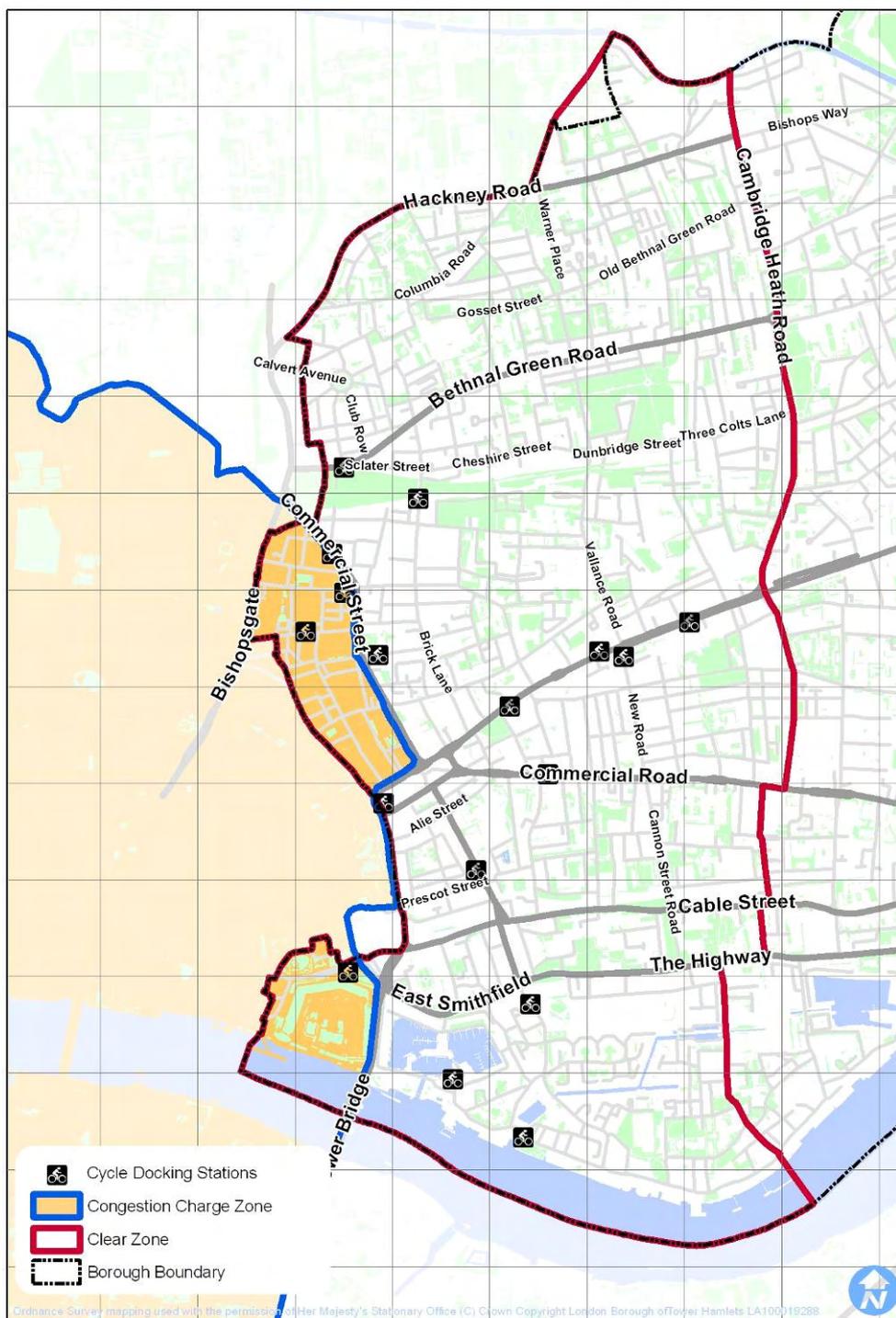
TfL Cycle Superhighways aim to provide safe, direct and continuous routes into central London from the outer boroughs. The Mayor's objective is to have twelve routes by the end of 2012, with the first two pilot routes opening in May 2010. Cycles Superhighway 3 runs through the Clear Zone along Royal Mint Street and Cable Street.

The route will offers high quality, segregated cycling conditions through the Clear Zone and is intended to attracted commuters to active travel.

Cycle Superhighway Feeder Routes

A number of additional feeder routes have been identified by LBTH to complement the Cycle Superhighway and maximise its benefits. One of the routes identified, along Vallance Road and New Road, falls into the Clear Zone.

Figure 2.2: London Cycle Hire Scheme Docking Stations in Clear Zone



Tower Hamlets Council's Cycling Plan

Cycling Connections - the Cycling Plan for Tower Hamlets - outlines the Borough's cycling strategy to 2020. The Plan recognises that:

“Car ownership in Tower Hamlets is relatively low and most people in the borough rely on public transport. However, parts of the local road network have reached capacity during peak hours and cycling offers an alternative, and often more enjoyable, means of moving around”

There are a number of committed measures that are aimed at increasing the level of cycling in the Borough and enhancing and improving cycling infrastructure and facilities. Cycling Connections contains an Action Plan of measures to implement across the Borough including a number of important and committed projects include sections within the Clear Zone:

- The LCN+ is a planned 900 km network of radial and orbital routes for cyclists covering the whole of London, which will be completed in 2010. Routes are planned for through the Clear Zone on Whitechapel Road, Cable Street, Hanbury Street, Columbia Road and through to Bishops Road in the north east of the Clear Zone;
- The Connect2 network in the Borough includes a new walking and cycling bridge over the Regent's Canal in Mile End Park. The route terminates opposite Paradise Row in Bethnal Green but provides an opportunity for a linked route into the Clear Zone.

In addition, a number of other committed measures are not initially location-specific, but when implemented will be inside the Clear Zone and therefore bring benefits:

- The Borough has a rolling programme to identify areas for new cycle parking. Existing cycle parking will be improved;
- Volunteer Ranger Programme- residents will be asked to take 'control' of sections of cycling routes, thus with monitoring of routes and identifying and addressing any issues;
- Tower Hamlets Cycle Training Programmes- adult training and cycle buddying scheme, cycling clubs and cycling events; and
- Awareness campaigns such as 'Bike it' aimed at increasing cycling in schools.

Cycle parking

Cycle parking is a key component of the planned cycling infrastructure in the borough. Secure parking can consist of large lockers to store cycles, clothing and equipment. Fourteen locations for parking of this type have already been identified, with at least ten lockers per location.

Cycle Training

The borough offers free adult cycling training and runs a cycle-buddy scheme to encourage more people to take up cycling on a regular basis. These are important supporting measures to accompany the implementation of new physical infrastructure for the Clear Zone.

Demand Management

Parking

The borough already operates a number of parking schemes:

- The entire borough is covered by Controlled Parking Zones (CPZ), giving the Council the powers to control parking management and abstract revenues;
- Residential permit charges are linked to CO₂ emissions from vehicles. There is no restriction on the number of permits per household but cost per vehicle rises with additional vehicles;
- Existing parking is adjusted and reviewed to assist local businesses and residents.

When appropriate, it is feasible to remove parking to make space for sustainable transport schemes such as docking stations for the London cycle hire scheme, car clubs and Cycle Superhighways.

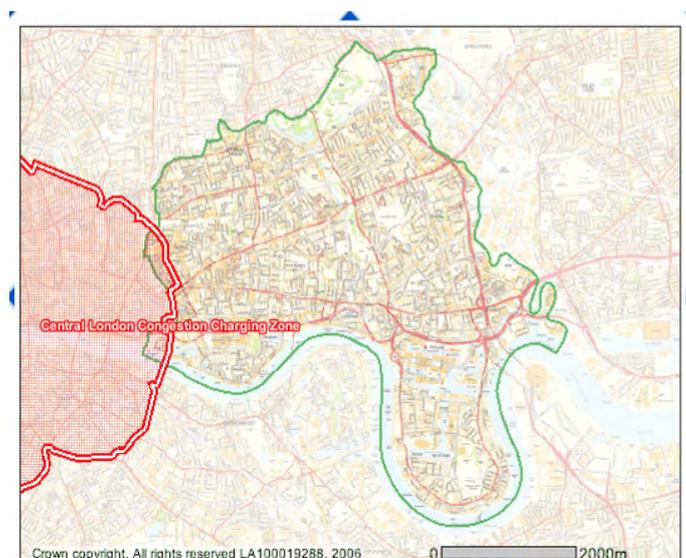
Vehicle Demand Management

The London Congestion Charging Scheme (LCCS) runs adjacent to the Clear Zone, and part the boundary of the LCCS zone falls within the Clear Zone (see Figure 2.3)

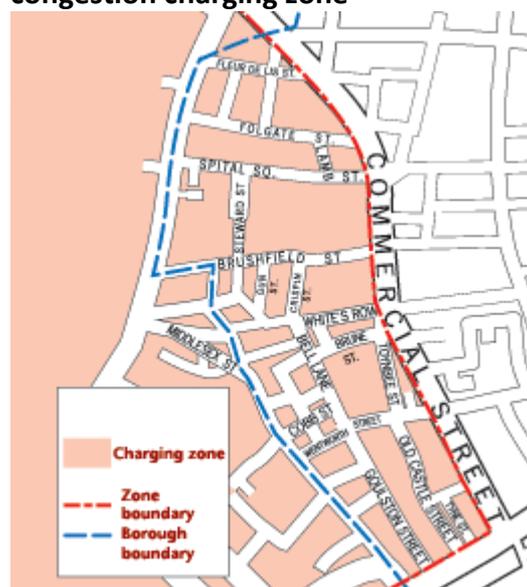
The LCCS has been proved to be a very successful demand management measure in the capital, implemented in tandem with additional investment in public transport services (in particular bus networks). The LCCS has also had the impact of acting as a ‘Low Emissions Zone’ by offering free entry to the zone for lowest emitting vehicles.

