Delivering a safe, sustainable and accessible transport system for Barking and Dagenham

Second Local Implementation Plan 2011/12 – 2013/14

June 2011

London Borough of Barking & Dagenham

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Contents

Foreword

This second Local Implementation Plan (LIP2) outlines the Council's continuing transport strategy to achieve a safe, sustainable and accessible transport system for the benefit of all those living and working in Barking and Dagenham.

Barking and Dagenham's first LIP succeeded in securing a good level of funding, delivering an extensive transport programme and meeting many of our targets. The second LIP builds on this record. It includes a package of schemes and priorities which we believe will help deliver our regeneration, economic development, climate change and health and well being priorities.

The proposals in LIP2 have been developed to prioritise schemes that deliver the best value for money and make the best use of existing assets. We expect to receive over £6.4 million of funding from TfL over the next three years and this will be directed to schemes which improve access to public transport, increase road safety and make it easier to walk and cycle around the borough. This includes improvements to the area outside Barking Station, the borough's busiest interchange, and improvements to the Merry Fiddlers junction to improve accessibility to the new Leisure Centre and address a number of safety issues. LIP2 also sets out our longer term priorities; amongst these are immensely important pieces of infrastructure including the extension to the Docklands Light Railway and improvements to the Renwick Road Junction, which are vital to the regeneration of the borough. We will continue to do everything in our power to make these happen. LIP2 also highlights the importance of local bus services and especially the need to improve access to Queen's hospital and the borough's employment areas.

The importance of LIP2 cannot be underestimated; we are committed to ensuring that the proposals within it are delivered as they will make a real and lasting difference to those who live, work and do business in the borough.

Cllr M McCarthy,
Lead Member for Regeneration

Cllr G Vincent,
Lead Member for the Environment

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Executive Summary

Introduction

The London Borough of Barking and Dagenham is **located at the heart of the Thames Gateway area** – the priority area for development in London. A small, principally residential borough, its proximity to the main retail, leisure and employment centres of Docklands, Stratford and Ilford, and good road, rail and Underground transport links to central London, means Barking and Dagenham has **substantial opportunities for regeneration**.

Despite this, Barking and Dagenham is one of the **poorest and most deprived boroughs** in London, characterised by high unemployment levels, poor health amongst residents and a lack of affordable housing. In addition, the borough has some of the busiest roads in London and **suffers from the problems traffic congestion causes**. Furthermore, **public transport connectivity is poor**, particularly between certain parts of the borough and the key sub-regional hubs.

This second Local Implementation Plan (LIP2) outlines the Council's continuing strategy to **achieve a safe, sustainable and accessible transport system** for the benefit of all those living and working in Barking and Dagenham. It includes a package of initiatives and wide ranging practical measures which we believe will bring about steady change.

The LIP is published by the Council both as a transport strategy for Barking and Dagenham, and a funding submission to Transport for London (TfL). It is a statutory document comprising an assessment of transport problems and opportunities, a set of objectives, a three-year programme of schemes to improve transport, and a set of targets with which to measure progress. Along with every local authority in London, we produced our first LIP in 2005. This formed a funding bid for the years 2006/07 to 2010/11. The second round of LIPs focuses on the next three-year funding period leading up to 2013/14.

Barking and Dagenham's first LIP succeeded in securing a good level of funding, delivering an extensive transport programme and meeting many of our targets. The second LIP builds on this record. In preparing the plan we have complied with the guidance produced by TfL and also incorporated suggestions for areas of development. Annex 1 sets out how we have met each point of the assessment criteria.

The Wider Context for the Local Implementation Plan

The **Mayor of London's Transport Strategy** (MTS2) and **Barking and Dagenham's Community Plan** provide the broad framework and vision for our LIP, as set out in chapter 1. Similarly, the plan is consistent with a wide range of other local plans and strategies, including the LDF and Economic

Development Strategy; with the East London Sub-Regional Transport Plan (ELSRTP); and with the national priorities for transport.

Chapter 1 summarises the **wide-ranging consultation, participation and partnership working** that are central to Barking and Dagenham's LIP. However, public involvement does not cease with the completion of the plan. Ongoing engagement will continue to inform the planning and implementation of our transport schemes and programmes.

Borough Transport Issues and Objectives

The transport problems and opportunities facing the borough are examined in chapter 2. This includes an assessment of demographic and other factors that influence the demand for travel in Barking and Dagenham and the wider Thames Gateway area; an account of current transport provision; and an appraisal of key problems and opportunities in relation to the MTS goals and challenges.

Many factors contribute to the severity of transport problems in the borough, including:

- A steadily increasing population and workforce;
- Poor public transport connectivity to and within parts of the borough and issues surrounding quality/frequency of some services;
- Worsening of the performance of the road network, with average journey speeds/journey time reliability falling and congestion worsening;
- Lack of safe, direct walking and cycling links and facilities. Concerns over the quality of the public realm;
- Poor air quality and traffic noise adjacent to some sections of the highway network;
- Safety and security issues surrounding use of the public transport network and resulting from poorly lit/maintained infrastructure;
- High pedestrian and motorcycle casualties;
- Issues surrounding accessibility of public transport services – lack of step-free access and travel information a key factor.

Despite the circumstances in Barking and Dagenham, **much progress has been made in recent years**. Public transport patronage has increased, with the number of trips made on the local bus network up by 23% since 2006/07. In addition, there has been a marked improvement in recent years in both service reliability and punctuality on public transport services serving the borough. There has been a 58% decrease in the number of deaths or serious injuries on our roads in the last five years compared with the 1994–98 average (child fatalities and serious injuries were down 70% during the same period). Elsewhere, borough-wide CO_2 emissions appear to be decreasing, whilst standards of road maintenance have improved, with the proportion of principal roads in the borough in need of repair at historically low levels. However, **there remain significant challenges to be overcome**.

Chapter 2 also presents the objectives of the LIP. These reflect important influences such as the Barking and Dagenham Community Plan, the MTS and ELSRTP, and the national priorities for transport. The consultation process has revealed a strong level of support for the objectives, and there is a close consistency with those of our first LIP. There are **ten objectives for the second LIP**:

A. Improving public transport connectivity to facilitate economic development/regeneration;
B. Tackling congestion to limit delays and lessen the impact on the economy/environment;
C. Increasing accessibility for all to key local services and facilities;
D. Securing improvements for people with poor access to public or private transport;
E. Improving safety and security on the local transport system;
F. Improving road safety conditions;
G. Reducing the need to travel and promoting more sustainable patterns of development;
H. Promoting sustainable/healthy travel to enhance the environment/improve quality of life;
I. Improving management and maintenance of our transport infrastructure;
J. Maintaining and improving the public realm to create distinctive public places.

LIP Delivery Plan and Programme of Investment

Chapter 3 sets out the LIP delivery plan - the combination of measures focused on addressing the problems and opportunities and achieving the objectives set out in chapter 2. The driving principles behind the delivery plan are **regeneration, economic development, social inclusion, safety and sustainability** – reflecting the Mayor's vision for London's transport system to provide access to opportunities for all and achieving the highest environmental standards, and our Community Plan ambition for Barking and Dagenham as a borough which is safe, clean, fair, healthy and prosperous. The delivery plan has evolved alongside our LDF and Economic Development Strategy, ensuring that transport, land use and economic development are properly coordinated **to deliver a more efficient, integrated and accessible transport system**.

The experience gained in implementing the first LIP, the advances in technology and innovations in 'Smarter Travel' have all helped to produce a delivery plan for the second LIP with a more effective range of measures. The main elements of the delivery plan include the following:

- **Improving connectivity and tackling congestion:** new and improved borough bus services; enhancements to station capacity and rail services; improvements to the local road network; rationalisation and upgrading of

traffic signals; management and mitigation of freight operations; development and promotion of travel plans; expansion of the car club.

- **Improving access for all:** continuation of bus stop accessibility improvements; introduction of real time passenger information and dynamic information systems; implementing station access improvement works; development of borough's demand responsive transport services; development and promotion of cycling and walking schemes.
- **Improving safety and security:** implementing/upgrading road crossings; introduction of CCTV cameras; improving street lighting; introducing vehicle-activated signs; undertaking road safety education and training; introduction of innovative traffic calming measures, introduction of home zones and roll out of additional 20 mph zones;
- **Enhancing the environment and quality of life:** undertaking additional travel planning and travel awareness activities; roll out of cleaner, more environmentally friendly vehicles; promotion of cycling and walking schemes; development of lorry management measures; improving street lighting; recycling of highway waste material.
- **Improving management and maintenance of our assets:** development of a Network Management Plan; undertaking carriageway and footway maintenance schemes; implementing highway lighting improvements and maintenance; prioritising bridge strengthening schemes; roll out of street scene enhancement projects.

The three-year programme of investment for of the LIP and the associated financial issues are also set out in chapter 3. The funding allocation from TfL comprises two principal components:

- **Corridors, Neighbourhoods and Supporting Measures** (holistic schemes for key corridors/ neighbourhoods that address issues relating to the smoothing of traffic flow; bus reliability; safety; cycling; public realm improvements and removal of street clutter; CPZs and 20mph zones, together with a range of supporting measures such as travel plans for schools; hospitals and businesses; plus more travel awareness/education and publicity initiatives to integrate with corridor/neighbourhood schemes);
- **Maintenance** (with the focus on ensuring that the highway network and structures are kept in a good state of repair).

For the three years to 2013/14, TfL has provisionally indicated that Barking and Dagenham will receive **in the region of £6.5 million to implement a range of integrated transport and maintenance schemes**. In support of the funding from TfL, the plan identifies the role that **complementary sources of funding**, such as developer funding, will make to the delivery of the LIP. Additional resources may also be available via TfL's Major Schemes programme (for large schemes over £1 million in value).

The programme has been developed to prioritise schemes that **deliver the best value for money and make the best use of existing assets**, based on the experience gained in delivering the first LIP.

Performance Management and Monitoring Plan

Chapter 4 sets out the targets and indicators for the LIP. These are developed taking into account the problems and opportunities (chapter 2) and are closely linked with the delivery plan and three-year funding programme (chapter 3). There are 12 targets in total, mostly set for the year 2013/14, corresponding with the final year of the plan.

The rationale behind each target is set out, together with the monitoring methodology, and an assessment of the main threats to meeting the targets. Evidence is provided that the **targets are ambitious but realistic,** and trajectories are drawn to show expected progress in meeting the targets over the three-year period.

Progress implementing the LIP targets and delivery programme will be monitored regularly. Areas of slow progress will be identified at an early stage in order to bring them back on-track.

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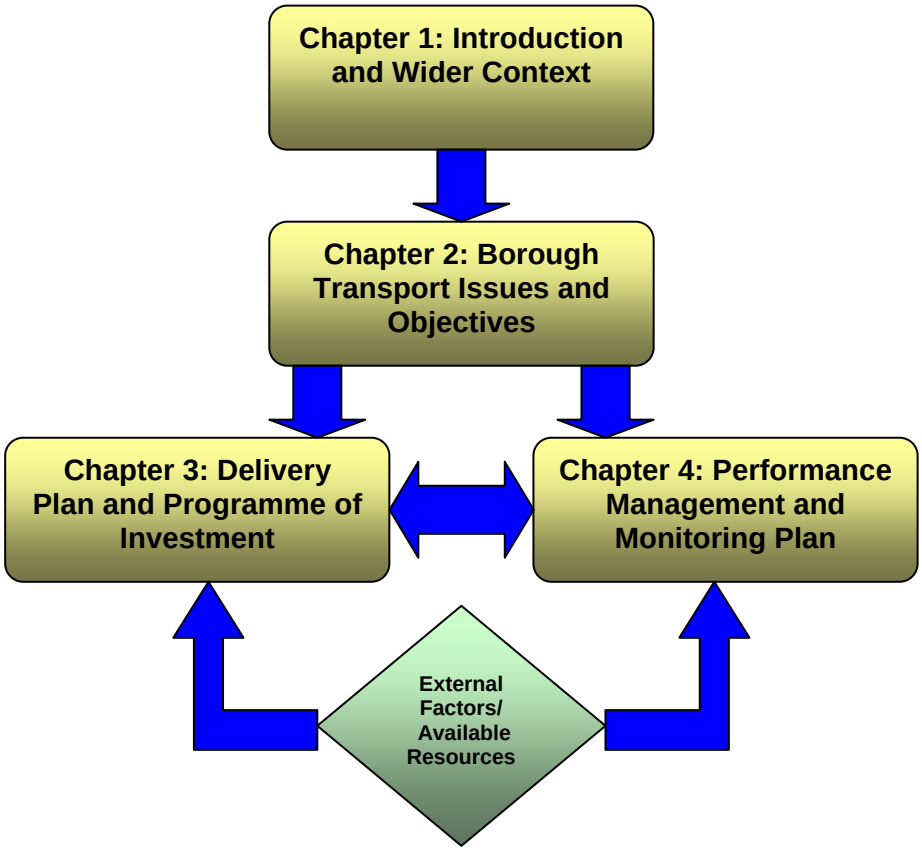
1. Introduction and Wider Context

1.1 Background and LIP Structure

1.1.1 The Council's strategy to achieve a safe, sustainable and accessible transport system for the benefit of all those living and working in Barking and Dagenham is outlined in this Local Implementation Plan (LIP). The LIP also represents the Council's submission to Transport for London (TfL) for funding for a range of transport projects which will address local transport issues and implement the Mayor's Transport Strategy at the local level.

1.1.2 The LIP is a statutory document that comprises an analysis of local transport problems, a set of objectives and targets, a delivery plan and a three-year programme of investment designed to improve transport in the borough. Figure 1.1 illustrates the structure of the second LIP and arrangement of the chapters within it.

Figure 1.1: Structure of the LIP



1.1.3 Along with every local authority in London, we produced our first LIP in 2005. This formed a funding bid for the years 2006/07 to 2010/11. The second round of LIPs focuses on the next three-year funding period leading up to 2013/14.

1.1.4 Barking and Dagenham's first LIP was successful in obtaining funding, delivering transport programmes and meeting a range of targets. Our second LIP now builds on this record of success. Analysis has identified both the most and least effective elements of the first LIP and the new programme has been developed accordingly.

1.1.5 This introductory chapter outlines the background to the second LIP and the wider context for production of the plan.

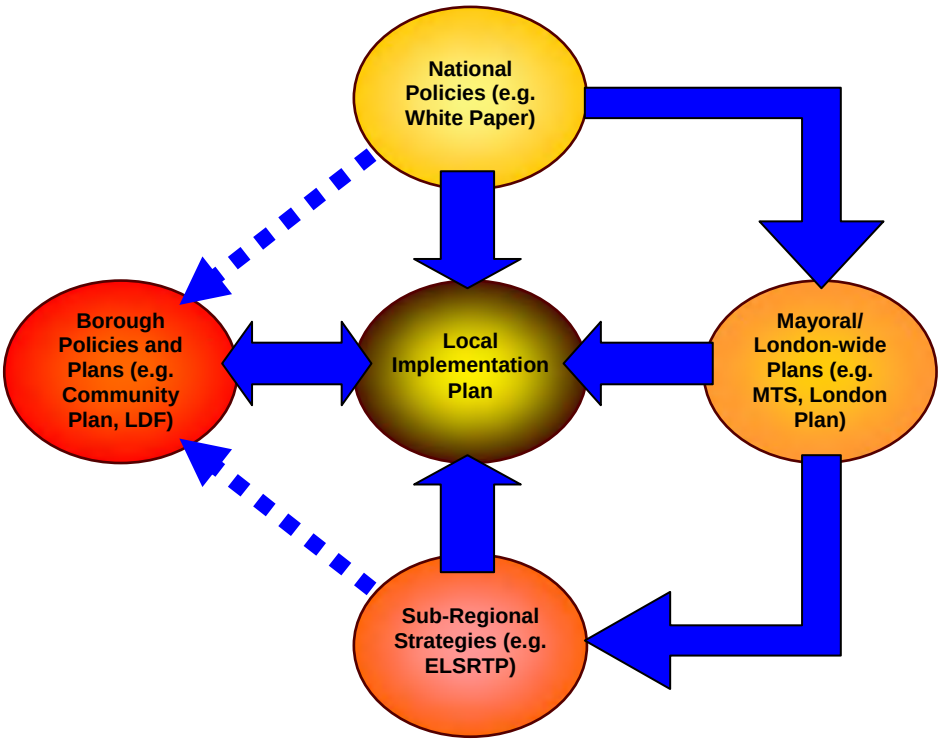
Chapter 1 identifies:

- **Integration with other plans and strategies** at the national level, London-wide, at the sub-regional level and locally;
- **Details of consultation carried out** in preparing the LIP;
- The **extent of cross-boundary and partnership working** in Barking and Dagenham;
- The **role of statutory requirements and other duties and processes** in shaping the plan.

1.2 Policy and Programme Influences

1.2.1 This section highlights the main national, London-wide, sub-regional, and local plans and strategies that set the context for the LIP. Figure 1.2, below, illustrates the relationship between the various plans.

Figure 1.2: Relationship between the LIP and other plans/strategies



National Priorities for Transport

1.2.2 The **Local Transport White Paper**, produced by the Department for Transport (DfT) in January 2011, sets out the Government's vision for a sustainable local transport system that supports the economy and reduces carbon emissions.

1.2.3 The Government recognise that local transport faces a sustainability challenge, principally through increased costs to the economy (through excess delay), society (through carbon emissions) and health (through physical inactivity, air quality and noise). However, there are a number of opportunities to tackle these problems, most notably by improving access to sustainable modes, particularly for short distance travel.

Key Transport Opportunities as identified in the White Paper:

- **Enabling economic growth** through use of more efficient logistics and access to new markets, flexible working (to reduce employee travel) and support for the tourism industry.
- **Improving the public realm** – research has identified that high street turnover increases 5 – 15% following such investment. Also shown that people who walk/cycle/use public transport spend as much, if not more, than those who travel by car.
- **Ensuring greater resilience to extreme weather**. The cost of disruption is over £1 billion over an average winter.
- **Improving access to employment, education and healthcare** so as to increase fairness and social mobility, and ultimately, growth.
- **Working to decarbonise road transport** so as to ensure that UK CO_2 emissions are cut by 80% by 2050. Development of ultra-low emission vehicles, particularly for longer journeys, will help in this regard, although for shorter journeys (which are responsible for 1/3 of emissions), greater emphasis needs to be placed on public transport, cycling and walking.
- **Tackling obesity, poor health and physical inactivity**. Cycling and walking offers an easy way for people to incorporate physical activity into their everyday lives.
- **Improving road safety**. The value of preventing accidents is estimated at £16 billion per annum. It is critical that efforts to address road safety problems involve work across organisations/disciplines (e.g. educational, engineering and enforcement activity).
- **Improving air quality**. The health costs of poor air quality are estimated at £19 billion per year. Children are particularly susceptible to environmental hazards, particularly those living in urban areas. New road vehicle exhaust emission standards have helped, however, excessive levels of NO_2 are still prevalent in many urban areas.

- **Decreasing noise from transport**. Some 84% of the population hear traffic noise and around 40% are disturbed by it. At certain levels, noise can lead to an increased risk of direct adverse health effects. The annual cost of transport noise is estimated at £3-5 billion.

1.2.4 The White Paper explains how the Government is placing localism at the heart of the transport agenda, taking measures to empower local authorities when it comes to tackling the various issues in their areas The Council has sought to embrace this approach in the development of the LIP.

Mayoral and other London-wide Plans

1.2.5 The Mayor of London has been given responsibility for the production of a range of plans and strategies for London, including a Transport Strategy, a Spatial Development Strategy, an Economic Development Strategy and a number of environmental strategies, covering issues such as Climate Change and Air Quality.

1.2.6 The **Mayor's Transport Strategy (MTS)** was published in May 2010 and sets out the transport strategy for London for the period up to 2031. The strategy is the principal policy tool through which the Mayor exercises his responsibilities for the planning, management and development of transport in London, for the movement of people and goods. The plan provides the overarching policy context for the LIP, setting the priorities and proposals that the Council must help deliver.

1.2.7 The Mayor has made commitments to a range of specific local transport interventions in the MTS which need to be considered in the development of the LIP. These are explored in more detail in the LIP Delivery Plan and three-year Programme of Investment at chapter 3. They include:

- Implementation of more shared space and simplified streetscape projects including de-cluttering, removing unnecessary guardrailing and lines and improved streetscape design;
- Increased provision for cyclists including providing more cycle parking and supporting the delivery of the Mayor's cycle hire scheme, the provision of cycle highways and the development of cycle hubs;
- Support for Electric Vehicles, including new charging points and the provision of more Car Club bays;
- Reducing unnecessary traffic signals and avoiding the use of road humps.

1.2.8 As well as addressing the MTS goals and challenges, the LIP should have regard to the 26 high level Mayoral outcomes set out in the plan. These are summarised in Table 1.1, overleaf:

Table 1.1: MTS Goals, Challenges and Outcomes

Goals	Challenges	Outcomes
Support economic development and growth	Supporting sustainable population and employment growth	• Balancing capacity and demand for travel through increasing public transport capacity and/or reducing the need to travel
	Improving transport connectivity	• 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	• 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 the use of the Thames for people and goods
Enhance the quality of life for all Londoners	Improving journey experience	• Improving public transport customer satisfaction • Improving road user satisfaction (drivers, pedestrians, cyclists) • Reducing public transport crowding
	Enhancing the built and natural environment	• Enhancing streetscapes, improving the perception of the urban realm and developing 'better streets' initiatives • Protecting and enhancing the natural environment
	Improving air quality	• Reducing air pollutant emissions from ground-based transport, contributing to EU air quality targets
	Improving noise impacts	• Improving perceptions and reducing impacts of noise
	Improving health impacts	• Facilitating an increase in walking and cycling
Improve the safety	Reducing crime, fear of crime	• Reducing crime rates (and improving perceptions of personal safety and security)

Goals	Challenges	Outcomes
and security of all Londoners	and anti-social behaviour	
	Improving road safety	• Reducing the numbers of road traffic casualties
	Improving public transport safety	• Reducing casualties on public transport networks
Improve transport opportunities for all Londoners	Improving accessibility	• Improving the physical accessibility of the transport system • Improving access to services
	Supporting regeneration and tackling deprivation	• Supporting wider regeneration
Reduce transport's contribution to climate change, and improve its resilience	Reducing CO_2 emissions	• Reducing CO_2 emissions from ground-based transport, contributing to a London-wide 60 per cent reduction by 2025
	Adapting for climate change	• 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	• 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's Transport Strategy, GLA, 2010

1.2.9 Through close partnership working with TfL and other stakeholders, we have developed a set of objectives, a strategy and a programme for the delivery of a range of transport projects and initiatives that will support the implementation of the MTS at the local level. Further information is provided in the proceeding chapters of the LIP.

1.2.10 One of the Mayor's responsibilities is strategic planning for London. Under the legislation establishing the Greater London Authority (GLA), the Mayor has to produce, and keep under review, a **Spatial Development Strategy (SDS)**. This strategy exists in the form of the **London Plan**.

1.2.11 The London Plan sets out an integrated economic, environmental, transport and social framework for the development of the capital over the next 20-25 years, and its policies guide decisions on planning applications by councils and the Mayor. The plan contains a range of detailed transport policies to support integration of transport and development, connecting London and ensuring better streets. It also sets out car and cycle parking standards. A key objective is to provide a transport network which will enable easy access to jobs, opportunities and facilities while mitigating adverse environmental and other impacts. The Council's local plans, including the LIP, need to closely align with the London Plan priorities.

1.2.12 The **Economic Development Strategy (EDS)** sets out the Mayor's ambitions for the economic development of the capital and provides the policy directions that will achieve this. The principal objectives of the plan are to promote London as a city that excels as a world capital of business; to develop a low carbon economy; and to maximise the benefits from investment to support growth and regeneration. The plan also aims to give all Londoners the opportunity to take part in the capital's economic success by providing access to employment.

1.2.13 The Council has an important role to play in helping to deliver the objectives of the EDS. In particular, it is recognised that improvements to transport are required, particularly in outer London, if the capital is to strengthen its economic productivity and competitiveness. The LIP has been developed to reflect this.

1.2.14 The Mayor is committed to making London a world leader in improving the environment. Accordingly, the Mayor has developed strategies aimed at **tackling climate change and improving air quality**. Through the LIP, the Council has developed a set of objectives, a delivery plan and a programme of investment that are consistent with these plans and which advocates reducing pollution levels (in particular, cutting carbon dioxide levels), developing alternative technologies and using fewer resources.

1.2.15 The **TfL Business Plan** defines the transport priorities and programmes to be delivered over the period 2011/12 – 2014/15,

building on previous business plans and taking into account the over-arching objectives of the MTS. Plans include the implementation of a major programme of renewals and upgrades across the Tube and local rail network, as well as building Crossrail; encouraging even more people to take up walking and cycling through improved facilities and the provision of better information; measures to improve the flow of London's traffic; and urban realm schemes that will provide better and safer streets and public spaces. The Council will work closely with TfL and other agencies to ensure that projects and operations are well coordinated.

1.2.16 The **TLRN Improvement Plan (TIP)** provides an overview of TfL's current intentions for improvements to its road network (referred to as the TLRN) until 2013/14. The TIP details how these improvements contribute towards implementation of the MTS and align with the requirements of the Network Management Duty. A number of road safety improvements have recently been implemented on the Barking and Dagenham part of the TLRN, including the introduction of average speed cameras on the A13 and a pedestrian crossing on the A12 at the junction with Whalebone Lane North. During the time frame of the LIP we will work closely with TfL to identify, and lobby for funding for, additional improvements to the TLRN in the borough.

The Sub-Regional Dimension

1.2.17 In conjunction with a range of stakeholders, including the Council, TfL has been working to develop an integrated approach to sub-regional transport development and land use planning, based around five sub-regions (central, north, south, east and west London). A key part of this work is the publication of a series of sub-regional plans and programmes.

1.2.18 The **East London Sub Regional Transport Plan (ELSRTP)** articulates the MTS goals in the context of East London, whilst setting out the various challenges and priorities for the region. It also outlines a range of policies and schemes for addressing these challenges. In the context of the plan, the East London Sub Region comprises of the London Boroughs of Barking and Dagenham, Bexley, Greenwich, Hackney, Havering, Lewisham, Newham, Redbridge and Tower Hamlets.

1.2.19 East London faces one of the greatest challenges of all the London sub regions, in that it has to accommodate significant levels of new housing and jobs, whilst needing to enhance existing neighbourhoods and create new mixed communities. Significant transport improvements are therefore required if these challenges are to be met.

East London Sub-Region Transport Priorities:

- **Improving connectivity** to and within key locations to support existing communities, growth, aspirations for change and improve the quality of the environment;
- **Reducing the physical barriers to travel**, including the River Thames, and **improving the resilience of the transport network**;
- **Supporting the efficient movement of goods** and encouraging sustainable freight movement;
- Ensuring that the benefits of funded transport investment are maximised;
- Managing highway congestion and public transport crowding and **making efficient use of the transport network**.

1.2.20 The Council has played a part in the preparation of the ELSRTP, attending workshops, meetings and consultation exercises organised by TfL and London Councils. In this way we have ensured that development of the LIP complements the approach of the ELSRTP. Moreover, the principles and policies of the ELSRTP are embraced within the LIP objectives, delivery plan and programme of investment.

1.2.21 The **Thames Gateway Delivery Plan (TGDP)**, published by the Department for Communities and Local Government (DCLG) in 2007, concludes that better transport connections will help achieve economic growth in the Thames Gateway area. To this end, it identifies East London Transit Phase 1b as a key project and provided funding for this, which will support the emerging Barking Riverside development and the associated new jobs that will be created. Public transport improvements such as this are a key strand of the Council's transport priorities, and this is reflected accordingly in the LIP.

Integration with other Barking and Dagenham Strategies

1.2.22 The wider planning and policy framework at the corporate level in Barking and Dagenham is provided by the **Community Plan - 'Building Communities, Transforming Lives'**, and the **Local Area Agreement – 'A Focus on Improvement'**. These provide the foundation for documents such as the LIP and the Local Development Framework, as well as other plans and strategies.

1.2.23 The Community Plan sets out the future for Barking and Dagenham up to 2020 and how it will look and feel for people who live, work, study, visit and do business in the borough. The ambition for Barking and Dagenham is a borough which is safe, clean, fair and respectful, prosperous, healthy and where young people are inspired and successful. The plan identifies how this will be achieved within this timeframe.

1.2.24 Good coordination between transport and land use is acknowledged as being particularly important. At Barking and Dagenham this is reflected in the close liaison between staff involved in transport planning and in land use and development planning, and in the integration of policy. For example, the Council's **Local Development Framework (LDF)** contains policies to direct new development to locations that can be easily accessed by public transport, cycling and on foot. Staff are working together to ensure effective linkage between the development of the LIP and the LDF, and that local planning objectives are facilitated through transport initiatives.

LDF Transport Priorities:

- **Managing Growth** – the Council will support plans for public transport initiatives which will benefit the borough. Land will be set aside for this purpose where appropriate;
- **Sustainable Resources and the Environment** – the Council will promote and enable sustainable transport, for the movement of both people and freight;
- **Creating a Sense of Community** – the Council will seek to secure community facilities that are sustainable and accessible. In particular, they should be located where they can be accessed on foot, bicycle or public transport, rather than only by car; and, where possible, be developed as part of mixed-use developments, in order to minimise travel distances;
- **Ensuring a Vibrant Economy and Attractive Town Centres** – the Council will develop town centres that are safe and accessible, and safeguard wharves from inappropriate development;
- **Creating a Sense of Place** – the Council will seek to foster a vibrant cultural and tourist scene by encouraging additional tourist attractions in town centres and other areas with high public transport accessibility levels, and appropriate public transport and walking and cycling infrastructure.

1.2.25 The LDF has superseded the **Unitary Development Plan (UDP)** as the statutory development plan for Barking & Dagenham. The LDF Core Strategy was adopted by the Council on 21 July 2010. The Site Specific Allocations Development Plan was adopted in December 2010, the Barking Town Centre Area Action Plan was adopted in February 2011 and the Borough Wide Development Policies DPD was adopted in March 2011.

1.2.26 The emerging **Economic Development Strategy (EDS)** for Barking and Dagenham identifies a range of projects and actions required for the development of a successful and sustainable local economy. Central to the strategy is the growing need to improve public transport provision and accessibility to jobs and business markets. The borough's transport infrastructure is under intense pressure from the

rising number of vehicle journeys. The costs associated with traffic congestion are now seen as substantially increasing business operating costs in Barking and Dagenham.

1.2.27 Through the coordinated work of our partners, we are lobbying for a range of strategic transport infrastructure improvements, such as junction improvements at Renwick Road, and improvements to local bus connections to employment areas south of the A13, to alleviate these problems. We are also working with businesses and other organisations to encourage sustainable freight practices and develop Company Travel Plans.

1.2.28 Many of the key spatial and economic development priorities for Barking and Dagenham are reflected in the objectives and programmes of the Council's **Regeneration Strategy**. The strategy sets out the actions required to improve skills and deliver business growth; provide appropriate housing and integrated health, social and leisure facilities; and regenerate and rejuvenate the borough. A key issue is the need to improve accessibility, particularly by public transport. This will be achieved through partnership working with a range of stakeholders to secure new and improved local transport links and services.

1.2.29 The need to plan for and mitigate the effects of climate change has been at the forefront of government policy in recent years and is an important aspect of much of the Council's work. A key objective of our **Climate Change Strategy** is to reduce the amount of CO_2 and other emissions resulting from the Council's day-to-day operations. Initiatives such as the Council's Carbon Management Programme and the Barking Town Centre Low Carbon Zone, are designed to deliver substantial reductions in emissions and enable us to achieve our target of an 80% reduction in CO_2 emissions by 2050. To this end, measures to encourage the take up of less polluting modes of transport, such as walking and cycling, will become increasingly important.

1.2.30 Progressing the work of our **Parks and Green Spaces Strategy** and drawing on examples of good practice elsewhere, the Barking and Dagenham **Rights of Way Improvement Plan (ROWIP)** aims to deliver improved access to the borough via the local Rights of Way network. Through a coordinated programme of management and maintenance; new and improved facilities; and marketing and promotion initiatives, the Council is working to meet the Government's aim of better provision for walkers, cyclists, equestrians and people with mobility problems. Many of our recent walking, cycling and local accessibility schemes have been developed to reflect these issues.

1.2.31 The role of transport in supporting the wider visions and objectives of education in Barking and Dagenham is primarily concerned with providing access to schools and further education opportunities. School transport issues are primarily addressed in our **Children and Young People Plan**, our **Sustainable Modes of Travel to School Strategy**

(SMOTS) and our **Special Educational Needs (SEN) Transport Strategy**, with the aim of ensuring that all young people in the borough, particularly those with specialist needs, have access to safe, sustainable and accessible routes to school and that availability and affordability of different modes of travel is not a barrier to accessing education and training. Through the LIP, the Council is committed to the development and implementation of School Travel Plans, creating safer and more accessible routes to schools, a reduction in casualties and an increase in the numbers walking and cycling in the borough.

1.2.32 Transport is often a major issue for the elderly or those with disabilities. Elderly and vulnerable people without access to a car can experience social exclusion, especially where this is compounded by a lack of regular, reliable and accessible public transport services. This is one of the key issues identified in our **Older People's Strategy**, which sets out to promote the health, independence, well-being, and mobility of older people in the borough. Research also indicates reluctance by vulnerable groups to use certain public transport services after dark because of the fear of crime or anti-social behaviour. The **Crime and Disorder Reduction Strategy (CDRS)** highlights the steps being taken by the Council in partnership with the police to tackle this issue. In addition, there is a call for more disabled parking in the borough, particularly in Barking Town Centre and in our shopping parades. The provision of such facilities is a key strand of our **Parking Strategy**.

1.3 Developing the LIP

1.3.1 This section summarises the wide-ranging consultation, participation and partnership working that have been central to the development of Barking & Dagenham's LIP. However, public involvement does not cease with the development of this document. Ongoing engagement will continue to inform the planning and implementation of our transport schemes and programmes with a strong emphasis on ensuring that our work meets public expectations.

Consultation, Participation and Engagement

1.3.2 Extensive consultation and close partnership working are at the heart of Barking and Dagenham's LIP and our approach to transport in the borough. Working with a range of statutory bodies, other authorities, businesses, voluntary organisations and local communities we are tackling transport problems that will help us meet our objectives and promote the economic, social and environmental well-being of the borough.

1.3.3 The overarching approach has been to ensure that decisions and delivery more closely reflect the needs of local people. To achieve this, a wide range of consultation measures have been used in the development of the LIP, including:

- A series of **workshops, seminars and meetings** involving Council Members and officers, local businesses, representatives of amenity groups and other local interest groups and organisations.
- **Engagement** with single interest groups, such as the local Cycling Campaign Group and the Barking and Dagenham Access Group, particularly in developing strategies and identifying problems and opportunities from their perspective.
- A series of **transport fora** meeting regularly to consider transport issues in the borough, including the Public Transport Liaison Group (PTLG) and the Chamber of Commerce Transport, Planning and Regeneration Issues Liaison Group.
- **Partnership arrangements** with health, education, social services authorities, transport operators and other organisations to work collaboratively on projects of joint interest.
- **Joint working** with other departments within the Council on a range of projects. We have also closely consulted with neighbouring London boroughs on the development of their LIPs, seeking their comments on the development of our plan.
- Customer **feedback** via petitions, complaints and the Council's 'Tell Us' campaign and from **monitoring exercises** undertaken in the development of transport schemes and initiatives.

1.3.4 Following the submission of the draft LIP to TfL in December 2010, the Council undertook a seven-week public consultation exercise with a range of statutory and local stakeholders and the general public. Consultees were asked to give their views on the various aspects of the Plan. Organisations contacted included:

- Key government bodies - including the LTGDC and the LDA;
- Neighbouring boroughs;
- Transport and environment groups - including train operating companies and friends of the earth;
- Transport user groups - including the London Cycling Campaign and the Ramblers Association;
- Access and equalities groups - including the Barking and Dagenham Access Group and the Disability and Equality Forum;
- Volunteer and community groups;
- PCTs and health organisations;
- The emergency services and safety groups - including the Metropolitan Police and Fire Brigade;
- Business and enterprise groups - including the Chamber of Commerce and Dagenham Dock Employers Forum.

1.3.5 In total, eight responses to the public consultation exercise were received. These included comments made by TfL, London Travelwatch, the LTGDC, the Disablement Association of Barking and Dagenham (DABD) and the local branch of the London Cycling Campaign. All these organisations were broadly in support of the

approach and content of the LIP and suggested a number of improvements/additions that would add further emphasis to certain projects and initiatives. Details of the comments made and how these have been addressed in the development of the final version of the LIP are set out in Annex H.

Cross Boundary and Partnership Working

1.3.6 Over the course of the first LIP we have maintained and developed effective cross boundary joint working with the local authorities adjoining Barking and Dagenham on a wide range of transport initiatives:

- We have worked with the **Thames Gateway London Partnership (TGLP)** and its various local authority members to improve transport linkages in the Thames Gateway area and have been actively involved in the promotion of the Thames Gateway Crossings and the Docklands Light Railway extension to Dagenham Dock. We will maintain close liaison as part of the work to develop the East London Sub-Regional Transport Plan.
- As part of our ongoing work on the development of bus services in the borough, including East London Transit and the Royal Docks Public Transport Corridor, we will continue to work closely with the **London Thames Gateway Development Corporation (LTGDC)**, TfL, transport operators and neighbouring authorities to improve cross boundary travel and enhance transport interchanges.
- Regular cross boundary liaison is carried out with adjacent London boroughs, NHS Trusts, businesses and other organisations in the development of travel planning opportunities and promotions. The **Thames Gateway Travel Plan Network (TGTPN)** is one such example where a number of neighbouring authorities and organisations meet to exchange information and co-operate on projects of interest.
- We will continue our involvement in the London Council's led **Pan London Fora on Road Safety, Sustainable Transport and Traffic Management**, established to coordinate policy and ensure cross boundary consistency on issues pertaining to road safety conditions, the use of sustainable transport and traffic and congestion related issues respectively. Working with neighbouring local authorities, the emergency services, transport operators and other organisations these important fora help in the identification and implementation of road safety, 'smarter travel' and traffic management measures, including a range of promotional, education and training schemes.
- Along with the neighbouring boroughs of Newham and Greenwich, Barking and Dagenham is a member of the **London City Airport Consultative Committee (LCACC)**, formed to monitor all aspects of the operation of the airport and to advise on operating procedures, with a view to minimising noise and air pollution.

1.3.7 In addition to cross-boundary work with the adjoining local authorities, partnership working with many other organisations is essential to the successful implementation of the LIP:

- We are liaising closely with **TfL** in analysing the interrelationship between the local transport network and the TLRN. In particular, we are working with TfL to improve the interface between the networks and to address problems, such as the need for improvements to the A13/Renwick Road junction to ease peak hour congestion and to improve access to Barking Riverside. In addition, joint working with TfL on the Cycling Super Highways Initiative has led to the introduction of improved cycling facilities along the A13, providing fast, direct access for cyclists between Barking and the City.
- We are members of various fora promoting rail network developments, including the **Orbital London Group (OLG)** and the **Crossrail Planning Forum**. In addition, we have been actively involved in consultation rounds with the **Department for Transport (DfT)** on the development of Route Utilisation Strategies (RUS), which define how the rail network should be used to bring the most advantageous use of scarce capacity to the greatest number of people.
- Work on developing effective solutions to freight issues involves close liaison with organisations such as the **Freight Transport Association (FTA)** and the **Road Haulage Association (RHA)**, local businesses and residents' groups. Our continued membership of the **Thames Gateway Freight Quality Partnership (TGFQP) Steering Group** ensures that cross-boundary freight issues are also being addressed.
- The work of the Barking and Dagenham **Public Transport Liaison Group (PTLG)**, which comprises representatives from the Council, TfL, transport operators, user groups, the police and the NHS, is central to the effective delivery of many of our passenger transport schemes and the smooth operation of public transport services in the borough.
- In developing many of the cycling and walking routes which run through Barking and Dagenham, including the Roding Valley Way and Dagenham Spine links, we are working closely with **Sustrans, Living Streets** and TfL to ensure the provision of safe and continuous cycling and walking routes to important local and regional destinations.

Statutory Requirements and Other Processes

1.3.8 There are a number of statutory duties and processes which the Council is required to consider in developing its LIP. These are considered in the following section.

1.3.9 **Strategic Environmental Assessment (SEA)** is a means of enabling authorities responsible for the preparation and implementation of plans or programmes to identify and evaluate the significant impacts (both

adverse and beneficial) that the proposed measures are likely to have on the environment. Directive 2001/42/EC of the European Parliament, and the UK Environmental Assessment of Plans and Programmes Regulations 2004, imposes a legal duty on all local authorities to undertake a SEA when developing LIPs.

1.3.10 As part of the SEA process, the Council has produced an **Environmental Report** that highlights the likely significant environmental effects of the measures contained within the LIP and proposes suitable alternatives. Consultation on the Environmental Report was carried out in early 2011, alongside the public consultation exercise on the draft LIP, after which some minor amendments were made to the report and the LIP. An **Environmental Statement** summarising how the SEA process has been taken into account in the development of the LIP is included in Annex F.

1.3.11 In preparing the LIP, the Council has a statutory duty to undertake an **Equality Impact Assessment (EQIA)** to demonstrate that the plan does not have a negative impact on a particular equality target group, or that any adverse impacts identified have been appropriately mitigated. To meet the EQIA guidelines, a **Full Impact Assessment** was carried out in February 2011, following the completion of the public consultation exercise on the draft LIP.

1.3.12 The EQIA examined whether the Council is meeting its statutory duties under other relevant legislation, including obligations arising from the **Equality Act 2010**. Initiatives such as shopping parade enhancements and bus stop accessibility improvements, which are based upon the principles of ‘inclusive’ design and 'access for all’ in identifying improvements to our streets and transport infrastructure, are consistent with the Equality Act. Further examples of how the Equality Act and other such duties have been taken into consideration in the development of LIP are highlighted in the Delivery Plan and three-year Programme of Investment at chapter 3. An **Equality Statement** summarising the main findings of the EQIA, with a brief outline of the key actions required based on the challenges and opportunities identified, is included in Annex G.

1.3.13 Under the terms of the **Traffic Management Act 2004**, the Council has a statutory duty to manage its road network to secure the expeditious movement of traffic, including pedestrians, on the network and to facilitate the same on the networks of other authorities (including neighbouring boroughs and TfL via the TLRN). Section 18(2) of the Act requires the Council to have regard for the **Network Management Duty (NMD) Guidance** in developing the LIP and, in particular, in the preparation of the Delivery Plan. Details of how the requirements of the NMD have been taken into account in developing the delivery plan and emerging three-year programme of investment are set out in chapter 3.

2. Borough Transport Issues and Objectives

2.1 Introduction

2.1.1 This chapter provides some background information about Barking and Dagenham; including information on its geography, economy and social demographics. It also provides information on the borough's transport geography, including details of local, sub-regional and London-wide transport networks and services. In addition, the chapter examines the problems relating to transport experienced in Barking and Dagenham and identifies the key opportunities to address them. It also identifies the principal plan objectives. This chapter provides the context for the LIP Delivery Plan and three-year Programme of Investment presented in chapter 3.

Chapter 2 sets out:

- An **overview of the borough's geographic and socio-economic characteristics**;
- The **transport scene**, in terms of **demand for and provision of transport infrastructure and services** in Barking and Dagenham and the surrounding area;
- A **summary of the main transport related problems** in the borough and the **opportunities to overcome them**.
- The principal **LIP objectives and how they were formulated**.

2.2 Overview of the Borough

Location of the Borough

2.2.1 The London Borough of Barking and Dagenham is situated in north east London and is located at the heart of the **Thames Gateway area** - the 'priority area for development in London', as described in the London Plan. It is a relatively small outer London Borough, measuring just 3,611 hectares in size, and has a population of around 164,572[1]. **Neighbouring London boroughs** are Newham to the west, Havering to the east, Redbridge to the north and Greenwich and Bexley to the South.

2.2.2 The borough is **principally residential in character** but also has significant areas of **employment land**, a major town centre at Barking, district centres at Dagenham Heathway, Chadwell Heath and Green Lane and a network of smaller neighbourhood centres. The borough has **substantial opportunities for regeneration**, including the

[1] LB Barking & Dagenham LDF Core Strategy, 2009

potential for the development of up to 25,000 new homes. The River Roding, Beam River and River Thames form the borough's westerly, easterly and southern boundaries respectively.

2.2.3 Barking and Dagenham's key advantages are its **proximity to the main retail, leisure and employment centres of Docklands, Stratford, Ilford and Romford**; its good road, rail and underground transport links to **Central London** and **London City Airport**, which has connections to international destinations; and its proximity to the **M25 Motorway**, and the proposed **Crossrail** route. In addition, the borough is predominantly flat which is advantageous for walking and cycling trips.

2.2.4 Figure 2.1 (overleaf) shows the location of the borough, including its main town and district centres and key regeneration areas, within the context of East London and the wider Thames Gateway area.