Figure 2.3: London congestion charging zone in Tower Hamlets

TfL central London congestion charging zone



Streets within Tower Hamlets in the congestion charging zone



Car Clubs

Car clubs offer cheap and convenient access to cars on a 'pay-as-you-go' basis. For an annual fee, car club members have access to a network of cars. Car clubs within Tower Hamlets are well established with 160 car club bays across the borough. Car clubs are thought to reduce the demand for car travel through pricing structures that encourage users to only use cars where no realistic alternative is available.

Development Control

Policies and Plans

Planning guidance provided in the Core Strategy highlights Transport Assessments, Travel Plans and Design and Access Statements as key documents that should be submitted alongside appropriate planning applications. These documents provide a focus on reviewing and providing transport infrastructure for new developments to ensure it is sustainable.

The Core Strategy also states that Town Centre Implementation Plans will be key documents in providing direction for regeneration throughout the borough including improvement of the urban environment.

Developer Contributions

Section 106 agreements can provide funding for transport infrastructure and other transport improvements. Monies are secured from developers to mitigate the impacts of new development.

A new system for securing developer contributions towards transport projects could come into force during 2010, based on regulations for Community Infrastructure Levy (CIL), which is intended to largely replace S106 agreements. The key benefit for the Clear Zone would be the ability to levy a standard charge against all developments, possibly based on a charge per square meter, to help fund local transport and other infrastructure. It will be easier to levy this charge on developments whatever their size and this should increase the amount of overall of funding raised.

Whitechapel and Aldgate Masterplans

Within the Clear Zone, Aldgate and Whitechapel are currently earmarked for regeneration and should provide opportunities to secure contributions for infrastructure from developers. Multiple smaller development sites are planned in the Clear Zone area, which would fall within the proposed approach to CIL.

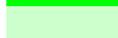
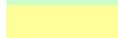
3) Clear Zone Measures

The identity of the Clear Zone can be found in the measures to be implemented. Some will be stand alone/generated through Clear Zone and many will complement current and future work and schemes described in section 2. The proposed measures, and how they relate to the Clear Zone objectives, are summarised in table 3.1.

Table 3.1		Clear Zone Measure	Objective				
Theme			1	2	3	4	5
Active travel	CZ1	Walking Zone schemes					
	CZ2a	Walking Corridor 1					
	CZ2b	Walking Corridor 2					
	CZ3	Cyclist Crossing Priorities					
	CZ4	Signage					
	CZ5	Urban Design Guide					
Demand Management	CZ6	Emissions based P&D parking					
	CZ7	Traffic Reduction Tools					
	CZ8	Road Hierarchy					
	CZ9	Awareness Campaigns					
New Technology	CZ10	Electric Vehicle Charging Infrastructure					
	CZ11	Electric Vehicle Car Clubs					
	CZ12	Local LEZ					
	CZ13	Low energy street lighting					
	CZ14	No Idling Zone					
	CZ15	d-NOx Paving					
Freight	CZ16	Out of hours operation					
	CZ17	Freight Mapping					
	CZ18	Drop Box Scheme					
	CZ19	Consolidation Centre/s					
Planning and Development Control	CZ20	Supplementary Planning Guidance					
	CZ21	Construction Logistics Plans					
	CZ22	Delivery and Servicing Plans					
	CZ23	Travel Plan Toolkit					
	CZ24	Travel Assessment Toolkit					

Key:

Impact

	Strong positive/benefit
	Moderate positive/benefit
	Neutral

Promotion of Active Travel

Many existing car journeys are over short distances that could be made by cycle or on foot- in the East London sub region 73% of trips 5km or less are made by car.

Active travel is an accessible way for many people to become more active and healthy, and can replace more polluting, noisy and costly alternatives. A range of measures can be used to encourage a greater level of active travel, and those proposed support the already significant plans for cycling and walking infrastructure in the borough.

Measures in this section are aimed at improving the urban environment for walking and cycling and increasing the level of active travel by making this option more attractive with better signed, well lit, direct and well- maintained routes and prioritised road crossings.

A number of public realm improvements will be implemented as part of walking corridors and cycling feeder routes, plus other measures may be added in time to the Clear Zone plan or as part of re-development of public spaces in the Clear Zone. Examples of measures that should be encouraged to support the Clear Zone objectives of creating more liveable, accessible and healthier neighbourhoods include:

- planting of trees and shrubs;
- water features;
- seating, resting and waiting points;
- public art; and
- Community information.

The initial measures for the Active Travel theme are described below.

CZ1: Walking Zone

The Clear Zone will be a designated walking zone. This will entail schemes to provide users with high quality walking infrastructure designed to be inclusive, safe from traffic, and safe from crime.

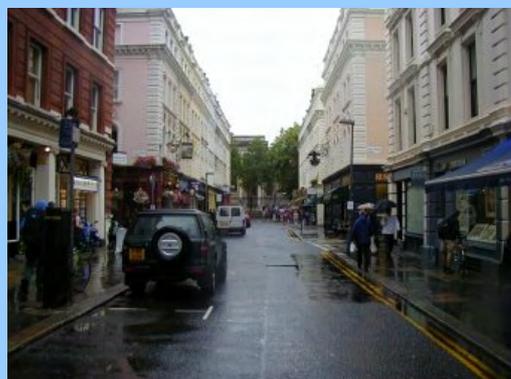
Streets will be de-cluttered to allow the widest possible walking space, well lit to improve the feeling of safety with new way finding systems to effectively guide pedestrians through the Clear Zone network that will progress the standard and designs for the High Street 2012 walking schemes.

CZ2: Walking Corridors

The emerging LDF Core Strategy highlights a number of areas within the Clear Zone requiring public realm improvements including Brick Lane and Bethnal Green Road. The walking corridors will compliment committed works in these areas, and is the method successfully used in Central London Clear Zone to focus a range of linked schemes along distinct corridors.

Locations for two initial, *indicative* walking corridors in the Clear Zone are shown below. Walking Corridor 1 connects the Bethnal Green town centre with Spitalfields Market and Brick Lane. Walking Corridor 2 will link Brick Lane with Tower Gateway via Aldgate and the new Braham Street Park. The corridors are shown in Figures 3.1 and 3.2.

Best Practice Example 1: Museum Street, Bloomsbury, Camden



The Central London Clear Zone Partnership in Camden has improved Museum Street, close to the British Museum. Museum Street is part of a much longer Clear Zone walking corridor from Covent Garden to the British Museum and onto King's Cross. This scheme aimed to reduce traffic and improve this street for pedestrians. The scheme achieved these improvements by using the following measures:

- Closed Museum Street to motor vehicles between Little Russell Street and Gilbert Place;
- Raised the carriageway on Museum Street to footway level between Little Russell Street and Gilbert Place to provide more space for walking;
- Created a cycle lane across this closure to still maintain access; and
- Enabled the adjacent public house and cafés to set out more tables and chairs on this small pedestrian space which now attracts and holds more people here.²

² <http://www.clearzones.org/projects/museum-street-sustainable-transport-scheme>

Figure 3.1: Walking Corridor 1 [The exact route shown is subject to change following detailed assessment of the most appropriate walking route to link the locations mentioned in the text above.]