Key Borough Facts and Figures

2.2.5 Table 2.1 (overleaf) summarises the **key demographic and socio-economic characteristics of the borough**, providing information on factors such as population, employment, crime and housing. This information provides the key to understanding the rationale behind the setting of the LIP objectives and delivery plan.

Figure 2.1: Location of the borough

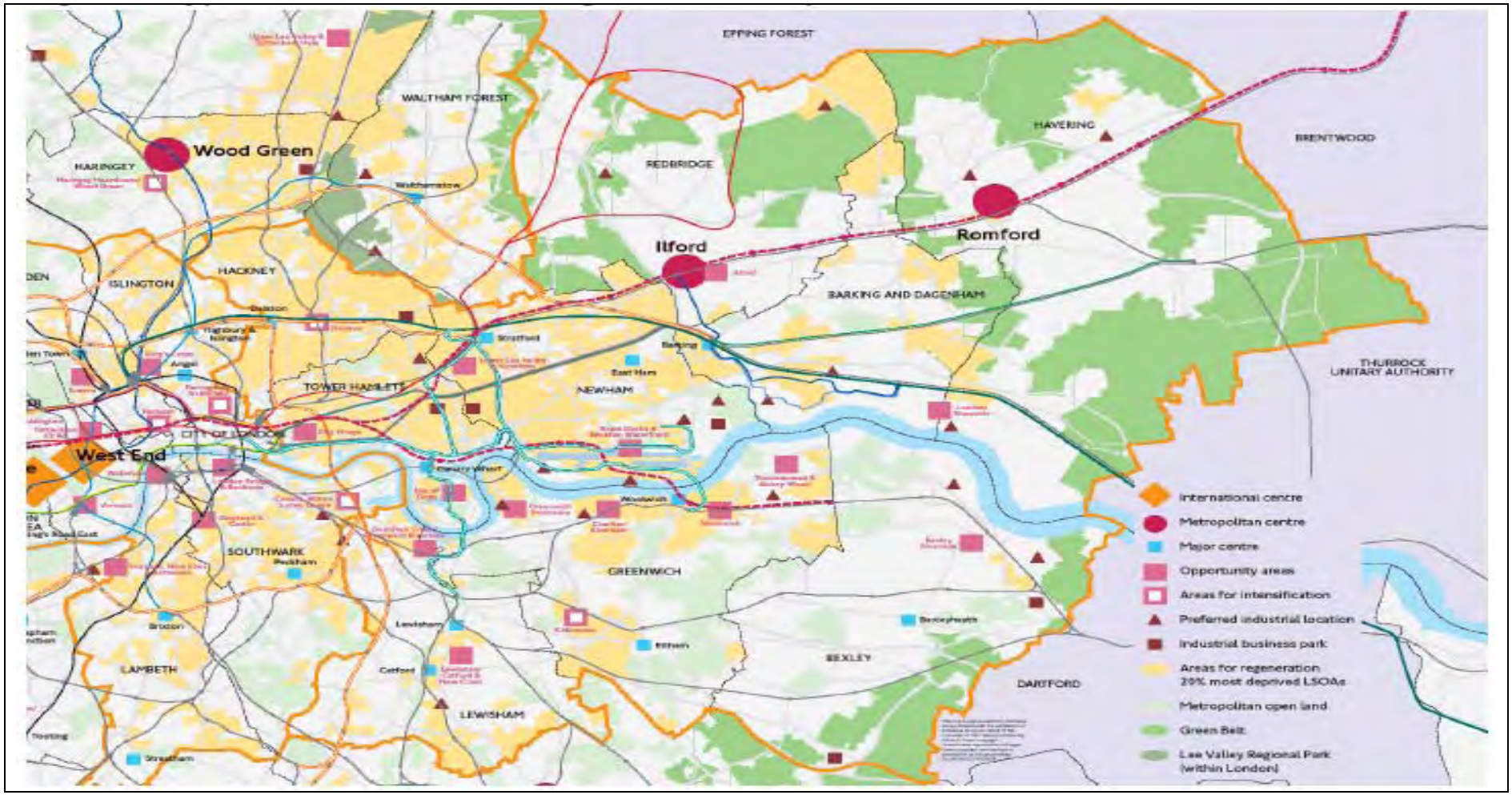


Table 2.1: Summary of key borough facts and figures

Criteria/ Indicator	Key Characteristics/Statistics
Population	• Historically stable, predominately white, working class population. • Population of the borough is increasing rapidly - could grow by over 67,000 by the year 2030 (GLA Intelligence Update, 2010). Resident workforce likely to increase by 45% (35,000 people) over the same period. • Biggest increases to date witnessed in the under-16 and over-85 age groups. • Population increase is not just due to new house building - there were 3,624 live births in 2009 (ONS General Fertility Rates, 2009). Barking and Dagenham has the second highest fertility rate of any London Borough, ranking only behind LB Newham. • Has been a rapid rise in the proportion of residents who are black or from an ethnic minority – up from 6.8% in 1991 to 15% in 2001 (now estimated to be 23%).
Deprivation	• Barking and Dagenham is the 7th most deprived of the 33 London boroughs and the 11th of the 354 nationally. • The Index of Multiple Deprivation (2007) shows that five of the borough's 17 wards have areas within them that are amongst the 10% most deprived in England. Over 10% of the borough's population lives within these areas.
Employment	• Traditionally an area associated with manufacturing. However, in recent years, manufacturing has been overtaken by the wholesale/retail and public service industries as the principal employers in the area - over a quarter of jobs locally are now found in these sectors. • Manufacturing still employs a far larger proportion of the workforce in the borough (16.3%) than in London (4.3%) or the UK (10.2%) as a whole (ONS – Annual Business Inquiry, 2008). • Manufacturing base is located predominantly in the south of the borough. The three main areas of strategic industrial land are Dagenham Dock, Rippleside and River Road, although there are a number of other significant employment areas spread throughout the borough. • Unemployment levels in the borough are high (10.5%) compared to London (8.4 %) and UK (7.4%) averages (ONS - Annual Population Survey, 2008). Household income is the second lowest in London - some 22% below the average figure for London and 6% below the average figure for the UK (CACI Paycheck, 2009).
Education and Skills	• Barking and Dagenham has the highest proportion of working aged adults in London with no qualifications - 23.2% compared with the London average of 12.0 % (ONS Annual Population Survey, 2008). • A survey of skills in the Thames Gateway estimated that almost 60% of new jobs within the area would require qualifications at Level 3 or above (Delivering Skills for Communities: First Skills Audit of the Thames Gateway - London Learning and Skills Council, 2004).
Health	• Health is a major issue in Barking and Dagenham. The Barking and Dagenham Joint Strategic Needs Assessment (JSNA) identifies that life

Criteria/ Indicator	Key Characteristics/Statistics
	expectancy in the borough is significantly below the national and London average for both men and women, with particular problems related to cancer and cardiovascular disease. In addition, more people are estimated to smoke, and healthy eating is less common. • The assessment also identifies that the most common cause of death overall in Barking and Dagenham is circulatory disease. Circulatory disease is also the main cause of early deaths and contributes to people from Barking and Dagenham on average, dying younger, than the national average. Other main causes of death identified include heart disease (coronary heart disease and heart failure), cancer, chronic obstructive airways disease (COPD) and pneumonia. Lung cancer was the major cancer contributor in both men and women.
Crime	• Crime and the fear of crime are key concerns for many of those living and working in the borough. However, recent figures indicate that recorded crime in Barking and Dagenham fell by 3.8% during the period 2009 – 2010 (Met Police, 2010). This compares with an increase of 1.4% across London as a whole during the same period.
Housing	• The borough's housing stock is fairly uniform and comprises mostly post–1900 terraced housing. Currently, some 65% of homes in Barking and Dagenham are within the private sector. • The Becontree Estate still accounts for half of Council stock and most right-to-buy sales. 13% of Council homes are in high rise blocks, many of which do not meet the Decent Homes standard and will need to be improved or redeveloped. • The lack of quality affordable housing in the borough is a key issue - there is a backlog need of 1,050 households and a newly arising need of 2,913 potential households per year in the borough (Barking and Dagenham Housing Demand/Needs Survey, 2005). • The LDF Core Strategy identifies a number of major housing regeneration sites in the borough with a combined capacity of 24,000 new homes by 2030, including 10,800 new homes at Barking Riverside (subject to the provision of new transport links); 4,500 new homes at South Dagenham and 6,000 new homes in Barking Town Centre.
Social Amenities	• Barking and Dagenham has 25 officially recognised parks and green spaces covering some 492 hectares. The parks are complemented by a network of open spaces and are linked by a network of wildlife corridors and public Rights of Way. • A survey undertaken as part of the development of the Council's Parks and Green Spaces Strategy (2004) revealed that parks and open spaces are the most used of all the borough's amenities (43% of respondents used them regularly for a variety of purposes), • Some 42% of people living in the area were satisfied with the parks and open spaces, although this compares less favourably with the London average of 52%.

2.3 Local Transport Context

Overview

2.3.1 Barking and Dagenham is well served by **radial east - west rail and road networks**, providing good links to Central London by train, Underground services and by car. Bus services predominantly follow a similar pattern, providing good connectivity to a range of key local destinations. The borough also has a fairly extensive, but fragmented, **network of cycling and walking routes**.

2.3.2 In contrast, however, **north – south transport links in Barking and Dagenham are inadequate** and connectivity between certain parts of the borough and key sub-regional hubs such as Stratford, particularly by public transport, is poor. The problem is exacerbated by the **existence of manmade barriers** such as railway lines and major trunk roads like the A12 and A13. In general, **buses are more widely used than train/tube services for journeys within the borough**, due principally to the lack of stations and north - south rail links. In addition, despite the borough's proximity to the River Thames, the **current lack of riverboat services** in the area means that opportunities to promote travel by river remain unfulfilled.

2.3.3 Within the borough, there are several **key interchange points**. These allow various types of interchange between transport modes - for example, bus/bus, bus/rail and bus/underground:

- **Barking Town Centre** is the borough's principal transport interchange and has extremely good accessibility from all parts of the borough. The town centre generates many trips because of the facilities it has to offer, whilst the rail and Underground services increase the range of destinations that may be reached from here;
- **Dagenham Heathway** has similar bus and Underground links, but also benefits from bus services linking the north and south of the borough;
- **Becontree Heath** is an important bus interchange as it has links with most parts of the borough. However, the bus station has limited facilities and there is no convenient rail or Underground station nearby;
- **Dagenham Dock** is the newest transport interchange in Barking and Dagenham, enabling passengers to change quickly between rail and ELT. However, it is not served by local bus services and therefore public transport access north of the station is poor. The provision of new cycle parking facilities and lifts at the station has improved conditions for cyclists and pedestrians.

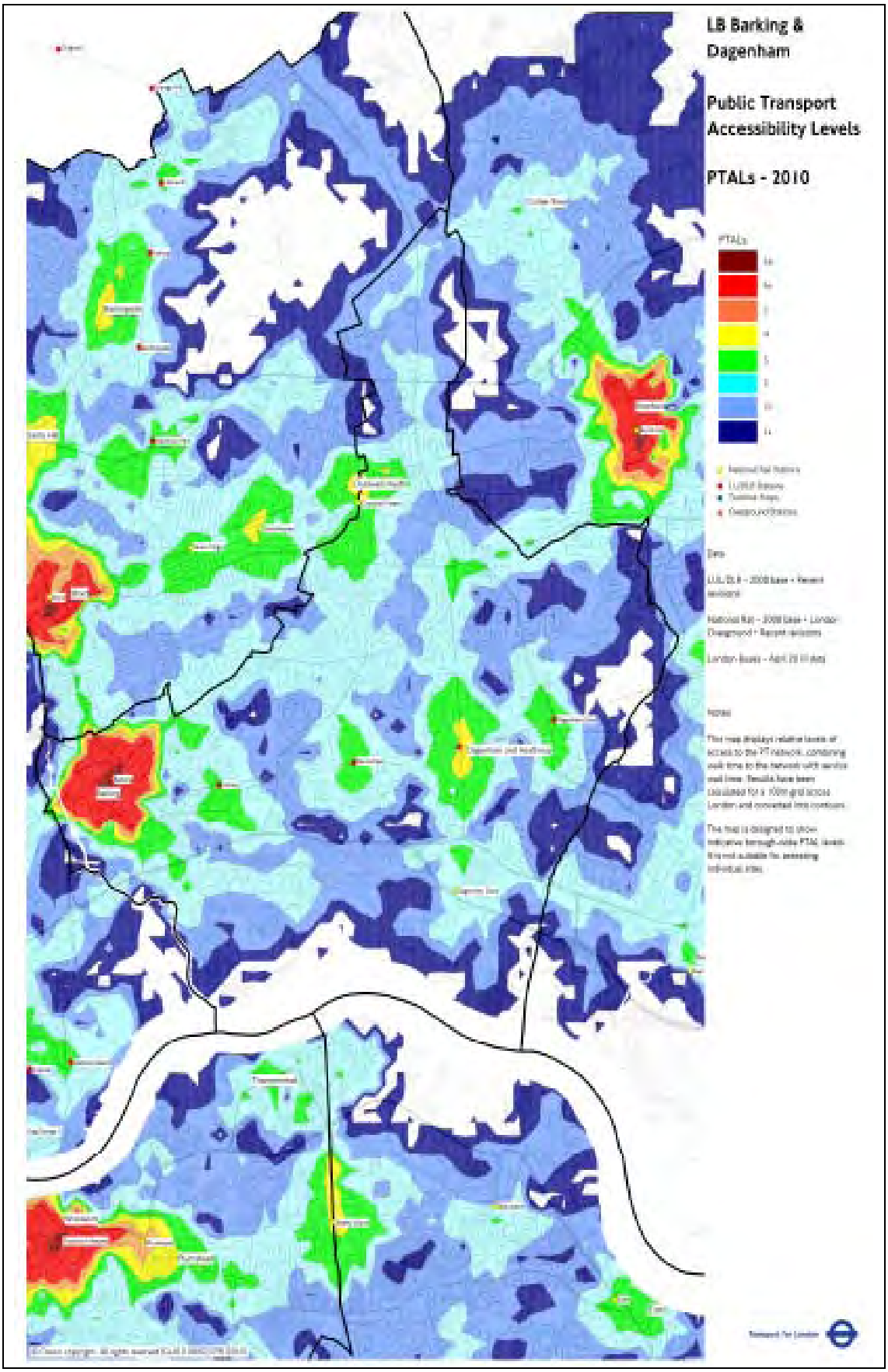
2.3.4 An overview of **transport network/service provision** in Barking and Dagenham and the wider Thames Gateway area is provided in Figure 2.2, overleaf.

2.3.5 Figure 2.3 shows levels of public transport accessibility in Barking and Dagenham, derived from TfL's PTAL tool. An 'Accessibility Index' is calculated which is then allocated to bands of PTALs, where band 1 represents a low level of accessibility and 6 a high level. A value of zero would indicate no access to the public transport network within the specified catchment area.

2.3.6 The pattern of accessibility across the borough is fairly complex, although ultimately shows that **locations closer to the main town and district centres, and key interchange points, benefit from higher levels of public transport accessibility than those further out**. The influence of geographical features such as Eastbrookend Country Park is clearly visible, and there are recognisable patterns reflecting the presence or absence of bus and rail corridors (e.g. Marks Gate). Significantly, the pattern of accessibility shows that public transport access to the Key Regeneration Areas within London Riverside is very poor. London Riverside has the potential for over 15,000 new homes (excluding Barking Town Centre), but it is clear that there needs to be significant public transport improvements to make this happen.

Figure 2.2: Borough transport networks and services

Figure 2.3: Public transport accessibility – Barking and Dagenham



Borough Transport Provision

2.3.7 Table 2.2 (overleaf) sets out in more detail the **nature and extent of the key transport networks and services** in Barking and Dagenham, including the highways, public transport and cycling/walking networks.

2.3.8 In addition to these, there are a number of other **complementary transport networks/services** in Barking and Dagenham which are integral to transport operations in the borough and which are important in the context of understanding the various problems and opportunities. These include:

- **Community Transport services**, such as the TfL run **Dial-a-Ride** service and the **Taxicard** scheme managed by London Councils. These provide free or subsidised door-to-door transport for people who have serious mobility impairments or have difficulty in using conventional public transport. Voluntary sector organisations, such as the Disablement Association of Barking and Dagenham (DABD), also operate similar services in the borough. In addition, the Council provides a **'Freedom Pass'** for the disabled and the elderly. These permits entitle holders to free travel on buses/rail services between certain times. There is also a **Shopmobility** scheme in Barking Town Centre which is part subsidised by the Council. Shopmobility provides manual and powered wheelchairs and scooters to help people with limited mobility to shop and use the town centre facilities.
- **Taxis** and other **Private Hire Vehicles (PHVs)**, such as licensed mini-cabs. These can play a complementary role to mainstream public transport provision. Some taxi access is provided at key stations/transport interchanges and at locations attracting significant numbers of the public (e.g. shopping centres).
- There are 95 **road bridges and other road bearing structures** within the borough, 20 of which are on the TLRN. There are 64 load-bearing structures on borough roads, 10 of which are the responsibility of Network Rail/London Underground. Responsibility for the assessment/maintenance of the remainder lies mainly with the Council.
- There are currently 10 **major public off-street car parks** in the borough, providing some 2,000 parking spaces, principally for the use of shoppers and commuters. Six of these car parks are located in Barking Town Centre, and account for around 1,400 of the total spaces available. On-street parking in Barking and Dagenham comprises principally of **residents parking** (permit and non-permit) and public **pay-and-display/metered parking**. A number of dedicated **disabled drivers and doctors parking spaces** are also provided on-street, as well as parking spaces for **car club** vehicles. In addition, there is provision for businesses in the form of **vehicle loading/unloading bays** as well as dedicated parking spaces for **motorcycles and cycles**.

Table 2.2: Borough transport networks and service provision

Mode/ Network	Extent/Distribution of Infrastructure and Services
Road Network	• There are some 322 km (200 miles) of roads in Barking and Dagenham, comprising **trunk (TLRN)** roads (including the A12, A13 and A406), **borough principal roads** (including the A124, A118, A1153, A123, A1112 and A1083) and **minor roads**. The Council is responsible for maintaining all borough principal and minor roads. TfL maintains the A12 and A406, whilst a Design, Build, Finance and Operate (DBFO) company operates and maintains the A13. Access to central London and the **national road system** is generally good, particularly via the A406, A12 and A13 trunk roads. • The DBFO contract delivered a number of improvements along the A13, including the Mover's Lane Underpass, completed in 2003. Other key requirements of the contract include the replacement of the Lodge Avenue Flyover by 2025 (there may be opportunities for earlier implementation of this scheme). A scheme has also been prepared for a grade separated junction at the A13/Renwick Road junction to serve Barking Riverside and to improve traffic flows on this heavily congested part of the A13. Due to funding issues there is currently no set timetable for this critical improvement. • To make best use of the existing road network and to assist in the delivery of wider regeneration, environmental and socio-economic goals, the Council has defined a **hierarchy of roads** and structured the use of those roads accordingly. Essentially, trunk roads are roads whose function is to provide for longer journeys involving both people and goods, to link London to the national road system, and to reduce travel demands on borough roads. Borough principal roads are those on which the traffic function will continue to predominate; linking trunk roads, strategic centres, and being the main bus routes. On minor roads, there is a presumption in favour of access and amenity, particularly for residents, buses, pedestrians and cyclists.
Mainline Rail	• Three train operators provide rail services to the borough; however direct access to the rail network is limited because there are only three mainline railway stations serving the borough - Barking, Dagenham Dock and Chadwell Heath (which falls just within the London Borough of Redbridge). They include: o **C2C**, which connects London to Southend and calls at Barking station and Dagenham Dock. There is an average of 9 trains an hour in each direction serving Barking Station. There are four services an hour at Dagenham Dock at peak times and two services an hour off peak. A key requirement of the new Essex Thameside franchise (due to commence in 2013), is that all routes to London Fenchurch Street will be expected to be capable of operating 12-car trains after Network Rail has completed a programme of platform lengthening. o **London Overground** connects Barking to Gospel Oak and provides a connection to the North London Line. It calls at Barking with an average of 4 trains an hour in each direction; o **National Express East Anglia** connects London to Ipswich and beyond and calls at Chadwell Heath. • There are a number of active **rail freight facilities** in Barking and Dagenham, including the Freightliner/P&O intermodal terminal and the Ford intermodal terminal in Dagenham. These account for a growing proportion of rail freight movements undertaken in the borough.

Mode/ Network	Extent/Distribution of Infrastructure and Services
London Underground	• The **District Line** provides an east - west link with Central London and West London. It stops in the borough at Barking, Upney, Becontree, Dagenham Heathway and Dagenham East and terminates at Upminster in the neighbouring borough of Havering. Although the District Line shares the same route as the London to Southend railway line, the only common stops are Barking Station and Upminster. The stations at Barking, Upney and Dagenham Heathway are equipped with lifts, enabling step-free access for all between street level and platforms. From 2013, 80 new trains will be introduced on the district line, providing step free access at all stations apart from Becontree. Once the new enhanced signaling system is introduced by 2018, capacity on the District line will increase by 24%. • The **Hammersmith and City line** terminates at Barking station and provides another east - west link across London, connecting the borough with the City, and Hammersmith to the west. From 2011, 53 new seven-car trains will be introduced. Once the new enhanced signaling system is introduced by 2016, capacity will have increased by 65%.
East London Transit	• **East London Transit (ELT)** is a new bus based transit system linking Ilford to Barking Reach/Dagenham Dock via Barking Town Centre. It aims to provide a fast, frequent and reliable public transport service - linking the wider transport network including National Rail, London Underground and other local bus services. The first phase of the service (ELT1a) was launched in February 2010. • ELT1a comprises two bus routes - EL1 and EL2. Route EL1 runs between Ilford and Thames View Estate via Barking. Route EL2 follows the same route but continues along Choats Road to Dagenham Dock station. Both services operate 24 hour a day, seven days a week. The new service replaces route 369 and part of route 179. The second phase of the service (ELT1b) will run from Barking town centre to Dagenham Dock station via Barking Riverside and is scheduled to begin construction in 2011, with services starting in 2013.
Local Buses	• There are currently 27 **bus routes** in operation in Barking and Dagenham, providing links to a range of key destinations within the borough, as well as to the major centres of Rainham, Romford, Ilford and Stratford in neighbouring boroughs (where many services start and end). However, there are no direct bus services to Central London. • 23 routes run daily services, with 4 running on fewer days. Daily services operate mainly between the hours of 6am and midnight, although some services begin earlier and finish later. Within the borough there are two major operators, Stagecoach and First, who operate approximately 75% of the services. Other operators include Arriva, East Thames Buses and Blue Triangle Buses. • The majority of services run in an east - west direction, with slight variations north and south. North - south links within the central area of the borough are fairly comprehensive, but the areas to the north of the A12 (such as Marks Gate - one of the most deprived parts of the borough) and the industrial areas south of the A13, are very poorly served, with no or few connections to other parts of the borough. The problems are exacerbated by the existence of man made barriers such as the A12, A13 and railway lines. • Since 2004 we have implemented around 40 major bus improvement schemes and have made 93 **bus stops** fully accessible at a cost of over £4.5 million, resulting in significant improvements to infrastructure – including the provision of new bus shelters, improved lighting and better travel information. All buses are low-floor and wheelchair accessible.