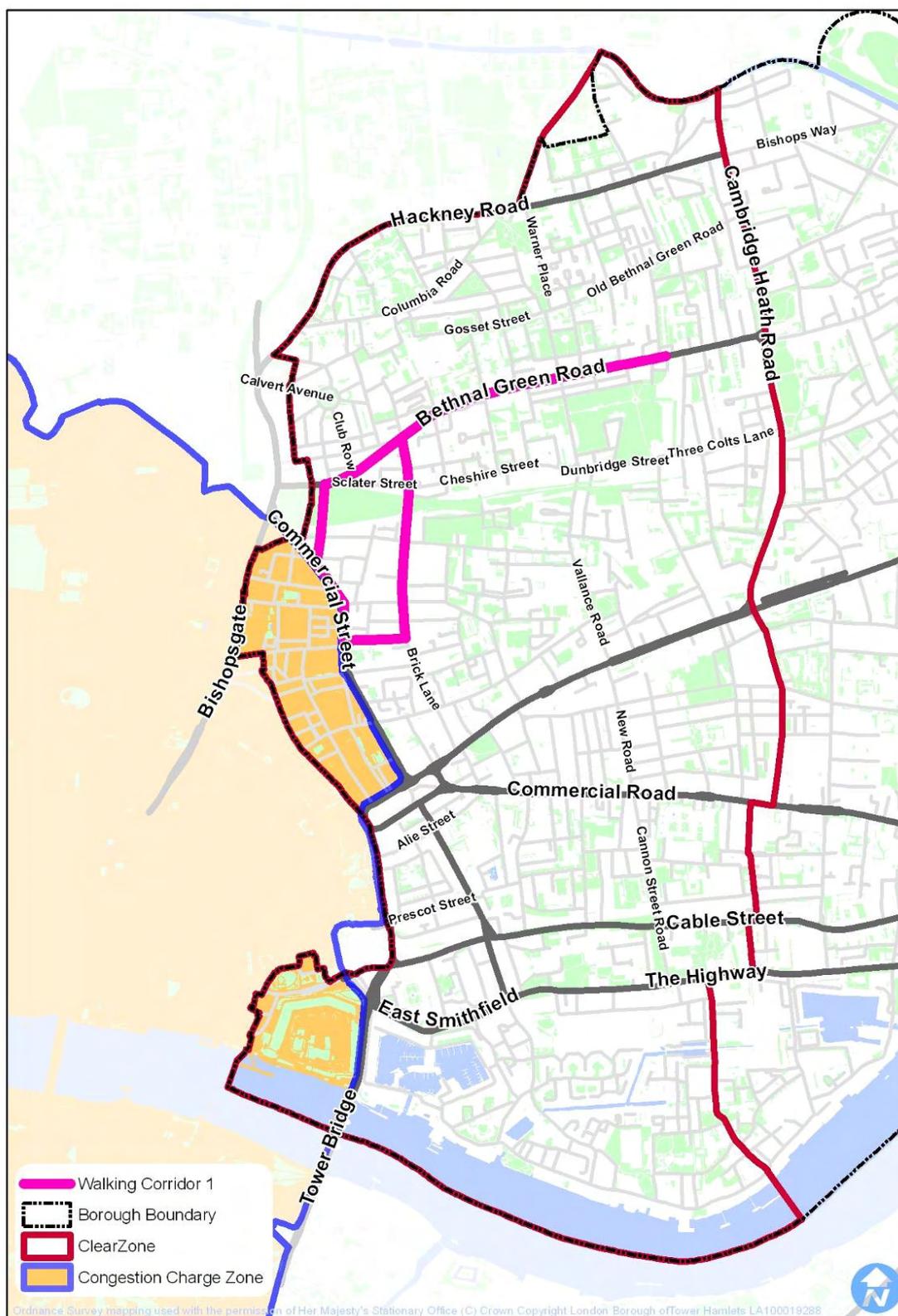
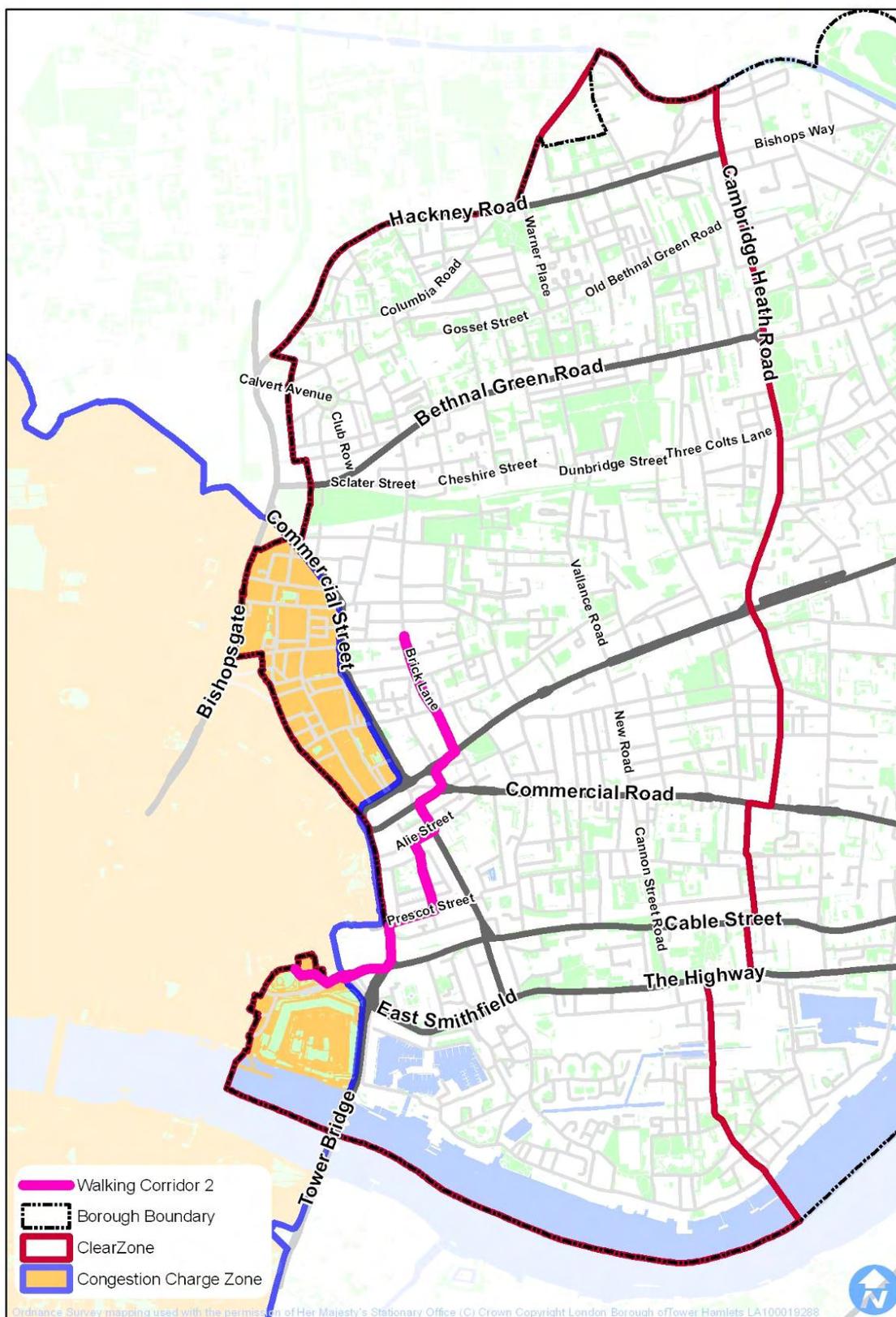


Figure 3.2: Walking Corridor 2 [The exact route shown is subject to change following detailed assessment of the most appropriate walking route to link the locations mentioned in the text above.]



The walking corridors will include measures that directly provide or support accessible and safe new connections for pedestrians, with an emphasis on encouraging pedestrians to use routes away from polluted road. They will comprise:

- Potential **green squares** should be investigated along all three corridors in order to deliver more direct routes with greater priority for pedestrians; and
- **Pavements** kept to standard and ideally a regular cleaning regime set-up to further maintain the attractiveness of the walking corridors to pedestrians.
- **Road crossings** on key roads such as Whitechapel Road and Brick Lane would be modified to make them more pedestrian friendly. On roads which are managed by TfL, the Council would need to work in partnership with TfL to suggest and demonstrate a need for modifications;
- **A colour coordinated signage scheme** implemented to highlight different types of destination (e.g. places of interest, transport interchanges). Signs will be designed to display journey times, inform pedestrians how long it will take to reach each destination by foot and follow the **Legible London** format.
- There is potential for street traders to be attracted to, and for cafes and restaurants to provide outdoors seating in the new open spaces created by the walking corridors.

Completion of the walking corridors will take place over the medium to long term. However, if a clear overview can be set early in the process then small component schemes can start to be developed in the short term.

The High Street 2012 scheme includes several measures relevant to the suggested walking corridors that are currently unfunded. The specific proposals below would be component schemes contributing to the larger scale walking corridors.

- a proposed pavement extension over White Church Lane - to ease traffic flow from Whitechapel High Street and create a new link for pedestrians;
- a pavement extension proposed on Osborn Street at the junction with Whitechapel Road to will allow better east-west pedestrian movement.

Cycling Zone

The Clear Zone measures to encourage cycling build on the wide range of commitments found in Cycling Connections and the exciting opportunities presented by the London Cycle Hire Scheme and Cycle Superhighway. The proposals in this section reinforce those commitments by promoting short-term implementation of them to produce a 'Cycling Zone', where cycling is a visibly well used choice for travel.

CZ3: Cyclist Priority Junctions

Road crossings and intersections on key roads such as Whitechapel Road, and Commercial Road can be made more comfortable and safe for cyclists. By providing advanced green lights for cyclists at road intersections, they will be provided priority and safer means to navigate busy junctions (see Figure 3.4). In addition, shared bike and pedestrian crossing signals will be

used to provide a segregated priority phase to cyclists at signalised junctions. For roads that are managed by TfL, the Council will work in partnership with TfL to secure modifications.

Figure 3.4: Cycle crossing



CZ4: Cycling Guidance

The emerging Core Strategy has highlighted a number of areas within the Clear Zone for public realm improvements. These areas contain potential feeder cycling routes that will also benefit from cycling signs to key services and transport interchanges.

To distinguish these signs, a colour coordinated scheme will be implemented for each type of destination. Signs will also display journey times to give cyclists an estimation of how long it will take to reach each the destination (cycling at an average speed). The signs will be of consistent design throughout the Clear Zone and correctly spaced along appropriate routes and conform to DMRB standards.

It is proposed that the cycle signage will be implemented in the short-medium term to complement the major cycling schemes taking place within the Clear Zone.

CZ5: Urban Design Framework

To ensure consistency of design throughout the Clear Zone a **Clear Zone Urban Design Framework** will be produced. The framework will provide guidance on the design features, quality and materials required for urban realm improvement schemes within the Clear Zone as well as information on where and how particular measures can contribute to the Clear Zone objectives. This in-house resource for planners and engineers will support them achieving consistency in design to strengthen the identity of the Clear Zone measures, and can be publicised to developers and contractors who will implement schemes that can impact on the public realm.

Demand Management

The Demand Management theme includes policies and measures to make more efficient use of parking resources and road-space. Demand management measures can encourage people to consider using modes of transport for their journey other than private car. Charging-based measures can manage demand for particular types of journey or vehicle, and go some way to capturing the external costs of traffic's negative environmental impacts. Reductions in traffic volumes resulting from well applied demand management leads to a reduction in emissions, noise, can be linked with road safety improvements, and can release space for other modes of travel or public use. A thorough understanding of what is the best use of the road network now (and for future years) is a sound basis for planning such measures, and modifications should be accompanied by information about the changes and why they are being carried out. The initial measures in the Demand Management theme are described below.

CZ6: Parking management

There are a significant number of pay and display charging spaces inside the Clear Zone area as seen in Figure 3.5.

These will be converted to air pollutant and CO₂ emissions-based pay and display charging bringing the Council's charging structure for short term parking in line with its charging structure for residential parking. This measure would require roll-out across the entire Clear Zone to ensure its effectiveness in incentivising lower emission vehicles to travel and park in the Clear Zone.

Best Practice Example 3: CO₂ emissions-based pay and display charging, Richmond

Car parking in Richmond is based on CO₂ emissions emitted from motor vehicles. The amount paid for parking in pay and display bays is based on an engines CO₂ emissions, or a vehicle's cylinder capacity if registered before 28 February 2001 (due to lack of data on CO₂ for older vehicles).

Pay and Display charge tiers		
Charge Tier	Vehicles registered before 28/02/2001	Vehicles registered after 01/03/2001
Standard	Cylinder capacities of 2001cc and above	CO ₂ emissions of 186g/Km or above
Medium	Cylinder capacities between 1301cc and 2000cc	CO ₂ emissions between 121g/Km and 185g/Km
Low	Cylinder capacities of 1300cc or less	CO ₂ emissions of 120g/Km or less

To take advantage of the Medium or Low charge tiers a Richmond Card is required to pay for parking. This is a 'smart' card pre-programmed with the owner's vehicle details and on which funds can be stored to pay for parking.



When motorists insert the card into any pay and display machine in the Borough, the tariff will automatically be adjusted based on the details stored on the card. The card can be used at machines in any council run car park (except the multi-storey car parks at Arragon Road, Twickenham and Paradise Road, Richmond), or any on-street pay and display machine.

Residential parking permits in Richmond are also charged based on CO₂ emissions (or cylinder capacity where the former is not registered).

CZ7: Traffic Reduction Tools

An estimated 60% of traffic within the Clear Zone is through traffic, much of it originating from east of the borough and travelling through to access central London and further destinations. The pollutants emitted by these vehicles significantly contribute to the high concentrations of NO_x and PM₁₀ in the Clear Zone, particularly in Aldgate, where the A11 and A13 strategic roads converge.

The Tower Hamlets Sustainable Transport Vision makes a commitment to test charging-based demand management initiatives. Under the *costing travel options* section there is a statement to explore with Transport for London the 'benefits of congestion charging and road pricing initiatives to support and encourage healthier, cleaner and more environmentally friendly transport systems'.

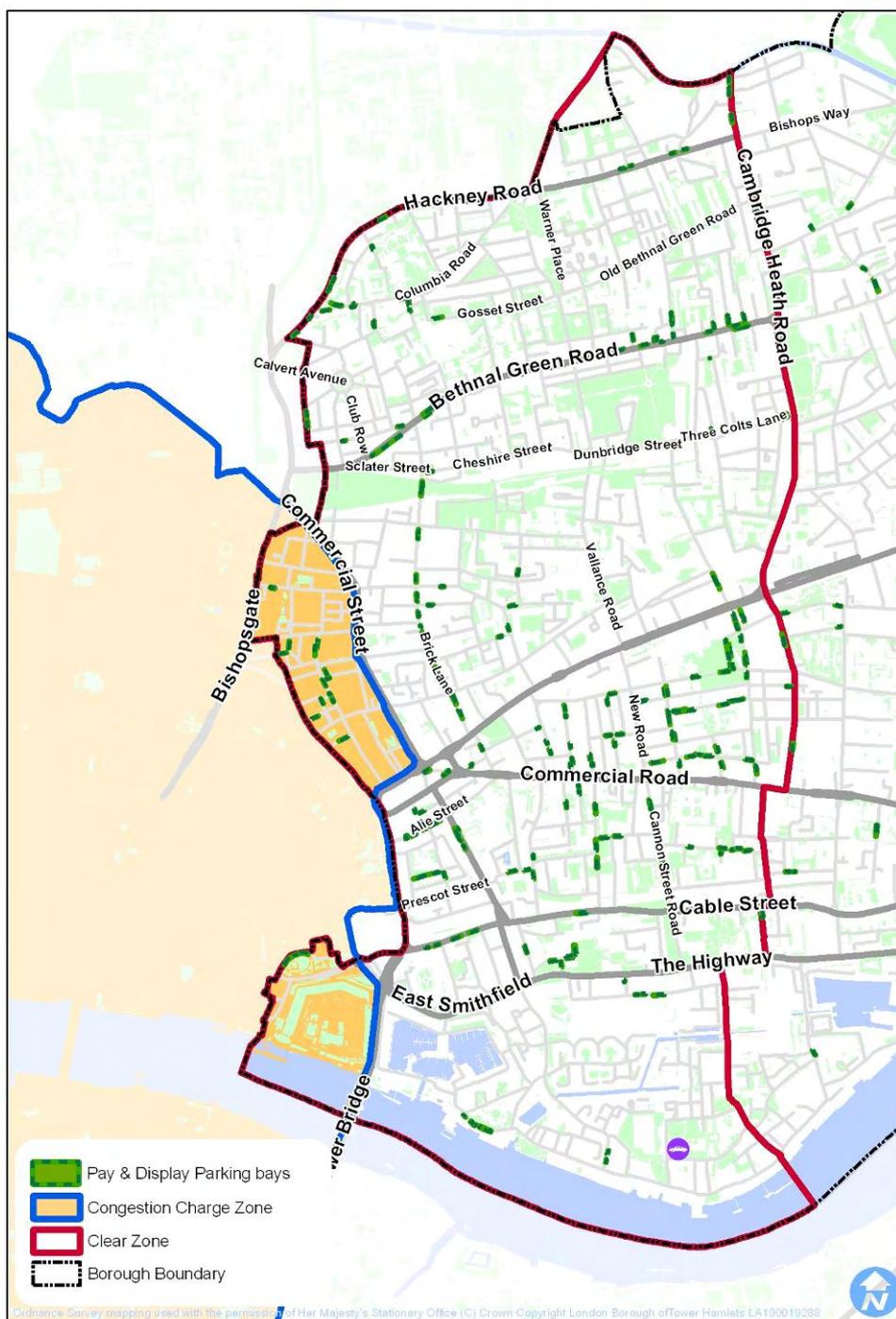
Thus, some form of charging-based measure is a suitable long-term measure to consider as part of the Clear Zone framework to tackle the air pollution and climate change impacts of strategic traffic. The Clear Zone benefits from significant public transport infrastructure to provide alternative passenger transport options to the private car which must be in place before implementing any form of road user charging.

The precise nature of a charging-based demand management scheme will require careful investigation and design in order to ensure it is appropriate to the needs, network and travel patterns in the borough. A number of alternative options, such as road tolls, vehicle occupancy lane tolling and area-based user charging, could therefore be explored further for their applicability.