Mode/ Network	Extent/Distribution of Infrastructure and Services
River Thames and other Waterways	• The River Thames remains largely underutilised as a passenger transport network - there are no scheduled or other passenger services in operation east of the Thames Flood Barrier at Woolwich. • The area of the Thames around Barking Reach does witness significant freight activity. Over half of London's **safeguarded wharf sites**, identified by the London Plan, are in this area. These key strategic terminals handle significant volumes of river borne freight every year.
Cycling	• The Council has been working to increase levels of cycling in the borough through the provision of new and improved cycling facilities. Central to this has been the development of a number of new on and off-road cycle routes and associated infrastructure, including: - 7km of **'Greenways'** routes, providing safe, continuous cycle links through a number of borough parks; - Implementation of new/improved cycle lanes and crossing facilities, improving safety for cyclists on the **London Cycle Network**; - Implementation of comprehensive **local cycling routes** linking key destinations in the borough; and - The Barking to Tower Hill **Cycle Superhighway**, launched in July 2010 in collaboration with TfL. • A range of **cycle parking** facilities exist at key destinations, such as shopping areas, libraries, council buildings, business areas and transport interchanges.
Walking	• Walking is already a common mode of travel for short journeys and pedestrian footfall is high in certain parts of Barking and Dagenham, especially Barking Town Centre and Dagenham Heathway. As such, and to support people who currently walk and to encourage more journeys on foot, a range of pedestrian facilities and walking routes have been developed, providing links to a range of key destinations in the borough. These include: - Designated **'safe routes to schools'**, as a means of encouraging more children to walk to school; - Eight **'Just Walk'** routes set up in the borough's parks, with the aim of encouraging people to walk to improve their health; and - The **Thames Path** 'City to Sea' pedestrian/cycling route, and other local links to some of the 'strategic walking' routes in London. • There are a number of public **Rights of Way** in Barking and Dagenham, predominantly located in the more rural eastern part of the borough. This 16km network comprises a range of pedestrian, cycling and equestrian routes in varying states of repair. Further information is provided in the Council's Rights of Way Improvement Plan.

Transport Network Usage and Service Demand

2.3.9 This section summarises key trends and developments relating to transport and travel in Barking and Dagenham and across London. In particular, it provides information on the **current demand for and use of** the various transport modes and services within the borough and the wider area. The headline findings are as follows:

- The **amount of travel in London has grown substantially** – up 24% since 1993. Some 24 million trips are currently made in, to or from London;
- There has been a **substantial net shift away from private transport and towards public transport** in London – some 9% between 1993 and 2009;
- **Road traffic volumes in London have fallen** in recent years – down 6% since 2000. However, **road traffic congestion has been increasing in all areas of London** for some years;
- The **number of cycle journeys in London has increased** – up 61% since 2001. The **proportion of walking trips in London has remained stable at around 30%**;
- **The total weight of freight lifted in London decreased by 23% in 2009**. Some 107 million tonnes of freight were carried on the Capital's roads in 2009 – about 86% of all freight lifted in London. The combined total amount of freight lifted by rail and water in 2009 was 14.8 million tonnes.
- Licensed taxis and private hire vehicles (PHVs) are both significant transport modes in London. **PHVs and driver numbers are continuing to increase**, with almost 49,000 vehicles and 59,000 drivers registered in 2010;
- The **number of journeys made by the Dial-a-Ride service in London has increased** over recent years, with over 1.2 million trips made in 2009/10. The **number of subsidised journeys made under the Taxicard scheme has continued to increase**, with over 1.7 million journeys made in 2009/10.

2.3.10 Further information on some of the key borough transport and travel trends are set out in Table 2.3, below.

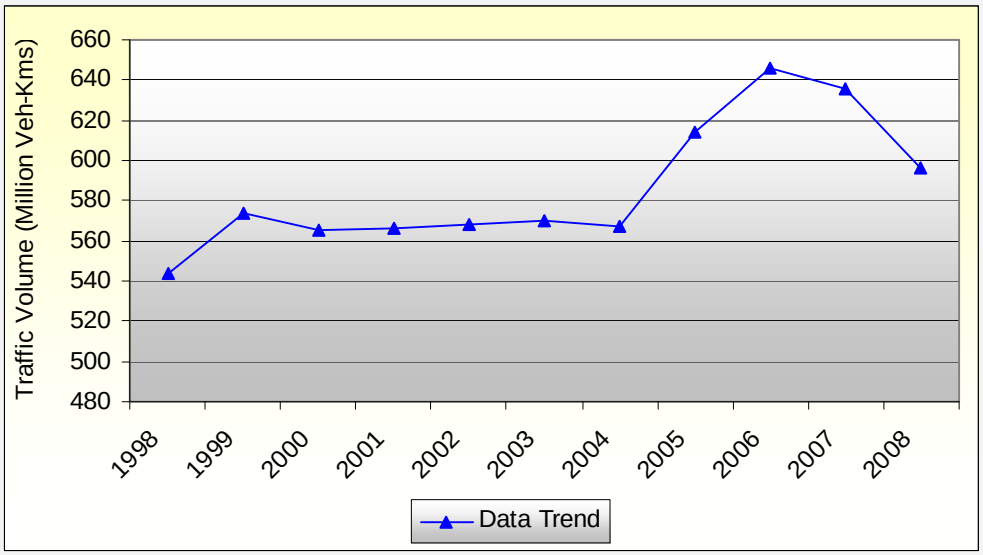
Table 2.3: Borough transport/travel trends

Criteria	London/Sub-Regional Trends	Borough Trends
Road Traffic Volumes/ Speeds	• London-wide, there has been a 6% decrease in traffic volumes between 2000 and 2009. Traffic volumes in outer London have remained broadly stable over the same period. • Over the period from 1980/82 to 2007/09, average weekday London main road traffic speeds fell by 18% in the morning peak period and 12% in the evening peak period.	• Traffic volumes in Barking and Dagenham remained relatively stable between 2001 and 2004, but then increased sharply. Overall, they were 5% higher in 2008 than in 2001 (see Figure 2.4). • Journey time reliability on the local road network has decreased and estimated total daily vehicle delay has increased.
Journeys by Car	• Between 1993 and 2009, the proportion of journeys made by private motorised transport (principally car) in London has fallen from 50% to 41%. • Of the 4.3 million trips per day originating within the East London sub-region (2006/07–2008/09 average), only 42% (circa 1.8 million) were made by car – the lowest of the 5 sub-regions. • Car ownership levels in London are lower than the rest of the UK, with some 40% of households not having access to a car.	• Around 40% (circa 123,600) of trips in Barking and Dagenham are currently made by car (see Figure 2.5). This is one of the lowest of the Outer London boroughs. • The borough has lower than average households with one, two or more cars.
Public Transport Patronage	• Between 1993 and 2009, the proportion of journeys made by public transport in London rose from 24% to 33%. • Total passenger kilometres travelled on the public transport network rose by almost 70% between 1991/92 and 2009/10. • Bus network seeing a 95% increase in patronage over this period. Underground patronage has seen steady growth, reaching its highest ever recorded level in 2008/09.	• Passenger demand has been growing rapidly on C2C rail services and has increased by around 4% since 2007. Some 1,047 passenger kilometres were travelled in 2008/09. • Patronage on the local Underground network (District and Hammersmith and City lines) has grown steadily (19.2%) since 2005, with some 200 million passengers travelling on the District line in 2008/09 alone. • In the four year period between 2006/07 and 2009/10, the total number of trips made on bus services serving the borough has increased by around 23%, from 71 million trips to 87 million trips.
Cycling and Walking	• Cycling journey stages in London increased by 61% between 2001 and 2009, including a 5% growth between 2008 and 2009. However, cycling continues to represent a relatively low	• The mode share for cycling trips originating in Barking and Dagenham is currently 1%. This is one of the lowest figures in London, and significantly lower than that for LB Hackney (8%).

Criteria	London/Sub-Regional Trends	Borough Trends
	proportion of travel - just 2% overall. • Just over one-third (38%) of Londoners' cycle trips are commuting to or from work. Trips for shopping or leisure account for a further 43% of trips. • The trip based mode share of walking in London remains at 2000 levels (circa 24%).	• Figures for Barking and Dagenham reveal that 37% of all trips originating in the borough are made on foot.
Freight Transport	• Circa 107 million tonnes of freight were carried on London's roads in 2009 – approximately 86% of all freight lifted in London. Of this, 41 million tonnes was moving wholly inside London. • Waterborne freight handled at the Port of London amounted to 45 million tonnes in 2009 – down 14% from 2008. Waterborne freight to and from Thames wharves accounts for about 7% of freight lifted in London (circa 8.1 million tonnes). • Circa 7.5% of all rail freight moved travels via London, although only 1% originates from there. The amount of rail freight moving through London has fallen recently – down 8% from 2008. Circa 6.7 million tonnes of freight was lifted by rail in 2009.	• No figures are available at the borough level with regards road freight trends, although there has been a noticeable increase in the number of local road freight movements in recent years. • Some 3.1 million tonnes of cargo were handled at the 11 main operational terminals in Barking and Dagenham in 2001, saving some 320,000 lorry movements. • No figures are available at the borough level with regards rail freight trends, although the proximity of the Channel Tunnel Rail Link and several active rail freight terminals would account for a large proportion of freight movements on the local rail network.
Demand Responsive Transport	• Private hire Vehicles (PHVs) and driver numbers are continuing to increase, with almost 49,000 vehicles registered in 2010. • The number of taxi drivers licensed in London has remained fairly stable since 2001. However, the number of taxis licensed is at historically high levels. • The number of journeys made by the Dial-a-Ride service in London has increased over recent years, with over 1.2 million trips made by the 50,000 users in 2009/10. • Taxicard scheme members and the number of subsidised licensed taxi journeys made under this scheme have continued to increase, with over 1.7 million journeys made by the 83,000 members in 2009/10.	• There are currently 962 licensed taxi drivers operating in barking and the neighbouring boroughs of Havering, Newham and Redbridge. • At the borough level, the number of Dial-a-Ride trips has increased in recent years (up 3.9% between 2008/09 and 2009/10), although membership has decreased slightly (down 1% during the same period). • Taxicard membership has increased over the course of the last year (up 10.1%), as did the number of trips made (up 3.2%).

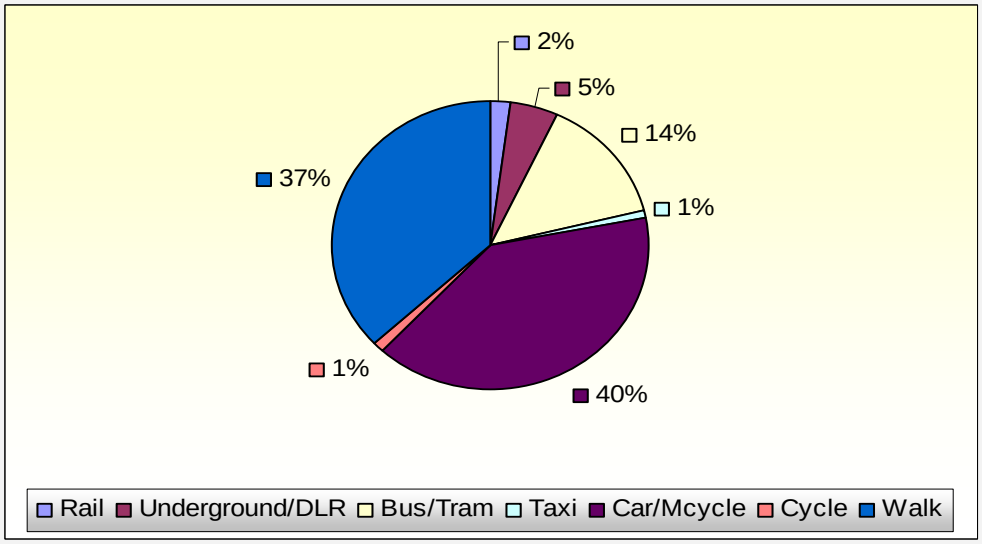
Source: Travel in London Report 3, TfL, 2010

Figure 2.4: Borough traffic volumes (million vehicle kilometres)



Source: Road Statistics, DFT, 2009

Figure 2.5: Modal shares (main mode of trip) – 2006/07 to 2008/09 borough average



Source: TfL Planning LTDS Survey, 2009

Travel Patterns and Behaviour

2.3.11 TfL's annual London Travel Demand Survey (LTDS) provides a unique window on the travel behaviour of London residents and is a major planning resource. The results for the latest (2008/09) survey suggest that **travel by London residents fell sharply**, with the number of daily trips down 8% to 17 million compared with 2007/08. The fall in rates of travel was greatest among residents of Outer London, and its intensity varied considerably by sub-region of London, being particularly intense among residents of East London. Table 2.4, below, provides a summary of the key findings.

Table 2.4: LTDS (2008/09) – summary of key findings

Criteria	Key Borough/Sub-Regional Trends
Trip Origin/ Destination	• 22% of all trips (circa 3.8 million) made by London residents have an origin or destination in the East sub-region. • Around two thirds of a million trips (4%) are made travelling from the East sub-region to elsewhere, and a similar number from elsewhere to the East sub-region. • There is a high level of travel between most boroughs in the East sub-region (between two and three in ten trips are made between boroughs). • Barking and Dagenham has a particularly high level of travel within the region, with 88% of trips being made wholly within the East and only 12% elsewhere.
Trip Rates	• Residents of the East sub-region have the lowest trip rate, at 2.3 trips per person per day, compared to a Greater London average of 2.6 trips. The figure for Barking and Dagenham is 2.4. • Distance travelled is also below the London average (14.9), at around 13 km per person per day. The figure for Barking and Dagenham is 13.6.
Mode of Travel	• East London residents were the least likely to travel by car (42% of trips), reflecting, in part, lower levels of ownership, but also reflecting good public transport network in the region (rail/underground mode share is 24%). • For all sub-regions, around a third of originating trips are less than 1kilometre in length; in the east sub-regions, three quarters of these trips are walked and most of the rest are made by car. • On average, more trips are made on a weekday than at the weekend, with the fewest made on Sundays, although the difference between trip volumes on an average weekday and Saturday in all the sub-regions is often quite small. • Trips made at the weekend are more likely to be made by car in all sub-regions. • Across the four outer sub-regions, between a quarter and a fifth of weekday trips are made during the peak periods and around 4 in 10 trips are made in the inter-peak. At the weekend, more trips are made between 10am and 4pm than at any other time. This pattern is strongest in East London.
Trip Purpose	• The profile of trips by purpose was fairly similar for residents of all sub-regions, although residents of the East sub-region were somewhat more likely to travel for work (24%) and education purposes (15%), and less likely to make discretionary trips for shopping and leisure purposes. However, there are significant variations between the different East London boroughs, particularly those inner and outer London boroughs. • The share of trips for shopping and leisure purposes is particularly high in Barking and Dagenham, at 60%. This reflects the different age profiles of the populations of these boroughs; Barking and Dagenham has a higher proportion of older people with 17% of population over 60.

Source: London Travel Demand Survey 2006/07 – 2008/09, TfL, 2010

Other Key Features and Trends

2.3.12 Table 2.5, below, summarises some of the other key transport and travel related features and trends in London, the sub-regions and Barking and Dagenham. The headline findings are as follows:

- **Reliability of the public transport networks in London has improved in the last decade**, although there has been a reduction in the total kilometres operated in recent years;
- **Customer satisfaction with transport services in London has increased** over the last 10 years, particularly with bus services;
- There have been **substantial reductions to the numbers of people killed and injured on London's roads** in recent years;
- There has been a **marked decrease in incidences of crime on the transport network** in London in recent years, despite increasing passenger numbers;
- **Ground based transport emissions of CO_2 in London have fallen by 5.3% since 2003**, reflecting decreases in levels of private road traffic, extended public transport networks, and improvements to the fuel efficiency of vehicles;
- **London's outdoor air quality remains poor**, with long-run trends for both fine particles (PM_{10}) and nitrogen dioxide (NO_2) showing only relatively slow year-on-year reductions;
- Since 2000, **there has been a progressive improvement in the condition of streets-related assets** across London.

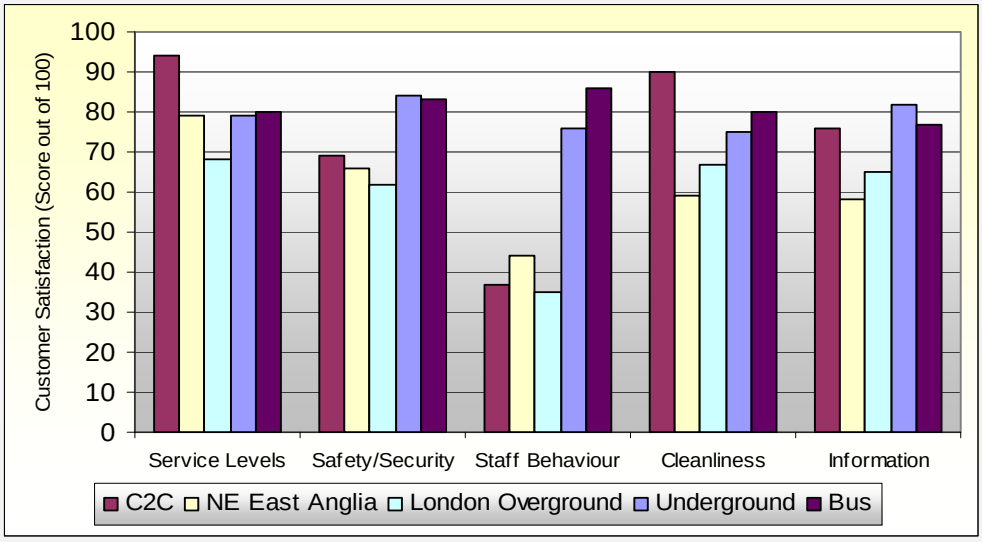
Table 2.5: Other key features/trends

Criteria	London/Sub-Regional Trends	Borough Trends
Public Transport Reliability	• Around 96.6% of scheduled Underground train kilometres and 97.1% of scheduled bus kilometres were operated in 2009/10 - this is despite the major works programme on the Underground and increased levels of congestion on the road network. • Excess journey times on the Underground have improved over the last decade, down from a high of 9.7 minutes in 2002/03 to a low of 6.4 minutes in 2009/10. • Both 'actual' and 'excess' waiting times for buses have progressively improved over the same period – reflecting both additional buses and improved bus service reliability.	• There has been a marked improvement in recent years in both service reliability and punctuality on public transport services serving Barking and Dagenham. • Some 96.6% of scheduled C2C services were operated during 2008/09, with around 95.3% of services arriving on time. Similar improvements were seen on the Underground, with some 96.7% of District Line services operating in this period, with around 96.9% arriving on time. • The EWT figure for bus services in Barking & Dagenham in 2009/10 was 1.00 – an improvement of some 37.5% on the 1999/2000 figure of 1.60.
Public Transport Customer Satisfaction	• The composite mean score in 2009/10 for overall satisfaction of those travelling on the network with the operation of the principal public transport modes in London was 79/100. • The mean score for satisfaction with bus journeys in London was 79/100, whilst the mean score for Underground services was also 79/100. Customer satisfaction has increased at a steady rate over the last decade.	• Surveys undertaken by Passenger Focus reveal that for those public transport services serving the borough (bus, Underground and rail) passengers are most satisfied levels of service and safety/security. Passengers appear less satisfied with aspects of staff behaviour, cleanliness/ and availability of information (see Figure 2.6 for further details).
Road Safety	• Total fatalities and serious injuries on London's roads were 52% lower in 2009 than the 1994/98 average. • The number of child fatalities and serious injuries decreased by 72% and the number of slight injuries decreased by 37% over the same period.	• Total fatalities and serious injuries on Barking and Dagenham's roads were down 58% between 1994/98 and 2008. • Child fatalities and serious injuries were down 70%, and slight injuries down 31% during the same period. Figure 2.7 illustrates the key accident trends in the borough.
Crime and Security	• Bus related crime in 2009/10 was 8.2% lower than the previous year, with the rate of crime falling to 11.1 crimes per million passenger journeys. • Crime on the Underground/DLR has reduced slightly in the last	• Total crimes recorded on the local bus network have fallen significantly in the last four years – down some 63% from a figure of 793 in 2006/07 to 291 in 2009/10, currently one of the lowest figures in the sub-regional area.

Criteria	London/Sub-Regional Trends	Borough Trends
	year, with the crime rate falling to 12.8 crimes per million passenger journeys (a 1.5% reduction).	
Environmental Issues/ Pollution	• Transport is a major source of CO_2 emissions, accounting for some 22% (9.9 million tonnes) of Greater London's total CO_2 emissions in 2008. Over three-quarters of this comes from road based transport. • Whilst total CO_2 emissions in London have increased by 7% since 2003, ground based transport (i.e. excluding aviation) emissions of CO_2 in London fell by 5.3% over the same period. • London's outdoor air quality (particularly in Inner London) continues to be the worst in the UK, and continues to breach National and European Union health-based air quality objectives. Long-run trends for both fine particles (PM_{10}) and nitrogen dioxide (NO_2) show only relatively slow year-on-year reductions.	• Borough-wide CO_2 emissions appear to be decreasing, with around 839 kilo-tonnes of CO_2 produced in 2008, down from 929 kilo-tonnes in 2005. Transport currently accounts for some 18% of Barking and Dagenham's total CO_2 emissions. • There has been a slight increase in levels of harmful local atmospheric pollutants over the last few years. An assessment of air quality in the borough undertaken in 2008 revealed high concentrations of NO_2 in a number of residential areas, as well as along several major roads. As such, it was recommended that the whole of the borough be declared an Air Quality Management Area.
Highways Asset Condition/ Satisfaction	• The condition of the TfL road network (TLRN) in London appears to be improving. The percentage of carriageway not in need of repair has fallen from 85.6% in 2002 to 93.5% in 2009. • Satisfaction with the quality of streets and pavements has decreased in the last year following an increase in 2009. Walkers were the most satisfied (64%), whilst cyclists were the least satisfied (49%) with the quality of London's streets. Car users' satisfaction has decreased since 2008.	• The percentage of principal roads in the borough in need of repair has declined from 11.9% in 2003/04 to 5% in 2009/10 – a 57.9% improvement.

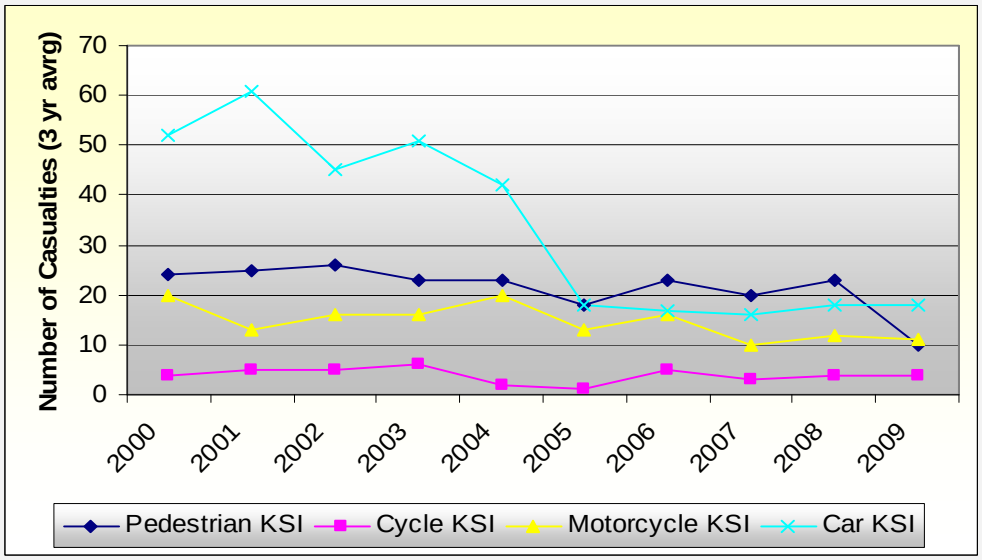
Source: Travel in London Report 3, TfL, 2010

Figure 2.6: Selected customer satisfaction indicators for public transport services in Barking & Dagenham (2009)



Source: Passenger Focus, 2009

Figure 2.7: Borough accident trends by mode (killed or seriously injured)



Source: TfL London Road Safety Unit,2009

2.4 Problems and Opportunities

2.4.1 Despite significant progress in recent years, there are still considerable challenges to improve transport in Barking and Dagenham. Table 2.6 (overleaf) provides an **overview of the key transport and land use problems facing the borough, and the principal opportunities to overcome them**. It draws on the information provided in previous sections, and provides the context for the various objectives and measures designed to tackle these issues and deliver the MTS goals.

Table 2.6: Problems and opportunities

MTS Goals	MTS Challenges	Problems	Opportunities
Support economic development and growth	Supporting sustainable population and employment growth	• Over the next 20 years the borough's population is expected to increase by 65,000, whilst the resident workforce is expected to increase by 32,000. Barking and Dagenham is clearly important to helping London sustain its world city status as it has the capacity to absorb a significant part of its growth. Most of this increase will be in the borough's key regeneration areas within London Riverside which lies at the heart of the Thames Gateway. London Riverside is currently poorly served by public transport and these numbers will simply not be realised without significant improvements to public transport links and the highway network. For example, it is no coincidence that there is currently 1.3 million square feet of vacant B8 warehousing in Dagenham.	• Major developments such as Barking Riverside are dependent on improvements to public transport infrastructure and services (e.g. DLR extension, ELT1b). For example, the current S106 agreement limits the development to 1499 new homes without a Transport and Works Act for the DLR. • Local businesses must be listened to and their concerns addressed. Consequently, bus services must serve the employment areas south of the A13 and provide links to the north of the borough. These areas, particularly the Dagenham Dock Sustainable Industries Park have significant potential for employment generation but this will be jeopardised if public transport is not improved. • Further improvements must be made to the A13. The Lodge Avenue flyover replacement is due before 2025, and the Renwick Road grade separated junction is needed to alleviate congestion on this vital corridor and to provide access to Barking Riverside. • New developments to have robust travel plans.
	Improving transport connectivity	• There is poor public transport connectivity between certain parts of the borough, to sub-regional hubs and important destinations in and outside the borough including: **Bus -** o Access from areas north of the A13 to the employment areas south of the A13; o Barking to Queen's hospital; o Access generally to Barking College; o Barking Town Centre to the Royal Docks;	• UEL development has significant S106 contribution for improvements to bus services between the site and Barking Station. • Any review of the number 5 bus service needs to look at scope of routing it to Queen's hospital • Junction improvement schemes to reduce bottlenecks (e.g. A13/Renwick Road junction, A112/A12, A124/A406 and A1153/A13). • Trains currently run from Barking to Stratford in the

MTS Goals	MTS Challenges	Problems	Opportunities
		o Generally poor bus connectivity between north and south of the borough which is exacerbated by barriers such as the A12/A13; o Bus accessibility with the Barking Riverside and South Dagenham Key Regeneration Areas. **Rail -** o Access to Stratford from Baking Town Centre; o Quality of interchange with bus services at Barking Station and Dagenham Dock Station; o Access to rail/underground stations at Barking Riverside. • Issues surrounding quality/frequency of some bus and rail services. Congestion and overcrowding, particularly at peak hours, are major factors restricting the efficiency of services. • Fragmented nature of many of the borough's cycling and walking links prevent better utilisation of this asset by cyclists and walkers. Lack of connectivity and poor state of repair of many routes cited as a common problem by users.	evenings. Need to establish a business case for routing more services to Liverpool Street via Stratford, taking advantage of capacity freed up by Crossrail. • New developments, particularly in London Riverside, will provide impetus for new bus routes, especially north-south routes. • Anticipated rail service improvements have potential to increase capacity and reduce overcrowding. Planned implementation of Crossrail will improve connectivity to Central London/sub-regional hubs. • DLR extension to Dagenham Dock will link London Riverside with Docklands and Central London. • Completion of the borough's cycle and walking network will encourage more cycling and walking. • Two new bridges proposed across the River Roding in the Abbey Road/Freshwharf area.
	Delivering an efficient and effective transport system for people and goods	• Performance of the road network has worsened. Average journey speeds and journey time reliability have fallen and congestion has worsened. • Increase in road freight movements adding to problems of congestion. Resulting vehicle delays has an economic cost to businesses. The MTS forecasts a 60% growth in container traffic at the London Gateway Port in Essex and this will further increase freight transport to and from London along the A13. • Increased pressures being put on borough's road network causing a wide range of maintenance issues. Problems exacerbated by size of network	• Developments in technology, such as CCTV and real-time travel information to aid management and control of congestion and help people avoid delays. • More efficient control/management of on-street parking and waiting and loading restrictions to ease congestion and smooth traffic flow. • Further promotion of Smarter Travel methods (e.g. Travel Plans, Car Clubs) to reduce car commuting and peak hour congestion. • Partnership working with lorry operators to support the efficient working of freight operations. • Greater use of rivers and rail to transport freight. The

MTS Goals	MTS Challenges	Problems	Opportunities
		and number of structures. • Issues over ownership/responsibility of various assets/structures and differing stakeholder priorities making it difficult to coordinate maintenance. • Congestion caused by on-street parking and lack of adequate enforcement. • Lack of availability of and growing demand for public and private parking spaces. This results in increased traffic generation/environmental impacts. • Difficulty faced by motorists in finding parking spaces due to inadequate signage/information. This increases traffic circulation/congestion.	borough has a large number of safeguarded wharves and there is potential for a new rail freight terminal. • Adoption of asset management plan approach to improve management/maintenance of highways network and structures. • Development of borough parking strategy advocating an integrated approach to parking (e.g. location and amount, cost, enforcement, business related, links with public transport, etc).
Enhance the quality of life for all Londoners	Improving journey experience	• Performance of road network has worsened. Average journey speeds and journey time reliability have fallen and congestion has worsened. • Issues surrounding quality/frequency of some bus and rail services. Congestion and overcrowding, particularly at peak hours, are major factors restricting the efficiency of services. • Common problems faced by many cyclists and pedestrians include high traffic volumes, route severance, poorly maintained cycle paths, traffic calming which takes no account of cyclists and cluttered footways, and fear of crime/collisions. These are seen as a deterrent against cycling/walking in the borough.	• Developments in technology, such as CCTV and real-time travel information to aid management and control of congestion and help people avoid delays. • Anticipated rail service improvements have potential to increase capacity and reduce overcrowding. Planned implementation of Crossrail will improve connectivity to Central London/sub-regional hubs. • Road safety, traffic management and public realm schemes will greatly improve conditions for cyclists and pedestrians. Barking Town Centre Access Study identifies range of potential solutions for this area.
	Enhancing the built and natural environment	• Concerns over the quality of the street scene in town centres, with residents/businesses calling for the development of a better quality local environment.	• Coordinated programme of street scene enhancements to improve the public realm and enhance peoples' quality of life.
	Improving air	• Air quality adjacent to some sections of the highway	• Borough declared an Air Quality Management Area

MTS Goals	MTS Challenges	Problems	Opportunities
	quality	network is poor. • Increase in HGV movements has associated environmental impacts (e.g. increased pollution, noise, vibration, etc.).	in 2008 with a view to tackling pollution problems. • Partnership working with lorry operators to reduce the impact of HGVs on the environment and improve air quality.
	Improving noise impacts	• Traffic noise a problem in some areas where both vehicle speeds and traffic flows are high. Some areas of the borough affected by noise from aircraft flying to/from nearby London City Airport. • Increase in HGV movements has associated environmental impacts (e.g. pollution/noise).	• Increased use of noise reducing road services in sensitive areas. • Partnership working with lorry operators to reduce the impact of HGVs on the environment and reduce noise.
	Improving health impacts	• Life expectancy is significantly below London and national averages. There are particular problems relating to heart disease and obesity. Data shows that the mode share of cycling is very low and the mode share of walking is falling.	• Continue work with schools to develop travel plans and to promote cycling and walking. • Provision of cycle training for adults and school children provides an opportunity to maximise the benefits achieved from infrastructure investment. • Promote the benefits of cycling through awareness raising events such as Bike Week.
Improve the safety and security of all Londoners	Reducing crime, fear of crime and anti-social behaviour	• Safety/security issues resulting from poorly lit/maintained car parks. • Despite a fall in recorded crime on the local transport network, crime and the fear of crime remains a concern for many travellers, particularly at night.	• Station/car park improvements to enhance security and improve passenger safety. Increased presence of staff/police at stations and on train/bus services. • Provision of improved cycle parking facilities. • Make sure new developments achieve the Secure by Design standard and car parks achieve the Park Mark award.
	Improving road safety	• Reducing casualties remains a major task. The number of pedestrian and motorcycle casualties in particular remains a cause for concern.	• Safety schemes to reduce casualties and the impact of traffic (e.g. 20 mph zones, traffic calming). • Road safety education and training programmes, with particular focus on high-risk groups (e.g.

MTS Goals	MTS Challenges	Problems	Opportunities
			children, motorcyclists).
	Improving public transport safety	• Issues surrounding safety/security on rail and bus services and at stations/bus stops. Poorly lit, badly maintained infrastructure often cited as a deterrent for travelling. Staff availability/ticketing arrangements and lack of travel information also a concern. • Increase in number of unlicensed taxis/PHVs and associated impact on safety and the environment.	• Safety/security improvements at rail stations and bus stops and on public transport services. • Improved vetting process for appointing taxi drivers. Tougher vehicle emission standards.
Improve transport opportunities for all Londoners	Improving accessibility	• Issues surrounding accessibility of bus services and facilities in some parts of the borough. Lack of travel information at bus stops/ interchanges and on buses a key factor. • Station accessibility issues, compounded by low number of stations and lack of step-free access. • Accessibility/cost of public and private transport an issue for some, particularly the elderly and disabled. Particular issues around some schoolchildren having to travel long distances to schools by public transport when no local school places available. • Many journeys in outer London involve more than one bus route and for each change a separate ticket must be bought.	• Public realm/accessibility improvements at key interchanges and bus stops. Better waiting facilities at Becontree Heath - a major bus interchange. • Roll-out of Real-Time Passenger Information, particularly Countdown, along key bus routes and at major interchange points. • New demand-responsive bus services, particularly for those unable to use public transport/private vehicles due to accessibility/cost issues. Closer working with education authorities to determine school travel needs, particularly at planning stage. • Opportunity to seek S106 funding to achieve step free access at Dagenham East. Crossrail should deliver step free access at Chadwell Heath station. • New Underground trains due in 2013 will introduce step free (train – platform) access at Barking, Upney, Dagenham Heathway and Dagenham East stations. • Press TfL to introduce time based rather than route based ticketing arrangements which enable people to change services without being penalised. • C2C ticketing arrangements need to closely align to those of TfL Underground and Overground services.

MTS Goals	MTS Challenges	Problems	Opportunities
	Supporting regeneration and tackling deprivation	• New homes, schools and jobs will increase demand on already congested roads and parking spaces. If not planned correctly this could increase congestion, air pollution, and impact on the Council's ability to reduce traffic growth.	• Closer partnership working with developers/businesses and health and education authorities to ensure better understanding of transport needs and coordination of resources.
Reduce transport's contribution to climate change, and improve its resilience	Reducing CO_2 emissions	• Traffic volumes in the borough have increased in recent years, in contrast to the downward trend in London as a whole. • Car mode share remains high in the East London sub-region, compared to other sub-regional areas. • If prosperity rises it is likely that the borough's low car ownership levels will also rise. • Low take-up of cycling often due to inadequate cycle provision in some new developments. Result is mode share of cycling remains low. • Increase in HGV movements has associated environmental impacts (e.g. increased pollution, noise, vibration, etc.).	• New developments made more cycle friendly. • Travel planning activities/initiatives will help raise awareness of the need to reduce vehicle emissions and improve air quality in the borough. Roll-out of charging infrastructure to encourage the use of electric vehicles will help in this regard. • Close working with the freight industry to develop effective lorry management measures to limit the impact of emissions and reduce fuel consumption. • Electrification of the Barking to Gospel Oak line. • New hydrogen refuelling facility opens in Leyton summer 2010, opportunity to introduce hydrogen buses on key LBBD bus routes particularly East London Transit.
	Adapting for climate change	• Impact of adverse weather conditions causing damage to roads/footpaths and resulting in increased levels of reactive maintenance. • Extensive highway network and large number of structures makes a heavy demand on materials/resources. • More adverse weather conditions may impact on attractiveness of walking and cycling.	• Adoption of asset management plan approach to improve management/maintenance of highways network and structures. • Recycling of highway waste material to limit the use of declining primary aggregates and helped reduce the amount of waste material sent to landfill sites. • Ensure design and layout of streets and pathways provide sufficient shade through tree planting. • Incorporate sustainable urban drainage systems.

2.5 Borough Transport Objectives

2.5.1 This section establishes the principal objectives of the LIP. It **outlines the principles that have governed the formulation of the objectives**; sets out the **aspirations of stakeholders** that have been identified; and **links the objectives to wider policies**, including the MTS/Sub-Regional Transport Plans and Community Strategy; and other key goals/challenges such as the need to support economic development, improve accessibility and enhance the environment.

Principles Underpinning LIP Objectives

2.5.2 The objectives for the LIP have been formulated on the basis of the following key principles:

- **Continuity of the objectives in the first LIP**, whilst acknowledging the shift in emphasis needed as priorities change;
- **The imperative to integrate transport policy with other policies** (including health, education and social inclusion) and to liaise with other departments within the Council (e.g. Planning, Education);
- **Consistency with the Mayor's Transport Strategy and Sub-Regional Transport Plans**.
- **Consistency with the vision for Barking and Dagenham** as set out in the Community Plan, and other key plans and strategies (e.g. the LDF and Economic Development Strategy);
- **The constraints of funding** identified in chapter 3.

2.5.3 There were 13 separate objectives in the first LIP, with a focus on improving access for all; facilitating regeneration in the borough; reducing the need to travel; improving safety and security; reducing pollution and enhancing the environment; and improving integration. We aim to retain these broad objectives in the second LIP, but are taking the opportunity to change the emphasis.

2.5.4 Chapter 1 outlines how the LIP is compatible with, and complements the approach of the MTS. It also explains the link between the LIP and the East London Sub-Regional Transport Plan. The Council, both individually and collectively with other boroughs, has a key role in determining and delivering interventions at the sub-regional and local level, as well as influencing those charged with the delivery of international, national and London-wide networks and services. The LIP objectives reflect this 'hierarchy' accordingly.

2.5.5 The Barking and Dagenham Community Plan provides the broadest picture of how local communities would like to see the borough in the long term. Development of objectives for the LIP has been guided by this strategy, with aspects such as facilitating regeneration and tackling climate change being central to the process. Similarly, other key local plans and policies, such as the LDF, Economic Development Strategy,

2.5.6 Consultation on the LIP has ensured that the views of Barking and Dagenham residents, businesses, organisations and amenity groups, as well as a range of other stakeholders, have been taken into account in finalising the objectives. Details of the wide ranging consultation undertaken are set out in chapter 1.

2.5.7 The objectives that have been identified are on the basis that funding will be as indicated in the guidance. Changes to the LIP funding allocation could result in changes to the scope of our objectives, with programmes and targets either being stretched or reduced. The potential implications are explored in more detail in chapters 3 and 4.

Development of LIP Objectives

2.5.8 Table 2.7 (overleaf) summarises the LIP objectives, indicating how they relate to the MTS goals, the East London Sub-Regional Transport Plan challenges, and our wider Community Plan priorities. Theses broad, principally long-term objectives, have been informed by the issues identified in the previous sections.

2.5.9 **Objectives A and B, which are concerned with the issues of connectivity and congestion**, are principally geared to supporting economic development and regeneration and achieving a stronger and more prosperous borough. The emphasis here is likely to focus on improving public transport provision to and within Barking and Dagenham and tackling traffic congestion to reduce delays. Pollution from slow moving vehicles on congested roads is also an issue in relation to both the environment and health. These aspects are considered under objectives G and H, concerning the environment/sustainability.

2.5.10 **Improving transport opportunities, particularly for the young, elderly and disabled people is the key driver behind objectives C and D**. Increasing accessibility to key services was central to our first LIP, and is at the heart of national and local policy to ensure greater social inclusion.

2.5.11 Despite a fall in the number of casualties on our roads and a reduction in crime on public transport, safety and security remains a key concern for many, particularly vulnerable groups such as cyclists and pedestrians and the young and elderly. **The successful delivery of objectives E and F will go some way to achieving the Community Strategy priority of creating a safer borough, as well as improving peoples' overall quality of life**.

2.5.12 Key concerns relating to the environment and sustainability are air quality and climate change, on which transport has a major impact. The

impact of transport choice and levels of pollution are also issues in relation to health. **The main focus of objectives G and H will therefore be on promoting the use of more sustainable and healthy modes of transport, whilst reducing the number of journeys made by private vehicles**. This, in turn, will help us achieve a cleaner, greener and more sustainable borough, as well as helping to improve peoples' quality of life.

2.5.13 The need for well maintained highways and streets are longstanding issues. Road maintenance and public realm improvements were central to the first LIP and recent consultation confirms the interest of residents and businesses in both the quality of road maintenance and the management of the street scene. **The need for a planned, coordinated approach to the management and maintenance of our assets and to create distinctive public places/protect the historic environment are the key drivers behind objectives I and J**.

2.5.14 To reflect the timeframe of the MTS, all the LIP objectives have a 20-year lifespan to 2031.

Table 2.7: Strategic LIP objectives

LIP Objectives*	MTS Goals					ELSRTP Challenges					Community Plan Priorities					
	Supporting economic development	Enhancing quality of life	Improving safety and security	Improving transport opportunities	Dealing with climate change and improving resilience	Improving connectivity	Reducing physical barriers to travel	Supporting the efficient movement of freight	Maximise benefits of committed investment	Public transport crowding and highway congestion	A safer borough	A clean, green, sustainable borough	A stronger and more cohesive borough	An ambitious and prosperous borough	A healthy borough	A borough of opportunity for all young people
A. Improving public transport connectivity to underpin the vitality and viability of our town centres and to facilitate economic development and the regeneration of the borough.	✓✓			✓✓	✓	✓✓	✓✓	✓			✓		✓✓	✓✓		
B. Tackling congestion on our road network to limit delays to all vehicles and travellers and lessen the impact on the local economy and environment.	✓✓	✓	✓		✓✓	✓	✓	✓✓		✓✓	✓	✓✓		✓✓	✓	
C. Increasing accessibility for all to key local services and facilities, including health, education, employment and leisure opportunities.	✓	✓		✓✓		✓✓	✓✓			✓			✓✓	✓		✓✓
D. Securing improvements for people with poor access to public or private transport to promote equity and social inclusion.		✓✓	✓	✓✓		✓	✓✓				✓		✓✓			✓✓

LIP Objectives*	MTS Goals					ELSRTP Challenges					Community Plan Priorities					
	Supporting economic development	Enhancing quality of life	Improving safety and security	Improving transport opportunities	Dealing with climate change and improving resilience	Improving connectivity	Reducing physical barriers to travel	Supporting the efficient movement of freight	Maximise benefits of committed investment	Public transport crowding and highway congestion	A safer borough	A clean, green, sustainable borough	A stronger and more cohesive borough	An ambitious and prosperous borough	A healthy borough	A borough of opportunity for all young people
E. Improving safety and security on the local transport system, with particular emphasis on reducing crime and fear of crime.		✓✓	✓✓			✓					✓✓		✓			
F. Improving road safety conditions, with particular emphasis on reducing the number of casualties.		✓✓	✓✓							✓	✓✓					✓
G. Improving integration between transport and land use planning to reduce the need to travel and promote more sustainable patterns of development.	✓✓				✓✓	✓		✓	✓✓	✓		✓✓	✓			
H. Promoting sustainable and healthy travel behaviour to enhance the environment and improve peoples' quality of life.		✓✓			✓✓	✓	✓	✓✓		✓		✓✓			✓✓	
I. Improving management and maintenance of our transport infrastructure to optimise the integrity,	✓	✓	✓		✓	✓	✓		✓✓	✓	✓		✓			

LIP Objectives*	MTS Goals					ELSRTP Challenges					Community Plan Priorities					
	Supporting economic development	Enhancing quality of life	Improving safety and security	Improving transport opportunities	Dealing with climate change and improving resilience	Improving connectivity	Reducing physical barriers to travel	Supporting the efficient movement of freight	Maximise benefits of committed investment	Public transport crowding and highway congestion	A safer borough	A clean, green, sustainable borough	A stronger and more cohesive borough	An ambitious and prosperous borough	A healthy borough	A borough of opportunity for all young people
quality and value of our transport assets.																
J. Maintaining and improving the public realm to enhance the local and historic environment and to create distinctive public places.	✓	✓	✓		✓	✓			✓		✓	✓	✓			

KEY:
✓✓ High contribution to goals/priorities
✓ Lower contribution to goals/priorities
* To reflect the timeframe of the MTS, all LIP objectives have a 20-year lifespan to 2031

3. LIP Delivery Plan and Programme of Investment

3.1 Introduction

3.1.1 This chapter sets out the **overarching delivery plan and three-year programme of investment for the LIP**. The delivery plan and associated transport measures form the framework for the development of the three-year programme of investment which, in turn, is designed to meet our objectives, and to address the transport problems and opportunities identified in the last chapter.