In addition, the Olympic Delivery Authority (ODA) is understood to be investigating measures that could deliver a 30% reduction in traffic levels during the Games, and will report later in 2010 on potential measures. If the ODA can demonstrate measures to achieve traffic reductions of this level, without the use of charging, such measures may be an alternative form of demand management that meets the Clear Zone requirements.

Any significant demand management measure would require close partnership working with TfL as a scheme would affect traffic on the TfL London Road Network.

Figure 3.5: Current Pay & Display Parking Bays in the Clear Zone



CZ8: Street Classification

The highway network in the Clear Zone will be reviewed with the objective of obtaining a finer level of categorisation, based on the traffic flow and strategic importance of each link, with the assessment made across all modes. A clear road hierarchy and plan for changes in classification of routes or sections of the network can support the evolution of the Clear Zone over the lifetime of the Plan.

A formalised categorisation of the network would support access restrictions made on some roads, based on prioritisation for different motorised modes. For example, lower classed residential roads will not be accessible to larger freight vehicles (this is linked to micro-consolidation. See page 39). This will lead to different types of traffic being directed onto the most appropriate sections of the road network. The objective is to make space for Clear Zone measures and travel by active modes where it is appropriate, and preserve key access routes for motorized traffic, with consequential benefits for noise and safety.

As implementing access restrictions based on a Clear Zone road classification would have indirect impacts on the TLRN development of this measurement will require working in partnership with TfL.

CZ9: Clear Zone Awareness Campaigns

Travel awareness campaigns can be used to encourage people to use public transport or walk and cycle more often which has the potential to lead to fewer cars on the road. This can be done in a number of ways, for example through marketing campaigns, personalised travel planning, increasing publicly available travel literature and travel plans. Clear Zone specific awareness campaigns with consistent Clear Zone branding could be developed to accompany traffic management, walking and cycling infrastructure changes, as part of marketing the potential benefits of the measures to affected residents and businesses.

New Technology

The overarching objective of measures in this theme is to reduce green-house gas and pollutant emissions. The measures described support use of cleaner vehicles, remove pollution from the air and reduce the energy consumption (and cost) of lighting the Clear Zone's streets.

As Tower Hamlets moves towards becoming an '**Electric Vehicle Borough**', the Clear Zone will be an area where innovation is encouraged and new approaches supported. The initial measures for the New Technology theme are described below. However, by its nature this theme could evolve rapidly as new options are proved in the market or found to be appropriate for testing.

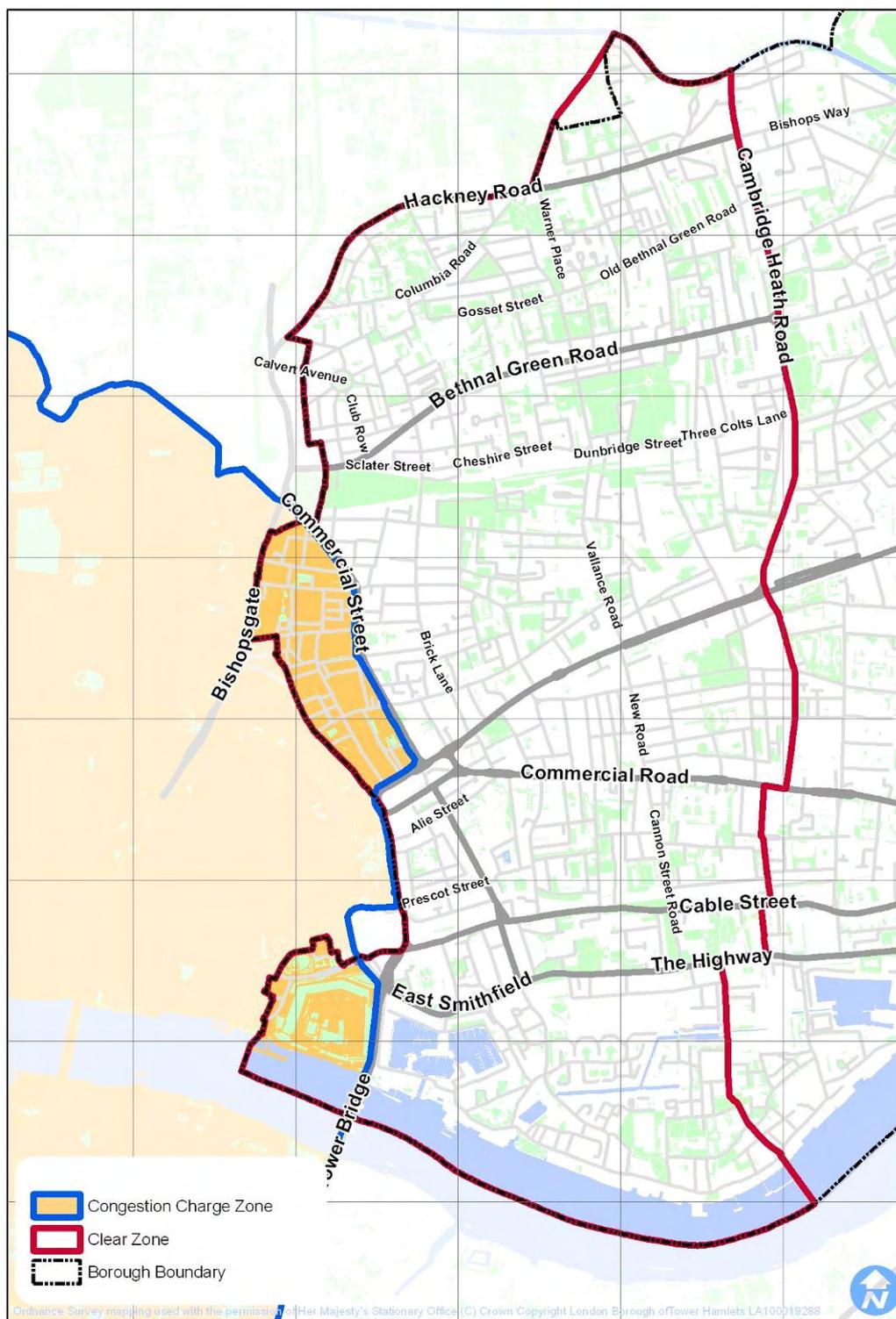
Electric Vehicle Zone

Electric vehicles are cleaner and greener than conventional combustion engine vehicles. They produce zero emissions of air pollutants and zero emissions of CO₂ at the point of use and estimates suggest electric vehicles produce 40% less CO₂ than conventional vehicles over their full life cycle. There are also noise benefits from electric vehicles as they can operate much more quietly than standard technology.

The Mayor of London has set out his intentions for electric vehicle use in the capital by working with the boroughs to promote the take up of electric vehicles. A key element of this

is the delivery of 2,500 publicly accessible charging points by 2015 across London, the costs of which will be part funded by TfL. The Clear Zone will promote take up of electric vehicles by having a network of publicly accessible electric vehicle charging points. The charging points will be located according to the Clear Zone delivery grid shown in Figure 3.6, with at least three points per square.

Figure 3.6: Clear Zone Electric Vehicle Delivery Grid (500m²)



CZ10: Electric Vehicle Hub

Full coverage of the Clear Zone will occur in the longer term and the policy will be reviewed at appropriate intervals in light of any technological developments. However, in the short term charging points will be delivered in high concentration- six points in one square to create a 'mini hub' of charging points. The location selected will reflect TfL research on the demographics of early owners of electric vehicles.

CZ11: Electric Vehicle Car Club Network

Given the strong Car Club presence already in Tower Hamlets and the Clear Zone (see Figure 3.9) there is an opportunity to work with the Car Clubs to introduce electric vehicle and electric vehicle charging points on to their networks. It is proposed that an initial pilot scheme is implemented and if successful, wider roll out should take place.

An electric van club will be formed for local businesses within the Clear Zone. This will allow those who wish to use low emissions vehicles without the major upfront costs and risk associated with operating a whole vehicle. The initial location for the van club would be based consultation with local business groups but potential locations are Brick Lane and Whitechapel Road.