Chapter 3 sets out:

- The **overarching delivery plan and the associated range of measures**, and the **priorities for its implementation**;
- **Funding sources** for implementing the delivery plan;
- The detailed **programme of investment**, including information on **Major Schemes** and the **Annual Spending Submission**;
- Details of the **methodology used for monitoring progress of the delivery programme**, and identification of potential **risks and associated mitigation measures**.

3.2 LIP Delivery Plan

3.2.1 The driving principles behind the LIP delivery plan are **regeneration, economic development, social inclusion, safety and sustainability**. These reflect the Mayor's vision for London's transport system to provide access to opportunities for all and achieving the highest environmental standards, and our Community Plan ambition for Barking and Dagenham as a borough which is safe, clean, fair, healthy and prosperous. The LIP delivery plan has evolved alongside our LDF and Economic Development Strategy, ensuring that transport, land use and economic development are properly coordinated **to deliver a more efficient, integrated and accessible transport system**.

3.2.2 Experience gained implementing schemes in the last five years, and further developments in technology, have enabled us to develop a delivery plan for the LIP with a more effective range of measures. Moreover, innovations in 'Smarter Travel' techniques (e.g. travel planning) are improving community engagement and awareness on transport issues, which will benefit the implementation of this LIP.

3.2.3 The overarching LIP delivery plan corresponds with the ten objectives identified in chapter 2. Table 3.1 (overleaf) illustrates how the preferred range of measures, which are based on the six main MTS themes, will meet the LIP objectives. The following section expands on the measures associated with each part of the strategy.

Table 3.1: Delivery plan matrix – influence of measures on objectives

LIP Objectives	Delivery Plan Measures					
	Public transport initiatives	Cycling and walking measures	Safety and security measures	'Smarter travel' initiatives	Traffic/demand management measures	Highways and public realm enhancement measures
A. Improving public transport connectivity to facilitate economic development/regeneration.	✓✓				✓	✓
B. Tackling congestion to limit delays and lessen the impact on the economy/environment.	✓✓	✓		✓✓	✓✓	✓
C. Increasing accessibility for all to key local services and facilities.	✓✓	✓✓	✓	✓		✓
D. Securing improvements for people with poor access to public or private transport.	✓✓	✓✓	✓	✓		✓
E. Improving safety and security on the local transport system.	✓	✓	✓✓		✓	✓
F. Improving road safety conditions.		✓	✓✓		✓	✓
G. Reducing the need to travel and promoting more sustainable patterns of development.	✓	✓		✓✓	✓✓	
H. Promoting sustainable/healthy travel to enhance the environment/improve quality of life.	✓	✓✓	✓	✓✓	✓✓	✓
I. Improving management and maintenance of our transport infrastructure.			✓		✓	✓✓
J. Maintaining and improving the public realm to create distinctive public places.			✓		✓	✓✓
Key: ✓✓ High contribution to objectives ✓ Lower contribution to objectives						

Priorities for Implementing the Delivery Plan

3.2.4 The priorities for implementing the LIP delivery plan take into account factors such as the indicators and targets, the assessment of transport problems and opportunities in the borough, public consultation and the wider issues referred to in chapter 1, including the MTS, and Barking and Dagenham's Community Plan. All parts of the delivery plan are of equal importance. However, from a geographic perspective there are certain areas of the borough where some elements of the delivery plan require particular emphasis. This was explained in the previous chapter and is summarised in table 3.2 (below).

Table 3.2: Geographic priorities

Priorities	Areas of Emphasis
Improving connectivity and tackling congestion (Objectives A & B)	Improving links to and within the borough is a key objective. The main focus will be on improving north-south links within the borough, in particular, enhancing public transport links between places such as Marks Gate and Dagenham and on improving public transport to London Riverside from outside and within the borough. Measures aimed at tackling congestion will be implemented throughout the borough. However, there will be a particular emphasis along key corridors and at major junctions (e.g. the A13 corridor and A13/Renwick Road and A13/Lodge Avenue junctions).
Improving access for all (Objectives C & D)	Areas of poor accessibility identified by accessibility planning studies will be targeted during the course of this LIP. Improving accessibility to local health, education and shopping/leisure facilities will be the main area of focus, in particular, access to Queen's Hospital, the planned Dagenham East Polyclinic and Barking and Dagenham College. Priority areas for future cycle/walking routes and facilities will be our town/district centres, employment areas and our parks and Rights of Way network.
Improving safety/security (Objectives E & F)	There are no geographical priorities for road casualty reduction. Locations will be dictated by intelligent analysis of accident data which is updated every year. A number of key corridors have been identified as having high accident rates, including Wood Lane, Longbridge Road, Ripple Road and Lodge Avenue. Similarly, the need for specific safety/security enhancements will take into account areas where safety/security issues are important. Priority areas include stations, bus stops, parks and car parks.
Enhancing the environment/quality of life	Industrial areas and areas with high levels of road traffic will be a focus for measures to improve air

Priorities	Areas of Emphasis
(Objectives G & H)	quality. In particular the A13 corridor and its junctions and other major junctions such as the Merry Fiddlers and Reede Road/Rainham Road North junctions. Sites where there is a concentration of residential property will be a priority for low-noise road surfacing.
Improving management/ maintenance of assets (Objectives I & J)	Management priorities for transport asset maintenance will be determined in accordance with the principles of our Asset Management and Network Management plans.

3.2.5 In addition to tackling the transport problems affecting the borough, **we will give special attention to implementing a strategy to facilitate cross-boundary improvements**. This will support delivery of neighbouring borough LIPs and the East London Sub-Regional Transport Plan, and the role of the Thames Gateway as a focus for regeneration and economic activity.

3.2.6 As with the LIP objectives, the delivery plan and associated measures relate primarily to the period 2011/12 to 2030/31, reflecting in part our long-term aspirations for the borough (as illustrated in the Barking and Dagenham Community Plan), whilst seeking to be consistent with the timescales of the MTS and the East London Sub-Regional Transport Plan. The delivery plan will be reviewed and, where necessary, refreshed every three years, to take into account changes to the local transport conditions or any new opportunities which may arise.

Improving Connectivity and Tackling Congestion

3.2.7 A principal aim of the delivery plan is to improve public transport connectivity to and within Barking and Dagenham, with emphasis placed on securing improved cross-boundary and north-south links (Objective A); and to tackle congestion to limit delays, particularly on the most severely congested areas of the road network (Objective B). As shown in table 3.1, **the approach is based primarily on a combination of public transport initiatives, traffic management measures and 'smarter travel' initiatives**. This includes investment in public transport and promoting its greater use; improved travel information for people to avoid congestion and disruptions; better management of the road network; and interventions/schemes to limit traffic delays and reduce bottlenecks. Specific measures to be considered will include:

- **Exploring the potential for new or improved north-south bus services** between Marks Gate/Chadwell Heath and Barking Town Centre and Dagenham to enhance connectivity and to maximise the economic benefits of Crossrail. We will work closely with the LTGDC to **secure additional east-west bus service**

improvements in the London Riverside area, via schemes such as the proposed Royal Docks Bus Corridor.

- **Securing enhancements to station capacity and on local rail services**. As part of the ongoing work on the Essex – Thameside RUS, we are hopeful that the DfT will recognise the benefits of capacity enhancing measures, such as more frequent services and longer trains, to ease peak hour overcrowding between Barking and London. Key priorities include the provision of 12 car trains on the London-Tilbury-Southend line, and four trains per hour off-peak on the Tilbury Loop. We will also explore the potential for improved rail links to Stratford and Liverpool Street taking advantage of spare capacity created by Crossrail, and the electrification of the London Overground Barking to Gospel Oak service.

Barking Station 'Fit for the Future':

Barking Station is a National Interchange 'B' station, providing access to C2C and London Overground rail services and District and Hammersmith & City Line Underground services. Over 3.7 million people entered or exited the station during 2008/09, putting it in the top 100 most used stations in the UK, and second only to Fenchurch Street with regard to stations on the London-Tilbury-Southend line[1]. Due to the significant growth planned in Barking Town Centre and Barking Riverside, as identified in our LDF, passenger numbers are expected to grow significantly over the next ten years.

The Better Rail Stations report published by the DfT identified Barking Station as a priority for funding, highlighting the need for improvements to its concourse and interchange arrangements. However, the coalition government has since axed the Better Rail Stations funding, meaning much needed improvements are likely to be delayed further.

To coordinate the necessary improvements, the Council is currently working in partnership with the LTGDC on a Station Masterplan which we intend to adopt as part of our LDF. The Masterplan will include proposals to make the station fully accessible, including the provision of lifts to all platforms; improving pedestrian access into and out of the station by increasing the size of the entrances and increasing the number of ticket barriers; improved interchange with other modes of transport, especially bus services and taxis; and making significant improvements to the public realm outside the station. In advance of the Masterplan being adopted the Council has recently consulted on a £900,000 improvement scheme to the station forecourt which:

- Doubles the amount of public open space in front of the station;

[1] http://www.rail-reg.gov.uk/upload/xls/station_usage_0809.xls

- Removes the bus lay-by and relocates the bus stops further down Station Parade;
- Reduces the taxi rank to two spaces outside the front of the station with the remainder relocated to Wakering Road;
- De-clutters the forecourt area by removing unnecessary signage, lighting and bus shelters with replaces them with a high quality new pavement, new street furniture, lighting, and cycle parking.

A survey undertaken as part of the recent consultation exercise revealed that 85% of the public[2] approved of the proposed scheme. The Council is keen to implement the scheme by 2012 and intends to fund the improvements from a number of sources, including S106 contributions from developments in and around the station; funding from the National Station Improvement Partnership; and LIP funding.

- **Lobbying for new public transport infrastructure and services**. The Council supports the Mayor's decision to **safeguard the route of the DLR Dagenham Dock extension** as part of the development proposals for Barking Riverside and will support the Mayor of London in lobbying for funding to secure this vital infrastructure link. In addition, we will work with TfL and boat operators, through the Mayor's River Concordat, to **explore the potential of extending river services to Barking and Dagenham**, via the new development at Barking Riverside.
- **Securing improvements to the local road network, particularly along key corridors and at junctions**, in order to reduce traffic bottlenecks and delays. In particular, **we will continue to lobby for improvements to the A13, particularly the A13/Renwick Road junction**, as a means of reducing peak hour congestion in the area, whilst increasing overall connectivity to Barking Riverside.

Improving the A13/Renwick Road Junction and Renwick Road Bridge:

The current arrangements at the **Renwick Road Junction** and the condition of the **Renwick Road Bridge** are two major impediments to the regeneration of London Riverside. The Renwick Road Junction is the only at grade junction on the A13 between Limehouse and Benfleet, and is the source of frequent and sever delays in the morning AM peak. The Renwick Road Bridge is currently weight restricted due to concerns about its condition and therefore cannot be used by HGVs.

The provision of a grade separated junction and the strengthening of the Renwick Road Bridge are necessary to:

- Improve the flow of traffic along the A13 and reduce vehicle

[2] Survey sample of 321 people.

delays and cost to the local economy. The A13 is one of the most heavily trafficked freight routes in London and this will increase over the coming years due, in part, to the anticipated 60% growth in container traffic at the London Gateway Port in Essex. The recently installed average speed cameras along the Barking stretch of the A13 may help in this regard;
- Alleviate the poor air quality suffered along the A13 where NO_2 and PM_{10} standards are routinely breached;
- Enable the full build out of the Barking Riverside development where currently the S106 agreement limits how many new homes can be built until the Renwick Road Junction is improved;
- Improve access to the River Road Employment Area. Commercial traffic to the area must currently rely on River Road and consequently local businesses are complaining about the delays this is causing to their operations;
- Improve public transport connections between Thames View/Barking Riverside and Dagenham. A grade separated junction would enable buses unimpeded access across the A13.

The Council will work in partnership with the GLA, the LTGDC and TfL through the East London Sub-Regional Transport Planning process and the transport modelling undertaken for the London Riverside Opportunity Area Planning Framework, to establish the business case and funding opportunities for these improvements.

- **Rationalisation and upgrading of traffic signals** and **maximising the potential of intelligent transport systems**, such as Variable Message Signing (VMS), as a means of helping to relieve the pressure on our busy road network. We will also work with TfL and bus operators to **evaluate the effectiveness of all existing bus lanes** on borough roads, with a view to changing their location or hours of operation, as a means of improving traffic flow and improving conditions for all road users.
- **Developing appropriate solutions to manage and mitigate against the impact of freight operations** in the borough, in partnership with TGLP, the Freight Transport Association and local businesses. This may involve enhancing existing or creating further **Freight Quality Partnerships (FQPs)**. In addition, **lorry management measures**, such as more effective signing, improved loading and unloading arrangements and the provision of suitable facilities for HGVs, will also be considered.
- Work closely with businesses and other organisations on the **development and promotion of company travel plans** to reduce car commuting and peak hour congestion. Work will also continue with schools across the borough to develop effective **school travel plans** to promote more sustainable travel habits amongst school children. Additional work to **promote greater travel awareness** amongst residents, local businesses and other organisations will be carried out in partnership with the Council and TfL.

- **Expand the Barking and Dagenham Car Club** (see below) to other parts of the borough, and to explore the potential of the Council becoming a corporate member of the scheme.

The Barking & Dagenham Car Club:

Launched in July 2009 in partnership with operators Streetcar, **the Barking and Dagenham Car Club** is playing an important role in helping to tackle congestion by providing people with access to a car for essential journeys without the need for them to own one.

Operating from four different locations within Barking Town Centre, the Car Club currently has over 200 members locally, with more joining every month. Demand is such that four addition vehicles were rolled out in the various on-street locations during 2010.

We are currently working with Streetcar to identify other suitable locations in the borough where we can install new car club bays, particularly where there is a clear demand for this service. As part of our travel plan commitments, we are also exploring the potential of the Council joining the scheme as a corporate member.

Improving Access for All

3.2.8 Our approach to accessibility in the delivery plan is centred on engaging with relevant partners and the community in order to identify areas of poor accessibility, particularly by public transport, cycle and on foot, and to agree and implement improvement programmes designed to tackle the various problems (Objective C). Accessibility in this context will be considered in two ways, firstly in terms of transport provision for a particular location, and secondly in terms of the orientation and performance of the transport networks for that location. We will use TfL's PTAL and CAPITAL accessibility modelling tools to assist in the process of identifying and confirming problems.

3.2.9 An initial assessment has been undertaken to identify the specific issues that are likely to require attention. The priorities on which we intend to concentrate initially are:

- Access to hospitals and health care facilities, in particular Queen's Hospital and Dagenham East Polyclinic;
- Access to higher/further education facilities, in particular Barking College;
- Access to key employment centres; in particular Barking Town Centre, Dagenham Dock and River Road; and
- Access to town centre shopping and leisure facilities, in particular Barking Town Centre, Chadwell Heath and Dagenham Heathway.

3.2.10 It will be important to coordinate the delivery of solutions to accessibility planning issues with our existing work to secure improved facilities and access for the elderly and disabled people and those without access to a car (Objective D).

3.2.11 A range of **public transport, cycling and walking measures** are being considered as a means of improving accessibility in the borough, including:

- **Bus priority measures**, such as bus lanes and intelligent traffic signal priority measures can be useful tools in helping to reduce bus journey times and improve service reliability. However, they are only appropriate in certain locations, principally where bus passengers represent a significant proportion of all road users (e.g. East London Transit routes 1a and 1b). Elsewhere as part of the review into existing bus lanes and bus priority measures, **the Council will consider implementing new bus priority infrastructure** where this would provide clear benefits to bus passengers and where there would be no significant detrimental impact on journey time for other road users.
- **We will continue with our programme of bus stop accessibility improvements**, to provide disabled passengers with safe, accessible boarding facilities at bus stops, as required under the Equality Act. To date, improvements have been made at around 120 of the 360 bus stops in the borough. **We will also ensure that all bus stops are fitted with up-to-date maps and timetables** which provide passengers with clear information on bus destinations and service frequency. The Becontree Heath Bus Standing area/Merry Fiddlers is the confluence of seven bus routes and **we will investigate the potential for improving interchange arrangements** in this area.
- **The introduction of real time passenger information at bus stops**, via TfL's Countdown 2 project, should make the bus network more attractive and user friendly for passengers. Currently there are eight Countdown signs installed at bus stops in Barking and Dagenham, as well as at bus stops along the route of ELT, and TfL proposes to increase this to 41 by 2012. We believe that the benefits of Countdown will be greater if linked with improvements to bus infrastructure and services.
- The potential for **new dynamic information systems at key public buildings and transport interchanges will be explored** during the course of this LIP. This could be tied in with the roll-out of Countdown 2, displaying real time information to visitors and passengers. In addition, **our new online Smarter Travel Information Service** (see below) will enable people to access travel information online. As the system is developed, we will explore ways provide users with access to real time information.

The Barking & Dagenham 'Smarter Travel Information Service':

One of a range of initiatives developed under the Council's 'Smarter Travel' programme, **the Barking and Dagenham Smarter Travel Information Service** is a new web-based transport mapping service, which provides users with a range of sustainable transport information.

This innovative service, provided in partnership with PIE (the Public Information Exchange), was launched in November 2010, and provides bespoke mapping and route planning facilities for cyclists, pedestrians and those wanting to use public transport services.

We are currently working with PIE to explore the potential of expanding the scope of the Smarter Travel Information Service to include details of town centre waiting and loading restrictions and to provide information on a range of other local services and facilities.

- **Station access improvement works will be carried out at key interchanges** such as Barking and Chadwell Heath Stations, levering in joint funding from the LTGDC and Network Rail. Work will focus on improving bus interchange arrangements and pedestrian access, as well as upgrading cycling facilities and implementing access improvements for the disabled. Opportunities to undertake improvements at Dagenham Dock station and Upney, Dagenham East and Becontree Underground stations will be investigated further.
- **Continued development of the borough's Demand Responsive Transport (DRT) services** and other bespoke travel services, as a means of meeting the diverse travel needs of individuals and tackling the issue of social exclusion. We will work closely with education and health service providers to identify gaps in specialised transport provision and, where there is a specific demand, look to secure additional services. Consideration will be given to providing further support for the Barking Shopmobility scheme.
- In partnership with TfL **we will explore ways of integrating taxis and PHVs into the public transport network** and bringing about improvements in the quality and delivery of services. The key aim will be to improve the consistency and level of service and information available to passengers. Working closely with the Police and taxi operators we will also work towards improved enforcement standards and training programmes encompassing customer care, disability awareness and passenger safety.
- The **development of cycling schemes** will be informed by our accessibility planning exercises and extensive consultation at local, sub-regional and London-wide level. Over recent years our cycling strategy has centred on the provision of **new cycling facilities**, including new cycle paths/lanes and cycle parking facilities; a

variety of **promotion and publicity campaigns** such as a borough cycle map; and comprehensive cycle **training programmes**. These will continue as part of a wider strategy aimed at improving accessibility and developing a network of continuous, safe and well-maintained cycle routes linking residential areas with work and leisure destinations and enhancing cycle access in town centres and parks. We will continue our close partnership working with Sustrans to develop new cycle routes throughout the borough as part of the development of the National Cycle Network, and with TfL via initiatives such as Cycle Superhighways.

- The **promotion of walking** in Barking and Dagenham as a low cost, healthy and socially inclusive means of travel plays an important role in enhancing accessibility. Our strategy is to make town and district centres in the borough accessible to all. In response to this, a **programme of improvements to local shopping parades** is currently being implemented, including measures such as the provision of **new or improved footways** and **accessibility improvements for disabled people**.

Improving Safety and Security

3.2.12 Our approach to safety and security in the delivery plan is designed to make Barking and Dagenham an even safer place in which to travel, by reducing crime, fear of crime and anti-social behaviour on buses and trains and at stations (Objective E); and by reducing the number of road casualties, particularly among children (Objective F). The need to improve safety and security on the borough's transport network is one of our main priorities - working closely with transport operators and the emergency services, and **drawing upon a variety of education, engineering and enforcement measures**, including:

- **Signalled/unsignalled crossings** can make a vital contribution to road safety, improving conditions for pedestrians and cyclists, as well as other vulnerable road users, and increasing accessibility across busy roads. New crossing facilities will be considered where safety problems are particularly prevalent.
- **The introduction of CCTV cameras** as part of wider transport or area improvement schemes can have significant security benefits, as can **the introduction of new street lighting**. Such measures will be considered as part of our ongoing work to improve conditions at stations, bus stops, car parks and our shopping parades. The Council's programme to upgrade/maintain the street lighting stock will have benefits for both safety and security.
- We will continue to support enforcement of local speed limits through the **use of vehicle-activated signs** to educate drivers and highlight hazards or speed limits to those approaching too fast. A significant and unnecessary factor in collisions on the borough's roads is excessive speed. Targeted publicity campaigns will be used to encourage a change in driver behaviour with information also disseminated through our website.

- Effective **road safety education and training** is an essential part of our delivery plan approach to improve safety and meet our targets to reduce the number and severity of casualties (see below). Education and training programmes will continue to target cyclists, powered two-wheelers, pedestrians and drivers. **Publicity campaigns** will be carried out in the areas of child safety, speed, drink/drug driving, seatbelts and sharing the road. We will maintain our support for national and London-wide road safety campaigns, such as Road Safety Week.

Borough-wide Cycle Training Programme:

This **high profile cycle training programme** has been in operation since 2005, and provides residents, employees, students and school pupils with access to free cycle training. Some 2,400 people in the borough benefited from some form of cycle training in 2009 alone.

The school cycle training programme is central to our work to improve road safety and reduce the number of casualties on our roads. In partnership with our road safety team and specialised cycle training providers, we will continue our work with schools to provide pupils with dedicated training, which will enable them to cycle safely and confidently.