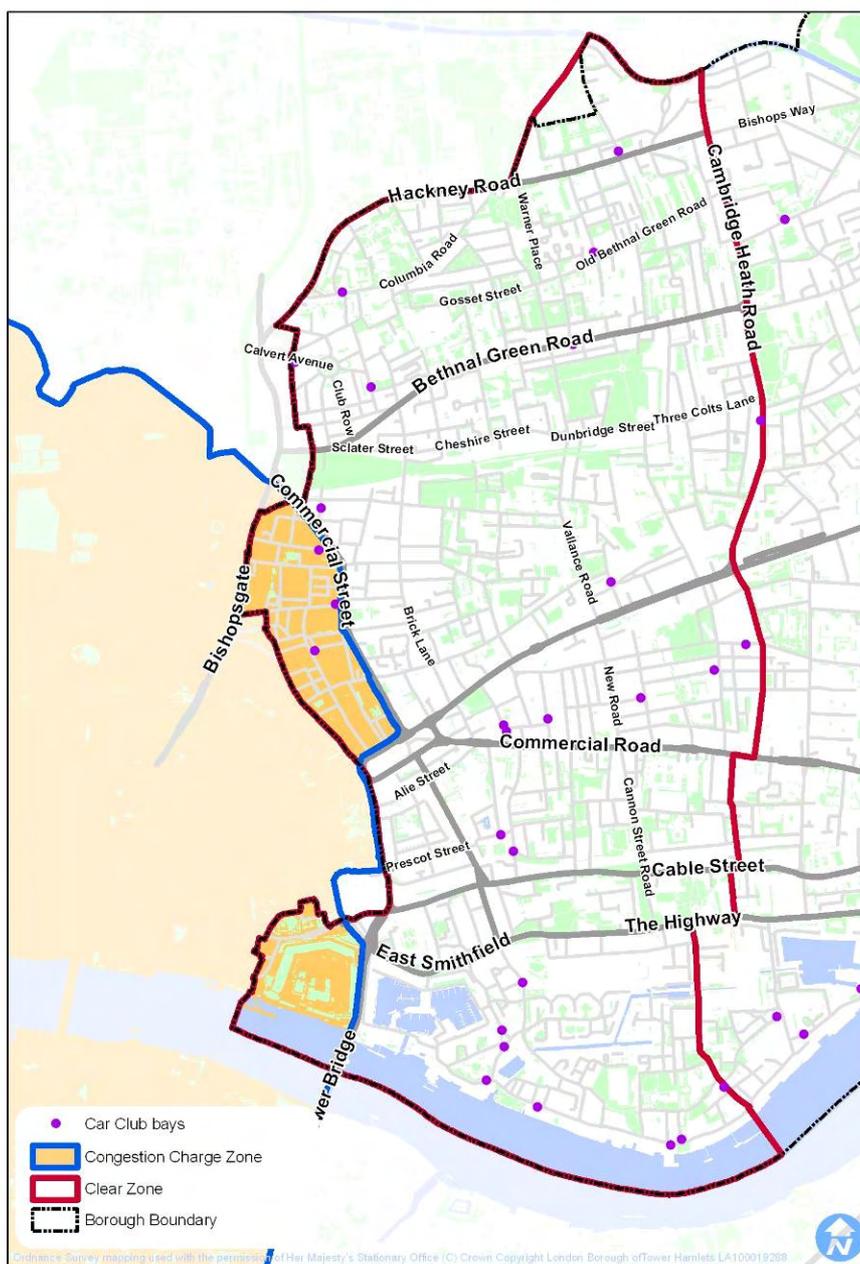
Figure 3.7: On-street electric vehicle charging point



Figure 3.8: Electric 7.5 tonne HGV (Smith Industry)



Figure 3.9: Car Club Bays in the Clear Zone



CZ12: Local Low Emission Zone

Emissions control schemes can drive the uptake of cleaner vehicles, using charging as a tool to enforce higher emissions standards. The London LEZ targets diesel powered commercial vehicles, whereby those vehicles not meeting specified standards are charged to enter the London LEZ.

In the current draft of the MAQS, there is a policy to work with boroughs to ‘address air quality through local low emission zones or similar measures’. Tower Hamlets Council will explore the feasibility and suitability of a local LEZ with TfL and other appropriate partners.

CZ13: Low energy street lighting

While not impacting directly on air quality in the borough, the use of low energy street lighting is gaining support for its reduced energy consumption, with beneficial impacts on running cost and carbon emissions.

New developments with significant public realm as well as regeneration and redevelopment of streetscapes (e.g. High Street 2012, and proposed walking corridors in the Clear Zone) should look to use low-energy lighting where feasible. There is understood to be improvement in clarity with LED lighting, which may produce benefits of personal safety and feelings of security.

CZ14: No idling Zone

Idling vehicles (stationary vehicles running the engine) generate unnecessary air pollution, carbon dioxide and noise. The impact of this can be particularly harmful as idling vehicles are often found on streets with high footfall. A 'No Idling Zone' introduced in the Clear Zone where instances of idling are high could deliver air quality benefits as well as reductions in noise. The scheme would be implemented on a trial basis to monitor its impacts.

CZ15: d-NOx Paving

d-NOx paving contains a chemical compound that can break down and remove nitrogen dioxide (NO₂) from the atmosphere. The reaction is accelerated by sunlight and the reduction of the pollutant is greatest within 2.5 m of treated surfaces.

Tests in urban settings determined that some pollutants could be reduced by 20 to 70% depending on the prevailing atmospheric and light conditions as well as the size of the area treated with the cement. It is proposed that a pilot scheme is implemented within the Clear Zone in a location with optimum sunlight conditions.

Managing Freight, Deliveries and Servicing Activity

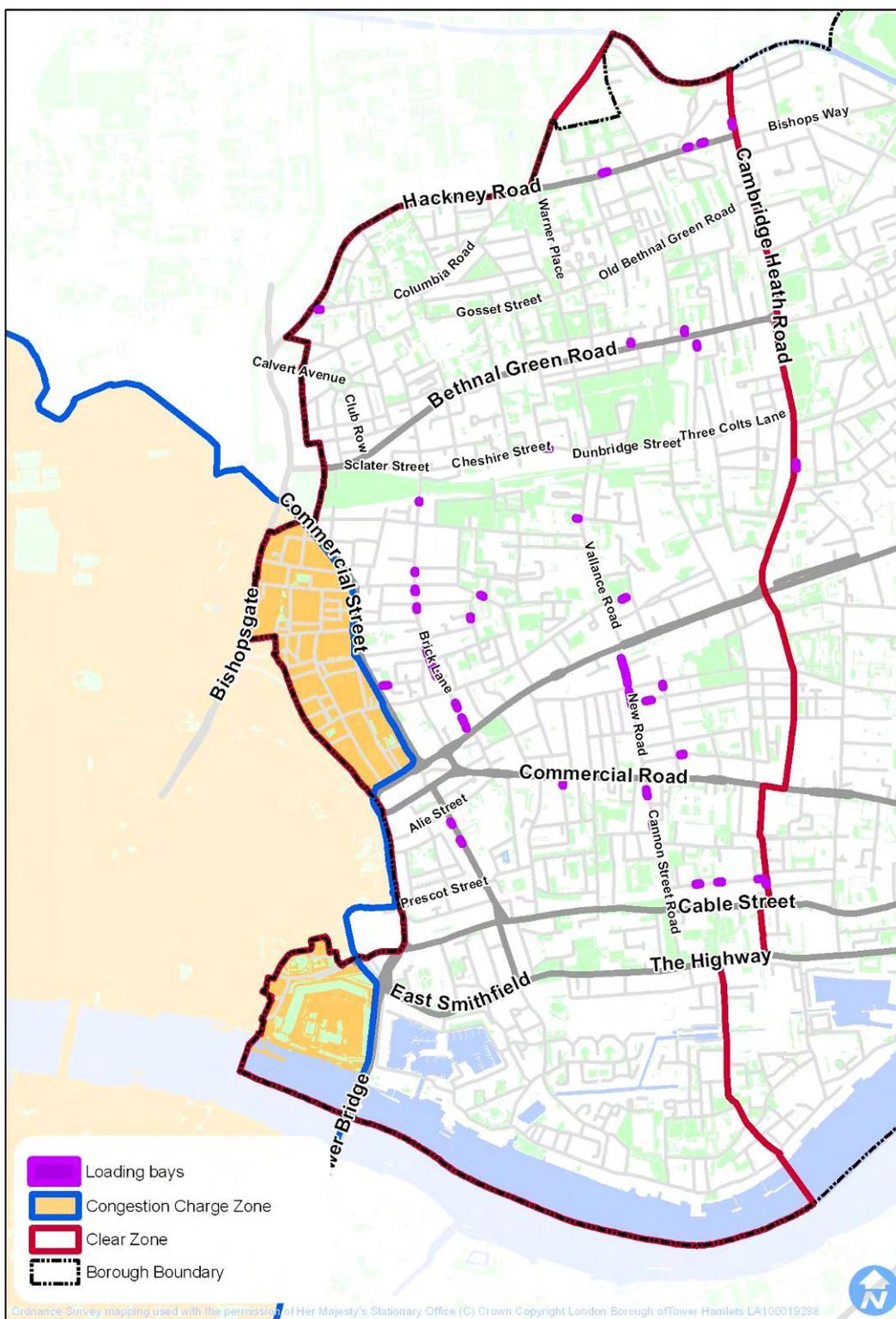
The opportunity exists for Tower Hamlets to take a more proactive role in managing freight, deliveries and servicing activity in the Clear Zone. These measures are focussed on managing delivery vehicles carefully in the Clear Zone during the busiest times of the day or night.