A number of schools in the borough were recently awarded **'Bike It'** status by cycling charity SUSTRANS, and will benefit from additional funding for a range of cycling facilities and initiatives, including cycle training, as a means of encouraging more pupils to cycle to school.

- We have recently completed **a programme of child road safety audits**. These audits identify specific child road safety problems and propose appropriate remedial actions, such as road safety education, cycle training and school travel plans, to reduce the incidences of child casualties. The results will be monitored closely to ensure that the measures employed are effective and that they are delivering our child casualty reduction targets.
- **The introduction of innovative traffic calming measures** can help meet the safety concerns of residents and vulnerable road users alike. However, we have learned from experience that the implementation of traffic calming measures needs to be carried out sensitively and selectively. Thus locations will be favoured where there is a good case on safety grounds, combined with strong support from the local community.
- **We will give consideration to introducing Home Zones** in residential areas, particularly where there are safety benefits for children and other vulnerable road users. Working with local communities and road safety groups we would look to develop innovative approaches to street design that control how vehicles move without preventing access.

- In principle, the Council considers that traffic on all the borough's residential streets should be limited to 20 mph and is willing to pilot any such initiative. Otherwise, **we will continue to reduce traffic speeds on the borough's roads through further 20 mph Zones**. 25 such schemes have already been introduced in Barking and Dagenham, resulting in a reduction in average vehicle speeds in some areas.
- **Good design and regular maintenance of walking and cycling routes and facilities** are crucial to improving safety and security for pedestrians and cyclists. We will undertake regular analysis of accident data to identify accident 'hot-spots' and other locations where safety improvements to infrastructure are required. **Improved safety and security information for pedestrians and cyclists** will also be provided through an expanded road safety education campaign in conjunction with TfL, the Police and road safety groups.
- Making sure new developments achieve the **Secured by Design standard** and that car parks achieve the **Park Mark award**.

Enhancing the Environment and Quality of Life

3.2.13 The delivery plan approach here is to promote sustainable patterns of development and reduce the need to travel (Objective G), and promote sustainable/healthy travel (Objective H), as a means of enhancing the local environment and improving people's overall quality of life.

3.2.14 Issues of pollution are of particular concern in Barking and Dagenham, particularly in areas of poorer air quality, such as the A13 corridor and its main junctions and other junctions such as the Merry Fiddlers and the Reede Road/Rainham Road junction. This will be a key focus of the LIP. In planning and delivering local transport measures to meet our transport and sustainability priorities, the Council will take every reasonable opportunity to improve other aspects of quality of life in the borough, including conservation of landscape and biodiversity, public health, noise and climate change. In all instances, **'smarter travel' initiatives and traffic/demand management measures (and in some instances cycling and walking measures), have been identified as playing an important role in helping us achieve our objectives**. Specific measures to be considered include:

- **Travel planning activities** can raise awareness of the need to reduce vehicle emissions and improve air quality in Barking and Dagenham, and can generate publicity and local support. Schools, businesses and new developments, such as Barking Riverside - the largest regeneration site in the borough, will be a focus for increasing mode share of journeys to work and to school by sustainable modes of transport. In particular, we will seek to continue our successful partnership working arrangements with TfL to engage with local businesses to help them develop travel plans and implement appropriate sustainable travel solutions.

- **Travel awareness initiatives,** such as Living Streets 'Walk to School Campaign' will continue to bring about improvements to the environment and quality of life. This highly successful initiative was launched to promote healthier and 'greener' travel to school. Some 17,000 pupils from 30 schools across the borough have taken part in the initiative, with evidence suggesting that a growing number of pupils are choosing green methods of travel, including public transport, walking, cycling and car sharing. Other Travel Awareness events, such as the increasingly successful 'Walk to Work Week' and 'Cycle to Work Week', coordinated by TfL, will also be considered in future.
- **Cleaner, more environmentally friendly vehicles,** can make a real contribution to reducing emissions and improving air quality. The Council owns a number of electric vehicles, and will consider ways of introducing new, low-emission vehicles, as well as reducing the overall need for individual journeys, as part of its fleet management and travel plan objectives. Elsewhere, as part of the drive to **promote the use of electric vehicles** in London, the Council has installed a number of electric vehicle charging points for use by the general public in the London Road multi-storey car park in Barking. We will investigate the potential for installing additional facilities at other locations throughout the borough during the course of this LIP. Indeed, this is a key aspect of our innovative **Low Carbon Zone project**, run in partnership with the GLA and the LDA (see below).

The Low Carbon Zone Project:

The **Low Carbon Zones (LCZs) Project** is a community led approach to cutting the capital's CO_2 emissions. Barking and Dagenham is one of ten London boroughs which have won support and funding from the Mayor and GLA to create local LCZs. These will provide model examples that can later be rolled out both within and beyond London.

Barking and Dagenham's LCZ is focused on Barking Town Centre – the borough's retail and commercial centre. It is a priority area for investment and new development, with 6,300 new homes planned. The zone focuses on the existing community, homes and businesses, and covers an area of around 48 hectares. A variety of building types feature in the zone, including housing, retail and commercial, schools, an Abbey, a theatre and community centres.

The LCZ project is a three year initiative and will target approximately 1000 homes and businesses. The short-term aim of the scheme is to achieve a 20% reduction in carbon by 2012, and helping towards the Mayor's target of a 60% cut in CO_2 emissions by 2025. In addition, the LCZ will seek to create new job opportunities and reduce fuel poverty.

As part of the scheme, the Council aims to provide financial help and professional support to all residents, businesses, community groups and schools, backed up by incentives to facilitate the delivery of the LCZ. Specific initiatives include:

- Free Home Energy Surveys, undertaken by locally trained and qualified Home Energy Assessors, and installation of energy efficiency measures;
- 'Grow Your Own' starter kits;
- EcoTeams, a community support programme providing advice on sustainability issues;
- A years free registration to the Barking & Dagenham Car Club, as well as 5 hours free drive time;
- Free home insulation and heating upgrades;
- Private Landlord Energy Efficiency Grants;
- Smartworks Business Consultancy Advice, providing bespoke energy saving advice to local businesses.

A range of transport and environmental improvements are also planned as part of the project, including tree planting, additional cycle racks, new signage displaying walking/cycling times to key local destinations, car club bays and electric vehicle charging points. These will be funded principally via the LIP.

- Walking and cycling are low cost, healthy and environmentally friendly means of travel. As such, the **pedestrian and cycling schemes** planned primarily as part of the delivery plan approach to increase accessibility will also enhance the environment and people's quality of life. A key focus of our work here will be the **'Fitter for Walking' initiative** run in partnership with Living Streets (see below) and the Cycling on Greenways programme sponsored by Sustrans.

The 'Fitter for Walking' Initiative:

Launched in 2008, the **'Fitter for Walking' initiative** is part of a group of projects coordinated by the national pedestrian charity **Living Streets**, aimed at helping people become more physically active, by regularly walking or cycling.

Working with a number of local authority partners, including Barking and Dagenham, Living Streets is engaging with local residents to create streets they can be proud of and to encourage people to walk more as part of their daily routine.

The four-year scheme, funded in part by Living Streets and the Council, has already been successful in securing improvements to the local public realm, including the creation of a 1.5km high quality,

direct, safe, accessible walking and cycling route, linking the Community Centre at Marks Gate with the shopping area and transport interchanges of Chadwell Heath.

The Council is working closely with Living Streets to identify new communities to engage with over the remainder of the project, with the aim of improving local neighbourhoods and promoting walking.

- **Lorry management measures**, such as better signing, which are designed partly to assist lorry operators, will also alleviate environmental concerns by routing HGVs away from sensitive areas, particularly residential areas.
- **Carefully targeted programmes of low noise surface treatment on borough roads** will be considered in Barking and Dagenham during the course of the second LIP. The priority will be sites where there is a concentration of residential property. Greater emphasis will be given to the type of surface dressings used in order to maintain the overall integrity of the carriageway asset.
- **Street lighting** can have an adverse affect on the environment through the levels of light pollution emitted. The Council's street light replacement and maintenance programme will improve the quality and performance of the lighting network to the benefit of all highway users and residents in the borough.
- **Recycling of highway waste material** is a rapidly developing part of most highway maintenance contracts, and we aim to increase the amount of recycling undertaken over the next three years. This will successfully limit the use of declining primary aggregates, and reduce the amount of waste material sent to landfill sites, enhancing the environment and significantly reducing costs.

Improving Management and Maintenance of our Assets

3.2.15 Our delivery plan approach for future management and maintenance of the transport network is to make the most effective and efficient use of existing infrastructure and, where appropriate, to secure improvements to the local street scene and historic environment (Objectives I & J). **Timely and effective maintenance, using the full range of available treatments, processes and innovative techniques, is central in improving the borough's transport assets and enhancing the public realm**. Specific measures to be considered include:

- **Developing a Network Management Plan**, as required under the Network Management Duty. The plan will act as a single coherent strategy for our highway classification, asset management programme and network responsibilities, and enable the Council's Traffic Manager to coordinate works more efficiently, whilst creating minimum disruption and inconvenience for road users and the wider public. In addition, **we will seek to coordinate and effectively manage the implementation of all integrated**

transport measures and maintenance programmes that impact on the highway. This will minimise the impact on the highway network and reduce the need for maintenance and repair.

- **Proposals for major carriageway and footway maintenance schemes** in Barking and Dagenham will continue to be assessed and prioritised on a needs basis and **implemented via the Council's Highways Maintenance Programme**. With significant emphasis placed on timely, cost-effective preventative treatments, we anticipate a reduction in the amount of reactive work needed during the next few years. **Packages of other highway maintenance schemes** will be undertaken, subject to the availability of funding. Typical schemes include routine repairs or minor patching schemes for carriageways and footways, together with highway stabilisation and containment work as required.
- **Highway lighting improvements and maintenance** in Barking and Dagenham is the responsibility of the Council. A large proportion of the 15,000 lighting columns in the borough do not meet modern safety standards. The Council's replacement and maintenance programme aims to improve the quality and performance of the lighting network to the benefit of highway users and residents.
- An **annual programme of bridge strengthening schemes** is central to the maintenance work carried out in the borough. This programme is coordinated through the London Bridge Engineers Group (LoBEG), with prioritised programmes of interim or permanent works to bring bridges up to standard. Priorities during the course of the second LIP are the Renwick Road Bridge and Station Parade in Barking.
- **We will investigate the potential for replacing subways and footbridges with surface level crossings**. Schemes would principally focus on meeting the access needs of the mobility impaired, as required by the DDA. The new crossings would also provide significant benefits to pedestrians and cyclists.
- Work to develop a high quality public realm in Barking and Dagenham will be spearheaded **through a programme of street scene enhancements** during this LIP. Such measures can help deliver the desired outcomes of our Community Plan to create a 'safer and cleaner' borough and also help make it a more attractive place to invest. It is also a key outcome in the MTS as a means of enhancing the built environment. A key priority will be to implement improvements to forecourt areas around stations, particularly Barking and Chadwell Heath Stations, and our main shopping centres/parades, to reduce street clutter and improve access.

Delivering the MTS High Level Outputs

3.2.16 The Mayor has made commitments to a range of specific local transport interventions in the MTS which need to be considered in the development and implementation of the LIP. Table 3.3, below, sets out how and where these high level outputs will be addressed.

Table 3.3: Links between LIP and MTS high level outputs

MTS Output	LIP Objectives (See Table 3.1)	LIP Delivery Plan Measures (See Table 3.1)	LIP Schemes (See Table 3.5)
Cycle highway schemes	B; C; D; F; H	Cycling & Walking; Safety & Security	2; 4
Cycle parking	C; D; E; H	Cycling & Walking; Safety & Security	1; 2; 4; 5; 7; 8; 10; 11
Electric charging points	H	Smarter Travel	8; 11
Better streets	B; F; I; J	Safety & Security; Traffic/Demand Management; Highways/Public Realm	1; 2; 3; 5; 7; 9
Cleaner local authority fleets	H	Public Transport; Smarter Travel	8; 11; 13
Net increase in street trees	J	Highways/Public Realm	1; 5; 8

3.2.17 Careful consideration has been given to addressing each of the Mayor's High Level Outputs in the LIP, although some have been afforded a higher priority than others - reflecting both our own transport objectives and priorities, and our overarching Delivery Plan approach. Of the six key outputs, **cycle parking features prominently in our three-year Programme of Investment and is included in eight of the 14 integrated transport schemes**, including the Barking Station Forecourt Public Realm Improvements scheme, the Longbridge Road Shopping Parades scheme and, the Borough Low Carbon Zone initiative, as well as being an important tool in the development and implementation of school and workplace travel plans. **Delivering better streets is a key objective in the LIP** and forms an integral part of both the Mayesbrook Park Access Improvements scheme and the Merry Fiddlers Junction Improvements scheme, as well as being central to the Station Access Improvements and Neighbourhood Improvements schemes.

3.3 Funding Sources

3.3.1 The principal source of funding to implement the delivery plan will be the **three-year LIP funding allocation from TfL**. The allocation, which totals circa £6.5 million, is broken down into a number of distinct categories (see table 3.4, below). The LIP funding allocation is

principally capital in nature, and is paid to the Council in arrears (via a series of ICS payments) as schemes are progressed or completed.

Table 3.4: Barking & Dagenham LIP allocation: 2011/12 – 2013/14

LIP Funding Category	2011/12 (Confirmed) £000s	2012/13 (Indicative) £000s	2013/14 (Indicative) £000s
Maintenance*	357	492	492
Corridors, Neighbourhoods and Supporting Measures	1,741	1,670	1,432
Local Transport Fund	100	100	100
TOTAL	**2,198**	**2,262**	**2,024**

** Annual submission based on condition survey information. TfL suggested submission ceiling is £446,000 in 2011/12 and £615,000 in 2012/13 and 2013/14.*

3.3.2 In addition to this, there is a range of **non-LIP funding** available to boroughs from TfL. The Council has been allocated £30,000 between 2011/12 and 2012/13 towards the implementation of additional parking bays and associated infrastructure to support the growth of Car Clubs in the borough. Following the announcement in January 2011 by the Mayor of London to allocate an additional £4 million of funding towards the Biking Boroughs initiative, the Council has recently been awarded £343,000 worth of funding, over the three-year period to 2013/14, to implement a range of measures geared to helping achieve a step change in attitudes towards cycling in the borough.

3.3.3 **The Council's Capital Budget is a key source of funding for many of our maintenance schemes**. Some £20 million was allocated to the Highways Improvement Project for the three-year period to 2010/11, and although this project has now ended, some £6 million has been earmarked for highways maintenance for the following three year period. Similarly, around £3 million pounds has been earmarked for our street light replacement and maintenance programme over the next three years.

3.3.4 In contrast to the planned capital programme, **relatively little money is available via our revenue budgets for transport programmes**. Indeed, levels of revenue and other similar funding have fallen in recent years and are likely to be reduced further as part of planned local government efficiency savings.

3.3.5 **Developer funding, via Section 106/278 agreements, is a useful source of complementary funding**, with circa £1.6 million secured for selected transport, highway or public realm improvements since 2003. The level and timing of this funding varies according to the scale of the development and impact on the transport network, and often needs to

be integrated with wider transport improvements that are being implemented as part of the LIP programme. The current economic downturn, and corresponding fall in development activity, has led to a drop in income from this source in recent years and there is currently very little developer funding available which can be utilised to support the delivery of our LIP programme.

3.3.6 As part of the Barking and Dagenham Local Development Framework a **Supplementary Planning Document (SPD) on Community Benefits is being developed**. This will consider the social and transport infrastructure needs of the borough, both in terms of current needs and projected increased need based on planned growth. It will then consider how that need can be met by extracting maximum benefits from housing and other developments. The Community Benefits SPD will set out in detail how **the Council will move towards a Community Infrastructure Levy type arrangement**. Work on the SPD will establish the level at which a local levy should be set; how funds derived through the levy will be spent; how planning obligations will operate outside the provisions of the levy; how, when and by whom the levy will be paid; the approach to exemptions and thresholds.

3.3.7 We will look to secure additional funding through our partnership with a range of other stakeholders, including:

- **The Greater London Authority (GLA)**. The GLA is the agency responsible for driving London's sustainable economic growth, to ensure the city remains a global success story. Investment is currently targeted through six main areas, including providing support for businesses, building better places and investing in a low carbon future. Projects such as the East London Green Grid – a network of interlinked, multi-purpose green spaces connecting the Green Belt and the Thames to places where people live and work, have helped to regenerate parts of east London with open spaces, making the area more sustainable and improving people's overall quality of life. The GLA are committing circa £245,000 in 2011/12 to help the borough implement a range of energy saving/sustainability measures as part of the Borough Low Carbon Zone initiative in Barking and Becontree Heath;
- **The Thames Gateway Development Corporation (LTGDC)**. The Council is working closely with the Development Corporation and the GLA in planning the regeneration of the entire London Riverside area. Work is currently focusing on facilitating improvements to Barking Town Centre, developing a creative and cultural industries hub at Abbey Road, Barking, and developing the Sustainable Industries Park at Dagenham. The Development Corporation has committed £400,000 towards the Barking Station Forecourt Public Realm Improvements scheme to be implemented in 2011/12;
- **Homes and Community Agency (HCA)**. Between 2009 and 2011, some £9 billion of government funding was invested in the Thames Gateway area to strengthen communities, support local businesses,

attract investment and enhance infrastructure. Of this, circa £19.5 million of social housing grant was secured to fund over 200 new homes in Barking and Dagenham. The Council will look to secure additional funding for new infrastructure and services in the borough to help the Thames Gateway become a strong, vibrant economy;

- **The London European Partnership for Transport (LEPT)** – a key coordinator for bids for sustainable transport and mobility management funding at the local, national and European level. LEPT is a project partner in a number of ongoing pan-European transport initiatives, including the PIMMS Transfer and EPOMM-Plus projects;
- **Sustrans, Cycle England, London Cycling Campaign**. Small amounts of funding are frequently made available through these charitable organisations/campaign groups to undertake a variety of cycling initiatives/promotions. Sustrans have been instrumental in promoting the highly successful 'Cycling on Greenways' initiative, which we are keen to support during the course of this LIP;
- **Living Streets**. The national charity that stands up for pedestrians has been closely involved in a number of town centre improvement, road safety and walking schemes delivered in Barking and Dagenham in recent years, including the much heralded Dagenham Heathway public realm improvements scheme. Living Streets currently provide funding and staff resources as part of the ongoing 'Fitter for Walking' initiative currently being piloted in the borough;
- **Department for Health/NHS**. The Department for Heath has become a potential source of funding for walking and cycle infrastructure, cycle training opportunities, and promotional events. The NHS, in particular, acknowledge that tackling the source of obesity, rather than the after effects, is an increasingly viable option. As a result, closer partnership working with local authorities is being encouraged, with the potential to secure additional funding streams.

3.4 Programme of Investment

3.4.1 A summary of the schemes that the Council is proposing under the LIP Maintenance and Corridor, Neighbourhood and Supporting Measures programmes for 2011/12 – 2013/14 is set out in table 3.5 (below). Further information on the three-year programme of investment is provided in Annex B. For each scheme an indication of costs and sources of funding are given. It is considered that the programme will go some way to addressing a variety of local issues, whilst also being consistent with the Mayor's Transport Strategy.

3.4.2 **A simple scheme prioritisation process was used in order to determine the LIP programme of investment**. The process, which is based loosely on the DfT's New Approach to Appraisals (NATA) methodology, has helped ensure that all chosen schemes deliver value for money; reflect the MTS goals; are consistent with the LIP objectives

and delivery programme; address local problems and priorities; have the support of Members and, above all, are deliverable.

3.4.3 The LIP programme of investment has been put together on the basis that funding will be as indicated in the latest settlement letter from TfL. If a higher level of funding is available, then the programme will be extended. Similarly, if funding is lower than the indicative amount, then the programme will be reduced. In any event, **the LIP programme is sufficiently flexible to allow resources to be transferred between projects, or enable alternative schemes to be delayed/brought forward**.

Major Schemes Programme

3.4.4 In support of our plans for facilitating the regeneration of the borough, to enhance transport connectivity and accessibility and to promote further economic development and sustainable travel practices in Barking & Dagenham, **we intend to submit a number of detailed bids for major schemes funding during the course of the LIP**, including:

- **Chadwell Heath Station Access Improvements** – involving improved crossing facilities and street lighting, and new paving and cycle parking facilities to complement Crossrail works and High Road public realm enhancements;
- **Barking Riverside Cycling/Walking Corridor** – implementation of key section of NCN Route 13 cycle link connecting Barking Riverside development and Sustainable Industries Park development at Dagenham Dock;
- **Green Lane Shopping Parade Enhancements** – scheme aimed at improving the public realm of this busy District Centre, including removal of street clutter, upgrading of paving and tree planting;
- **Becontree Station Area Public Realm Improvements** – street scene/accessibility enhancements to the areas surrounding the station and shopping parade, to support the objective of integrating new/existing communities;
- **Barking Station Parade/London Road Bus Corridor Enhancements** – involving the closure of Cambridge road to vehicular traffic and the re-routing of the bus network through station parade;
- **Barking Town Centre/East Street Public Ream Improvements** – large scale street scene enhancement project to improve the image of the town centre ‘gateway’ area.

3.4.5 Further information on each of these schemes, including details of costs, funding sources, timescales for implementation and contribution of schemes to meeting LIP objectives is set out in table 3.5 (below) and is also included in Annex C.