CZ16: Out-of-hours delivery schemes and servicing

Businesses or other substantial traffic generators will be encouraged to introduce out of hours deliveries. The main impact would be to lower volumes of daytime goods vehicle traffic in the Clear Zone leading to less congestion on the local and wider road network. It could also result reduced journey times for goods vehicle drivers by avoiding day time stop-start traffic, particularly at peak times, which will reduce air pollutant and green-house gas emissions. To allow deliveries during unsocial hours, delivery vehicles will need to operate to strict noise limits.

At present, there are a number of loading bays defined in the Clear Zone (see Figure 3.10) which would form the basis for agreeing out-of-hour delivery locations. The most appropriate locations will be identified through consultation with businesses, residents and TfL.

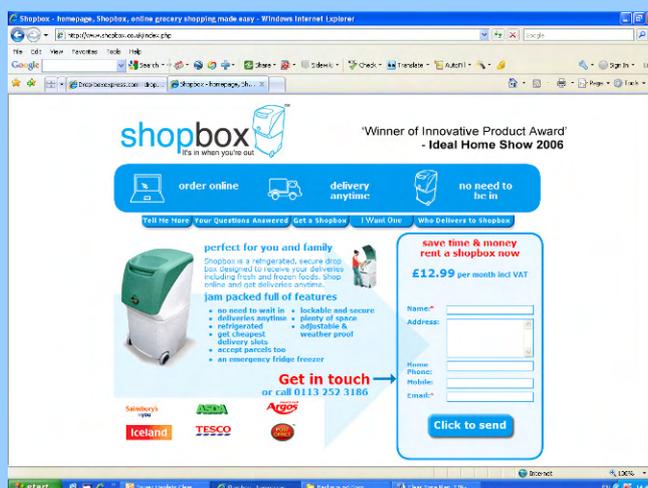
Figure 3.10: Loading Bays in the Clear Zone



Best Practice Example 4: Shopbox³

Shopbox is a refrigerated, secure container designed to receive grocery deliveries - including frozen and chilled foods - when customers are not at home. This avoids the need for the vehicle to make a second trip to make the delivery. People with a Shopbox can order groceries on-line and then have them delivered and put into the Shopbox.

Shopbox works like a fridge-freezer and can be left permanently switched on. However it is recommended that it is turned off between deliveries to conserve energy and prevent ice forming in the freezer compartment. Shopbox has a visible LED display to indicate that power is on and that the appropriate temperature has been reached.



A Shopbox can be rented out for £12.99 a month and an installation charge is applicable. However, this includes free repair or replacement throughout rental period.

Other drop-box schemes (generally non-refrigerated) have been set up and operated in the UK by Royal Mail and others in a number of areas.

CZ17: Community Drop Boxes

For the increasing number of residential deliveries caused by the rise in on-line shopping a drop box system will be piloted. The system works where if a parcel delivery is unsuccessful then the delivery can be left in the secure box for collection by the recipient. This reduces the need for the vehicle to make a second delivery. It is proposed the pilot drop box scheme be set up in conjunction with a housing association to cover deliveries to an individual building or group of buildings.

CZ18: Freight Connections

The provision of a specific freight map will provide knowledge as to the most efficient and suitable routes for goods vehicles to use in the Clear Zone. It will include further information regarding loading and unloading, and height, width and weight restrictions within the Clear

³ <http://www.shopbox.co.uk/index.php>

Zone. This will enable drivers to plan an appropriate route before beginning a journey. TfL has initiated a freight mapping project with the London Boroughs of Islington and Hackney, with the longer term intention to cover all of London. Supporting goods vehicle to use the most appropriate routes to and from their destination, avoiding sensitive areas, can have safety and local noise benefits.

CZ19: Consolidation Centres (London-wide or micro-scale)

The main purpose of a consolidation centre is to avoid the delivery of part loads into urban centres or other large developments. It does not apply to fully loaded vehicles. Various consolidation projects are taking place across the UK with trials proving to be a relative success.

The main benefits of consolidation centres are:

- Reduced number of HGVs and other goods vehicles in the Clear Zone and hence reduced congestion bringing with it reduced pollution noise levels.
- Improving the delivery service to businesses, leading to a drop in supply chain costs
- Further benefits in terms of value-added services, such as waste/packaging collection and storage facilities

It is unlikely that the conventional consolidation concept would be viable on a Clear Zone or even a borough level, but may be viable on a London wide or sub regional scale. There is interest in the 'consolidation' concept by other London boroughs. A collaborative approach will be explored to progress this potential longer term solution.

It is however proposed that the micro-consolidation concept will be piloted within the Clear Zone. Micro-consolidation will involve delivery of consolidated part loads into the Clear Zone on conventional vehicles with the 'last mile' delivery taking place by clean or low emission vehicles e.g. cycle freight and electric vehicles. Trials could take place on housing estates and are therefore subject to consultation with landlords.

Planning and Development Control

The preceding Clear Zone measures in this plan serve to mitigate and tackle existing problems of air pollution, noise pollution, climate change and poor health. The source of many of these problems is people's desire to travel and the number of trips this produces, many of which are made by polluting vehicles.

Tower Hamlets is set for a population increase of approximately 80,000 people by 2020 to be housed in 31,500 new homes. Approximately 7,000 of these new homes will be built in the Clear Zone, each household generating new trips with the potential to add to the problems that are currently being faced. Interventions in the planning process can help ensure growth

in development does not have to mean growth in pollution. The measures in this section are aimed at achieving this objective.

CZ20: Development Plan Documents

The Development Management DPD (currently under development) will set out the policies and requirements to inform planning decisions when new developments in Tower Hamlets are assessed. The document will be adopted as part of the Tower Hamlets Local Development Framework.

The DPD should inform developers of the specific requirements for new developments that fall into the Clear Zone:

- All future development within the Clear Zone will be 'car free' to ensure zero additional car trips are generated by the new development and contribute to a less car dominated environment
- All future development within the Clear must provide, safe, secure cycle facilities
- Funds obtained through developer contributions should be allocated to Clear Zone projects
- Electric Vehicle Charging Points for Service Vehicles should be provided in appropriate locations

Freight, deliveries and servicing trip generation

These measures will be applied across the whole of the Clear Zone when required as developments take place and aim to reduce the impact of construction traffic. Given the scale of development planned within the Clear Zone the measures below are important to work to towards the Clear Zone vision.

CZ21. Construction Logistics Plans

Construction Logistics Plans (CLPs) can help the construction industry manage all types of freight vehicle movement to and from construction sites. They improve the safety and reliability of deliveries to a site, reduce congestion and minimise the emissions and noise impact of construction traffic. The benefits of CLPs to the local community are less noise and intrusion from vehicle movements; better compliance with health and safety legislation leading to fewer accidents; improved compliance with loading and unloading regulations and reduced pollution and greenhouse gas emissions.

CLPs will be mandatory as part of a transport assessment for each development site in the Clear Zone. Every CLP needs to be tailored to the individual site's requirements, and construction firms will have to use freight operators who can demonstrate their commitment to best practice

The development of area-wide framework CLPs will maximise the benefits from the use of CLPs by exploiting the synergies between different development sites. The planned

development coordinated in Aldgate through the Aldgate masterplan could provide an opportunity to develop an initial area-wide CLP in the Clear Zone.

CZ22. Delivery and Servicing Plans

Delivery and Servicing Plans (DSPs) help the management of freight vehicle movement to and from individual buildings or a discrete geographical area. They improve the safety and reliability of deliveries, help reduce congestion and minimise environmental impact. The benefits of DSPs to the local community are less noise and intrusion from vehicle movements; better compliance with health and safety legislation leading to fewer accidents; improved compliance with loading and unloading regulations and reduced pollution and greenhouse gas emissions.

In addition, opportunities to develop area-wide framework DSPs that help maximise the benefits from the use of DSPs by exploiting the synergies between different development sites will be sought in the Clear Zone. DSPs will be a mandatory part of transport assessments for all new development in the Clear Zone, and will be encouraged for existing buildings.

CZ23. Transport Assessment Toolkit

A Transport Assessment Toolkit (TA Toolkit) could provide assessors and developers with a basis to incorporate low emission mitigation measures into the wider package of measures for new developments in the Clear Zone. It is recognised that there are three phases in the development process: construction; occupation; and monitoring. These would provide the basis for the TA Toolkit. Menus of measures would be provided under each of the three headings to provide a variety of measures which can be incorporated into a Transport Assessment.

CZ24. Travel Plan Toolkit

A Travel Plan Toolkit is similar to the TA Toolkit in that it offers travel planners a basis for including measures in their travel plans. The tool will provide a range of travel plan packages applicable to various possible development scenarios. It will allow the user to select a package of travel plan measures to be applied. It will also prompt assessment of the effectiveness of the measures in terms of how they are deployed.

4) Implementation

A Clear Zone co-ordinator will be nominated to steer the realisation of this Plan.

Responsibilities for the role would include:

- making 6-monthly reviews of the progress in implementation by delivery partners;
- drawing together the monitoring information from delivery teams to review how far Clear Zone objectives are being reached;
- co-ordinating any revisions that are required to measures; and
- adding new measures to the Clear Zone Plan that may be proposed by delivery partners or stakeholders where these support the Clear Zone objectives.

Implementation of the schemes identified in the Clear Zone Plan are grouped into three time periods:

- Short-term: The period up to 5 years from commencement of the Plan
- Medium-term: The period from 5 to 10 years from commencement of the Plan
- Long-term: The period from 10 to 15 years from commencement of the Plan

Table 4.1 below sets out the measures proposed in the Clear Zone Plan, the timescales over which they will be implemented and the cost of the scheme. It should be noted that the timescales reflect the nature of the scheme. For example, schemes such as the Local LEZ will be implemented in the short term but their benefits will be felt for much longer, whereas initial Walking Zone schemes may be completed in the short term but it is anticipated that further schemes will continue to be implemented for the life of the Plan.

Table 4.1: Clear Zone Plan Implementation

Theme	Clear Zone		Timescale (years)			Cost	Delivery Partner
	Measure		0-5	5-10	10-15		
Active travel	CZ1	Walking Zone schemes				H	Transportation & Highways, TfL
	CZ2a	Walking Corridor 1				M	Transportation & Highways, TfL
	CZ2b	Walking Corridor 2				M	Transportation & Highways, TfL
	CZ3	Cyclist Crossing Priorities				M	Transportation & Highways, TfL
	CZ4	Signage				L	Transportation & Highways, TfL
	CZ5	Urban Design Guide				L	Development Teams, Transportation & Highways
Demand Management	CZ6	Emissions based P&D parking				M	Parking Services
	CZ7	Traffic Reduction Tools				H	TfL, GLA
	CZ8	Road Hierarchy				L	Transportation & Highways, TfL
	CZ9	Awareness Campaigns				L	Development & Renewal
	CZ10	Electric Vehicle Charging Infrastructure				H	Transportation & Highways, Parking Services, TfL, RSLs, Businesses
New Technology	CZ11	Electric Vehicle Car Clubs				L	Car Club operators
	CZ12	Local LEZ					Transportation & Highways, TfL
	CZ13	Low energy street lighting				L	Transportation & Highways
	CZ14	No Idling Zone					Transportation & Highways, Strategic Transport, TfL
	CZ15	d-NOx paving					Transportation & Highways, Environmental Health
	Freight	CZ16	Out of hours operation				L
CZ17		Freight Mapping				L	Transportation & Highways, TfL
CZ18		Drop Box Scheme				L	RSLs
CZ19		Consolidation Centre/s				H	Transportation & Highways, TfL, RSLs, businesses
CZ20		Supplementary Planning Guidance				L	Strategic Planning
Planning and Development Control	CZ21	Construction Logistics Plans				L	Developers
	CZ22	Delivery and Servicing Plans				L	Local businesses and other organisations
	CZ23	Travel Plan Toolkit				L	Development Teams
	CZ24	Transport Assessment Toolkit				L	Development Teams

Broad estimates have been made on the implementation costs for each type of measures as envisaged for the Clear Zone (i.e. its full implementation, not simply a single item).

Costs: Z: No cost to LBTH L: £0-£50k M: £50-£100k H: More than £100k

Partnership Working

Through working together with partners in the local community, transport providers and others, comes the opportunity to learn and become better informed as a result. Implementation of many of the Clear Zone measures will require working with external partners to harness their expertise and resources and seek support for piloting the sustainable transport projects found in Clear Zone

Central London Clear Zone Partnership

The Central London Clear Zone Partnership will provide a valuable source of assistance in developing schemes as they have a wealth of their own experiences to call on, dating back to the concept of the Camden Clear Zone in 1998. The Central London Clear Zone partnership has also provided Camden, Westminster and the City of London with a useful mechanism for delivering cross boundary schemes, especially when applying for funding from TfL.

Funding

Clear Zone Plan measures can be funded by a range of mechanisms that include the Local Implementation Plan, planning contributions, European Union (EU) and other sources.

Local Implementation Plan (LIP) Funding

The LIP is a five year document produced by all London councils that describes how each authority will deliver the Mayor of London's Transport Strategy. It is used as the basis of which to generate specific transport schemes and produce funding applications to TfL. This funding stream is currently the largest source of funding for transport projects in the borough.

Planning Contributions

Section 106 (S106) of the Town and Country Planning Act 1990 allows a local planning authority (LPA) to enter into a legally-binding agreement or planning obligation with a landowner in association with the granting of planning permission. The obligation is termed a Section 106 Agreement. Agreements can be used to secure monies committed to transport projects provided the agreement mitigates the impacts of a development and is of similar scale to the proposed development.

A new system for collecting developer contributions towards transport projects has come in to force since April 2010. The CIL is largely intended to replace S106 planning obligations. Under CIL, local authorities will be able to levy a standard charge against all development to fund local transport and other infrastructure. The intended benefit of this new system is the ability to raise funds from smaller developments; currently councils only invoke S106 settlements for larger developments.

European Funding

There are a number of potential EU programmes that could support the demonstration and delivery of the package of proposed measures in the Clear Zone Plan. Working with the London European Partnership for Transport (LEPT) and relevant EU city networks the Council will explore opportunities to secure such resources.

Other Funding Sources

Many of the measures proposed in the Clear Zone Plan may bring benefits to businesses and landowners. Funding may be obtained through partnership working, for example working with Registered Social Landlords to deliver drop box schemes that have benefits for their tenants.

5) Evaluation

A series of initial evaluation indicators have been developed with which to judge progress of, and success with, implementation of measures described in the Clear Zone Plan. Indicators are required at two levels: measure-level indicators that determine progress with implementation of individual measures and a set of over-arching impact indicators to form the basis for measuring overall progress towards the achievement of the five key Clear Zone objectives.

Tables 5.1 to 5.3 set out the overall impact indicators to measure progress towards the Clear Zone objectives.

Table 5.1 – Impact indicators - emissions

Objectives	<p>1) Reduce the emissions of air pollutants from transport sources to help improve air quality.</p> <p>4) Reduce the emissions of GHG from transport sources to help the fight against climate change.</p>
Indicators	<p>Key indicators:</p> <ul style="list-style-type: none"> • Change in road transport emissions of PM₁₀/ PM_{2.5}, NO_x, • Change in road transport sources emissions of CO₂ / total GHG emissions) • Change in (long-term) air quality concentrations of PM₁₀/ PM_{2.5}, NO₂ <p>Supporting indicators:</p> <ul style="list-style-type: none"> • Change in vehicle parc (by weight, Euro standard/age, fuel-type) • Change in motorised transport km travelled in Clear Zone
Examples of application	<ul style="list-style-type: none"> • Low energy lighting will reduce electricity consumption. The change in kWh can be converted to GHG emissions based on current 'grid-mix' CO₂ value for UK electricity or specific value for a green electric supply the Council may be purchasing; • Pay and display emission based parking is aimed at accelerating the shift to low emission vehicle technology. A before and after survey of vehicles using pay and display in the Clear Zone, plus a comparison with London-wide data and registered vehicles would show if the scheme has brought about additional change to cleaner vehicles.

Table 5.2 – Impact indicators – urban realm

Objectives	2) Improve the urban realm and management of the road network to ensure better connections and increased accessibility within the Clear Zone.
Indicators	<p>Key indicators:</p> <ul style="list-style-type: none"> • Accessibility of key sites by active modes and public transport • Awareness/attitude/acceptance of urban realm: links, connections and spatial understanding <p>Supporting indicators</p> <ul style="list-style-type: none"> • Mode share for walking and cycling (for short-distance trips) • Mode share for public transport, as always requires a walking trip to access/egress
Examples of application	<ul style="list-style-type: none"> • Way-finding / signing aims to maximise awareness and understanding of existing facilities. Survey of residents awareness and appreciation of local facilities before and after way-finding measures are introduced. • Improvements to public realm are aimed at making travel by active modes more attractive. Level of support for specific schemes and significance of this and attractiveness of active modes to be assessed.

Table 5.3 – Impact indicators - development

Objectives	5) Ensure future development within the Clear Zone complies with and contributes to achievement of the other Clear Zone objectives.
Indicators	<p>Key indicators:</p> <ul style="list-style-type: none"> • Proportion of sites accessible by active modes and public transport • Awareness/attitude/acceptance of urban realm: links, connections and spatial understanding <p>Supporting indicators</p> <p>Mode share for residents, employees, visitors and service/deliveries</p>
Examples of application	<ul style="list-style-type: none"> • Car free developments aim to bring benefits of development without the normal negative impacts of additional traffic. The proportion of car free developments by type over each 5 year time-space can be used as a basis for estimating change in impact over 'business as usual' development decisions. • Delivery and servicing plans aim to reduce the overall vehicle km required to service a development site, or move these vehicle km to more sustainable technologies/vehicle types. Surveys before and after application of a DSP can indicate the 'shift' achieved and this can either be scales up to future sites, or the conduct of a survey be a integral part of each process.