Table 3.5: LIP programme of investment 2011/12 – 2013/14 (Proforma A)

Programme areas		Funding source	Ongoing scheme?	Funding (£,000s)				MTS goals					LIP objectives
				2011/12	2012/13	2013/14	Total	Econ. devt and pop growth	Quality of life	Safety and security	Opportunities for all	Climate change	
Corridors, Neighbourhoods And Supporting Measures	**Barking Station Forecourt Public Realm Improvements** - Public realm improvement scheme designed to improve access arrangements and provide an improved interchange area outside the station.	**LIP allocation**		500	0	0	500		✔	✔	✔		B, C, D, E, F, J
		LTGDC		400	0	0	400						
	Mayesbrook Park Access Improvements - Park access improvement scheme to support development of new sports centre in Mayesbrook Park. Work to focus on improving park access arrangements and improving safety, journey times and the public realm along Lodge Avenue.	**LIP allocation**		381	0	0	381	✔	✔	✔	✔		B, C, D, E, F, J
	Merry Fiddlers Junction Improvements - Large scale junction improvements scheme to support Council's 'Total Locality' initiative in Becontree Heath.	**LIP allocation**		150	460	400	1,010	✔	✔	✔	✔	✔	A, B, C, D, F, J
	Cycling on Greenways and other local cycle links - Development of network of high quality green links between the boroughs parks and open spaces, complimented with leisure cycling routes.	**LIP allocation**		150	100	50	300		✔	✔	✔	✔	C, D, E, F, I, H
	Longbridge Road Shopping Parade Improvements - Continuation of programme to improve local shopping parades within the borough. Work will be undertaken to improve the public realm outside the shops.	**LIP allocation**		150	200	250	600	✔	✔	✔	✔	✔	C, D, E, I, J
		Council revenue		120	0	0	120						
		Developer		60	0	0	60						

	Road Safety Improvements - Small scale, site specific road safety improvements to complement various corridor/neighbourhood initiatives and to reduce the number of road casualties.	**LIP allocation**		100	100	50	250		✔	✔	✔		C, D, E, F, I, J
	Station Access Improvements - Station access improvement works, including measures to improve pedestrian crossing facilities/footways, security and signage/information at Chadwell Heath and Becontree Stations. Includes studies to identify cost of step free access at Dagenham East and Becontree stations.	**LIP allocation**		50	300	250	600	✔	✔	✔	✔		C, D, E, F, J
	Borough Low Carbon Zones - Environmental improvement/ carbon reduction scheme linked to the designation of Barking Town Centre and Becontree Heath as Low Carbon Zones.	**LIP allocation**		50	50	0	100		✔			✔	G, H
		GLA/LDA		245	0	0	245						
	Neighbourhood Area Improvements - Area improvement schemes aimed at tackling congestion and improving accessibility within local neighbourhoods.	**LIP allocation**		0	250	250	500	✔	✔	✔	✔		B, C, D, F, I, J
	School Travel Plans - Continuation of work with schools to promote safe and sustainable travel.	**LIP allocation**	✔	60	60	50	170		✔	✔		✔	B, C, F, H
	Business Travel Strategies - Continuation of work with businesses to develop/implement travel strategies/logistics plans to promote sustainable travel and reduce the impact of goods deliveries.	**LIP allocation**	✔	60	60	50	170	✔	✔		✔	✔	B, C, G, H
	Cycle Training - Provision of cycle training to cyclists of all ages to promote cycling as a healthy and sustainable mode of travel.	**LIP allocation**	✔	60	60	50	170		✔	✔		✔	F, H
	Travel Awareness (Promotion and Events) - Promoting healthy/sustainable travel practices to businesses and residents.	**LIP allocation**	✔	15	15	16	46	✔	✔	✔		✔	B, E, F, G, H

	Road Safety Education, Training and Publicity - Implementation of road safety initiatives/events and production of related training material/ publicity material to schools/vulnerable road users.	**LIP allocation**	✔	15	15	16	46		✔	✔			E, F
Integrated transport total				**2,566**	**1,670**	**1,432**	**5,668**						
Maintenance	**Principal Road Resurfacing** - Carriageway resurfacing at priority locations.	**LIP allocation**		446	615	615	1,676	✔	✔	✔		✔	F, I
		Council revenue		TBC	TBC	TBC	0						
	Bridge assessment and strengthening - Investigative studies and remedial strengthening work at prioritised locations.	**LIP allocation**		13	TBC	TBC	13	✔					F, I
Maintenance total				**459**	**615**	**615**	**1,689**						
Major Schemes	**Chadwell Heath Station Access Improvements** - Station access/street scene enhancement scheme to complement public realm improvement work on the High Road and the planned station improvements as part of the Crossrail scheme. Stage 1 submission in 2011/12.	**Major schemes**		0	700	0	700		✔	✔	✔		C, E, F, I, J
		LIP allocation		0	300	0	300						
	Barking Riverside Cycling/Walking Corridor - Implementation of key section of NCN Route 13 cycle link connecting Barking Riverside development and Sustainable Industries Park development at Dagenham Dock. Stage 1 submission in 2011/12.	**Major schemes**		0	800	0	800		✔	✔	✔	✔	B, C, D, F, H
		Developer		0	100	0	100						
		LIP allocation		0	100	0	100						
	Green Lane Shopping Parade Enhancements - Station access/street scene enhancement scheme to enhance the local public realm in this busy shopping parade. Stage 1 submission in 2012/13.	**Major schemes**		0	0	1,300	1,300	✔	✔	✔	✔		C, E, F, I, J
		Council revenue		0	0	200	200						
	Becontree Station Area Public Realm Improvements - Public realm improvement scheme to enhance the street scene of this	**Major schemes**		0	0	1,000	1,000		✔	✔	✔		C, E, F, I, J
		LIP		0	0	250	250						

	important District Centre. Stage 1 submission in 2012/13.	**allocation**											
		Developer		0	0	250	250						
	Barking Station Parade/London Road Bus Corridor Enhancements - Public realm enhancement scheme aimed at improving poor image of the station and transforming the experience of those using the area. Stage 1 submission in 2013/14.	**Major schemes**		0	0	0	0		✔	✔	✔		A, B, C, D, F, J
	Barking Town Centre/East Street Public Ream Improvements - Large scale street scene enhancement project to improve the image of the town centre 'gateway' area. Stage 1 submission in 2013/14.	**Major schemes**		0	0	0	0	✔	✔	✔	✔	✔	C, E, F, I, J
		Developer		0	0	0	0						
Major Scheme total				**0**	**2,000**	**3,000**	**5,000**						
Other Schemes/Funding	**Local Transport Fund** - Investigative studies to inform future LIP Corridor/ Neighbourhood based schemes and various ad hoc schemes to support LIP objectives. Focus will be on road safety/accessibility improvements.	**LIP allocation**		100	100	100	300	✔	✔	✔	✔	✔	B, C, D, E, F, I, J
	Car Club Expansion - Implementation of additional parking bays and associated infrastructure to support the growth of Car Club in the borough.	**TfL Business Plan**	✔	15	15	0	30	✔			✔	✔	B, C, D, G
	Biking Borough Initiative - Implementation of measures geared to helping achieve a step change in attitudes towards cycling in the borough. Focus is on the development of cycle hubs, cycling communities and raising the profile of cycling.	**TfL Business Plan**		128	120	95	343		✔	✔	✔	✔	B, C, D, F, H
Other Schemes total				**243**	**235**	**195**	**673**						

3.5 Programme Management

3.5.1 The processes involved in the prioritisation and management of the delivery programme comprise three interwoven strands:

- Clearly defined process to **monitor programme progress**;
- A robust system for **reviewing the programme**;
- Methods to **identify and manage the risks to programme delivery**.

Programme Monitoring and Review

3.5.2 **Monitoring of the delivery of the LIP programme** is currently achieved through regular contact between the Transport Planning and Policy Team and the teams/individuals responsible for the delivery of the various schemes. Monthly project management meetings are held where information on costs and progress of all schemes, both planned and current, is obtained. The availability of up to date information is integrated into the risk management process (see below).

3.5.3 The process of **reviewing the overarching programme** through the period of the second LIP emerges, in part, from the above monitoring system. The programme could be amended, with schemes added/removed or brought forward/put back, etc. as a result of a change in priorities, the availability of resources or the capacity to deliver schemes.

Managing Risk

3.5.4 As part of the Council's internal Capital Programme Monitoring (CPM) process, **a risk assessment of the draft LIP programme has been undertaken**. The principal risks associated with the delivery of the LIP programme include the failure to deliver planned measures; the relative effectiveness of selected measures; the quality of the data/information supplied; and changes to funding levels. A summary of the key issues identified in the risk assessment is included in Annex D.

3.5.5 As part of the scheme prioritisation process (see section 3.4, above), **individual schemes are assessed to ascertain their deliverability** (in terms of both available resources and actual buildability) from the outset. In addition, the monthly project management meetings help ensure that programme slippage is identified at an early stage, so that remedial action can be taken to bring delivery back on track.

3.5.6 Associated with scheme deliverability is scheme effectiveness. Risk in this category includes uncertainty over which measures are relevant and their potential impact in delivering the programme and the overarching LIP objectives. The risk is managed by observing good practice elsewhere and noting the effectiveness of different types of intervention; reviewing the assumptions made about the impact of the

scheme; and, where necessary, reviewing the programme/strategy (e.g. focusing on education if cycling does not increase despite new infrastructure). **Scheme effectiveness is assessed as part of the initial scheme prioritisation process and reviewed annually**.

3.5.7 Scheme identification relies to a large extent on the collection and analysis of data/information. However, inaccuracies, uncertainties and gaps in data can arise either from technical problems (such as with automated data collection), or human error (in the case of data based on manual collection methods). Management of risk in these cases requires the availability of adequate resources and liaison with others; regular checking and evaluation of data; and awareness of realistic limits of accuracy and an appreciation of the statistical significance of trends in the data.

4. Performance Management and Monitoring Plan

4.1 Introduction

4.1.1 This chapter sets out the **targets and trajectories** for the five strategic performance indicators identified by TfL, and a number of other indicators that were identified by the borough. These will help determine whether the LIP objectives and, ultimately, the MTS outcomes are being delivered.

Chapter 4 sets out:

- An **outline of the rationale in setting the target for each indicator** with reference to borough transport issues and objectives (chapter 2) and the LIP delivery plan and programme of investment (chapter 3);
- The **target values for the end of the second LIP period** (2013/14) and **trajectories** to show how the indicators are expected to change over the duration of the plan;
- **Evidence that the target is ambitious and realistic** in relation to targets set by central government, TfL and other local authorities (benchmarking);
- A **summary of the monitoring methodology and the principal risks to achieving targets** (including the impact of factors outside the borough's control).

4.1.2 A summary table of all the indicators and targets is included in section 4.2. Performance management is covered in section 4.3, and covers the systems and measures in place for monitoring progress of targets, reviewing targets and managing the risks to targets.

4.2 Targets and Indicators

Approach to Target Setting

4.2.1 The general approach to setting targets for indicators is detailed below. Firstly, the **measures and policy interventions expected to impact on the indicator are identified**. In some cases, such as maintenance work, this is straightforward and we can estimate the extent of intervention required to achieve a given target level. However, for some indicators, the links between measures and outcomes are more complex (for example CO_2 emissions). In these cases it is helpful to **study past trends in the indicator and ascertain the factors that have influenced the trends**. The greater the understanding, the greater the confidence in predicting future trends and hence setting a realistic target. Either approach enables a preliminary target to be set.

4.2.2 The second stage is to **check central government and TfL guidance/policies to determine if there is a minimum target**. If this is the case, and it is more challenging than the preliminary target, then this minimum may be adopted as the preliminary target. The third stage is to **consider targets set by other departments within the Council and other local authorities and amend preliminary values** in the light of these – a process known as 'Benchmarking'.

4.2.3 Once a target has been set, we have then defined a **'trajectory'** to show how the indicator is expected to change over the three year period of the LIP. The trajectory takes account of:

- The **programmed implementation of relevant measures**;
- The **expected response of the indicator to the measures**, recognising that there will sometimes be a delay (e.g. satisfaction with buses may follow sometime after improvements to services and the infrastructure);
- The **increasing difficulty in making progress as a target is approached**.

4.2.4 It follows that for a given indicator, the trajectory may be linear, curved upwards or curved downwards.

4.2.5 The process to ensure that targets are **met** involves the performance management process (described in section 4.3) – in effect a review of the steps taken in **setting** the targets.

LIP Targets

4.2.6 The following section sets out (under our LIP priority headings) those **mandatory and local indicators for which targets have been set**. Information is given on the indicator and a brief reference to the monitoring method; the target value and date by which this is to be reached; and a summary of the risks to the target and actions needed to achieve the target. The indicators/targets are summarised in Table 4.1, below. Further information on the mandatory and local targets included in the LIP, including information on target milestones and values, is provided in table E1 (Proforma B) in Annex E of the LIP.

Table 4.1: LIP indicators/targets

Category	Indicator/Target	Data Source/Monitoring	Delivery Plan Measures to Achieve Targets
Improving Connectivity and Tackling Congestion			
Core Target	1. Maintain bus excess wait time on high-frequency routes at 2009/10 levels (1 minute) by 2017/18	• Quality of Service Indicators (TfL)	• Public transport initiatives • Smarter travel initiatives • Traffic/demand management measures
Local Target	2. Maintain average bus journey times on borough priority routes at 2009/10 levels by 2013/14	• iBus run time Data (TfL)	• Public transport initiatives • Smarter travel initiatives • Traffic/demand management measures
Monitoring Indicator	• Traffic volumes on borough principal roads • Car club membership	• National Road Traffic Survey (DfT) • Automatic Traffic Counts (Borough) • Car club data (Streetcar)	N/A
Improving Access for All			
Core Target	3. Increase the proportion of walking trips from 37% in 2009/10 to 38.5% in 2025/26 (37.38% in 2013/14) 4. Increase the proportion of cycling trips from 1% in 2009/10 to 4.3% in 2025/26 (1.83% in 2013/14)	• London Travel Demand Survey (TfL) • Manual and Automatic Traffic Counts (Borough)	• Cycling and walking measures • Safety and security measures • Highways/public realm enhancements
Local Target	5. Increase the proportion of children travelling to school by non-car modes from 75% in 2009/10 to 77.5% in 2013/14 (NI198)	• Travel Plan Monitoring (Borough) • iTrace (TfL)	• Public transport initiatives • Cycling and walking measures • Safety and security measures • Smarter travel initiatives
Monitoring Indicator	• Bus service frequency/patronage • Number of DDA compliant bus stops	• Passenger Surveys/Ticket Sales; Quality of Service Indicators (TfL) • Borough Records	N/A

Category	Indicator/Target	Data Source/Monitoring	Delivery Plan Measures to Achieve Targets
Improving Safety and Security			
Core Target	6. Reduce the number of people killed and seriously injured in road collisions by 33% by 2019/20 (12.8% by 2013/14) (NI 147) 7. Reduce the total number of road casualties by 33% by 2019/20 (12.9% by 2013/14)	• Modal Policy Unit (TfL) • STATS19 Database (Met Police)	• Cycling and walking measures • Safety and security measures • Traffic/demand management measures • Highways/public realm enhancements
Local Target	8. Reduce the number of child KSIs by 33% by 2019/20 (14.2% by 2013/14) 9. Reduce the number of motorcyclist KSIs by 33% by 2019/20 (15% by 2013/14)	• Modal Policy Unit (TfL) • STATS19 Database (Met Police)	• Cycling and walking measures • Safety and security measures • Traffic/demand management measures • Highways/public realm enhancements
Monitoring Indicator	• Total number of cyclist and pedestrian casualties • Total recorded crimes on local bus network	• Modal Policy Unit (TfL) • STATS19 Database (Met Police) • Crime Statistics Bulletin (TfL)	N/A
Enhancing the Environment and Quality of Life			
Core Target	10. Reduce borough ground based transport CO_2 emissions by 45.3% by 2025 (16.2% by 2013)	• London Energy and Greenhouse Gas Inventory (GLA)	• Public transport initiatives • Cycling and walking measures • Smarter travel initiatives • Traffic/demand management measures
Local Target	11. No increase in Barking average mean PM_{10} and NO_2 concentrations by 2013 (from 2009 baseline)	• London Air Quality Network (ERG)	• Public transport initiatives • Cycling and walking measures • Smarter travel initiatives • Traffic/demand management measures
Monitoring Indicator	• Number of adults and children participating in regular physical activity (LAA Target) • Number of businesses signing up to travel plans	• Barking & Dagenham Partnership • Travel Plan Monitoring (Borough) • iTrace (TfL)	N/A

Category	Indicator/Target	Data Source/Monitoring	Delivery Plan Measures to Achieve Targets
Improving Management and Maintenance of our Assets			
Core Target	12. Maintain the proportion of borough principal road length in need of repair at 2009/10 levels (5%) by 2013/14	• Visual Inspection Data (LB Hammersmith & Fulham)	• Traffic/demand management measures • Highways/public realm enhancements
Local Target	None set. Data on condition of other assets no longer collected locally due to lack of resources	N/A – No data available	N/A
Monitoring Indicator	• Condition of bridges and other structures	• Structures Register (LoBEG) • Street Lighting Register (Borough)	N/A
MTS Outputs			
Output Indicators/ Targets	A. Cycle highway schemes	• Borough Records • Surface Transport (TfL)	• Cycling and walking measures • Safety and security measures
	B. Cycle parking	• Borough Records	• Cycling and walking measures • Safety and security measures
	C. Electric charging points	• Borough Records	• Smarter travel initiatives
	D. Better streets	• Borough Records • Surface Transport (TfL)	• Safety and security measures • Traffic/demand management measures • Highways/public realm enhancements
	E. Cleaner local authority fleets	• Borough Records	• Public transport initiatives • Smarter travel initiatives
	F. Net increase in street trees	• Borough Records	• Highways/public realm enhancements

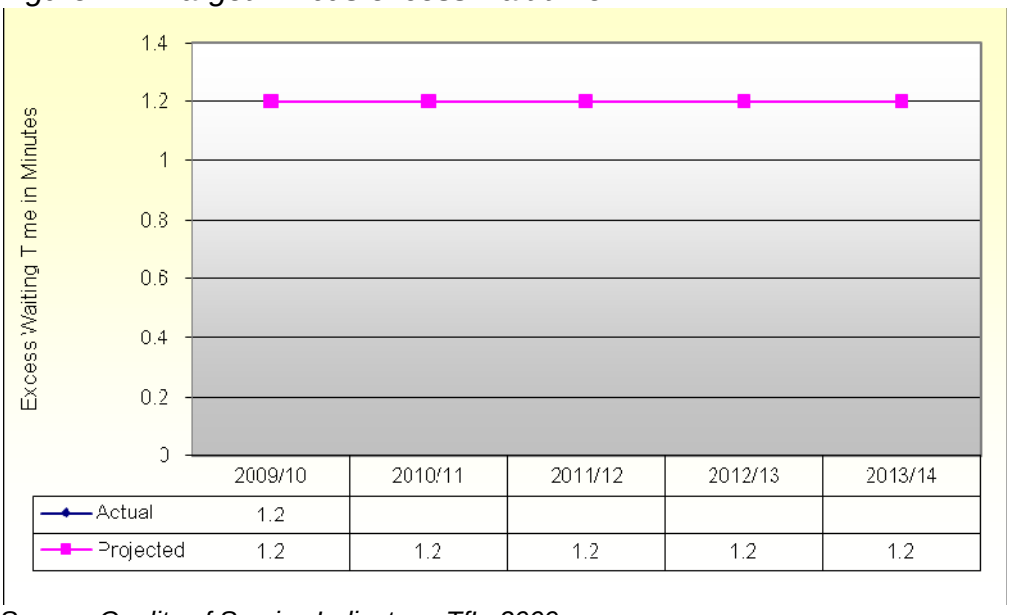
Improving Connectivity and Tackling Congestion

4.2.7 Improving public transport reliability is one of the key proposed outcomes of the MTS. To this end, **bus service reliability** has been included as a mandatory LIP indicator against which boroughs are required to set a locally specific target.

4.2.8 On the whole, bus services in Barking and Dagenham are fairly reliable. Indeed, the Quality of Service data collated by TfL indicates that **bus excess wait time on high frequency routes in the borough have remained low** at around 1.2 minutes over the last few years[1].

4.2.9 The Mayor's Business Plan aims to achieve a London-wide EWT figure of 1.2 minutes by 2017/18. The current bus excess wait time (EWT) for high frequency services in Barking and Dagenham is 1.2 minutes (2009/10 figures). Taking into consideration the historical trend of this indicator data at borough level, and in light of the fact that overall traffic volumes in Barking and Dagenham have increased in recent years, it is felt that there is little scope for bus service reliability to improve further. Accordingly, we have set a long-term target to **maintain bus excess wait time on high-frequency routes at 2009/10 levels by 2017/18**. The short-term target trajectory (to 2013/14) for this indicator is shown in figure 4.1, below.

Figure 4.1: Target 1 - bus excess wait time



Source: Quality of Service Indicators, TfL, 2009

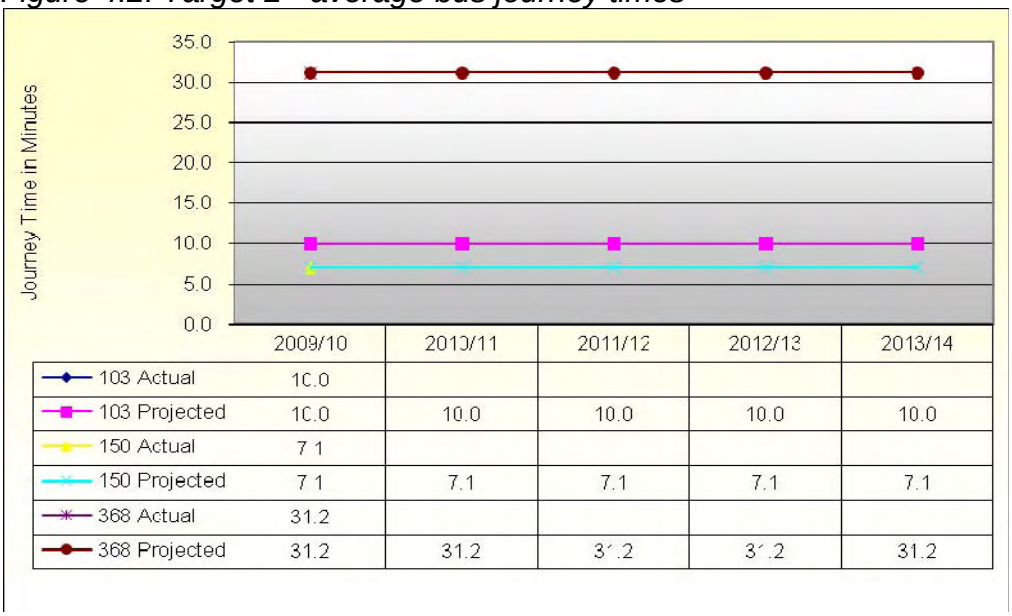
4.2.10 As many bus services start or end outside the borough or run on the TLRN, the Council generally has limited influence on borough-wide EWT. However, in recognition that boroughs can have a positive impact on bus run times (for example, via the implementation of certain traffic management measures on borough roads), **it is recommended**

[1] London Bus Performance, TfL, 2008/09

that the mandatory target be supplemented with a local target based on scheduled bus route run times.

4.2.11 Following careful analysis of all bus services operating in the borough, we have identified three high frequency routes (routes 103, 150 and 368) where there are known traffic delays, on which we will seek to monitor run times (on the entire length of the route running through the borough) utilising iBus data collected from TfL. With this in mind, we have set a target to **maintain average bus journey times on borough priority routes at 2008/09 levels by 2013/14** (see figure 4.2). Given that average route run times have remained relatively constant in recent years, and that overall traffic volumes in the borough have increased over the same period, it is felt that this is a realistic target. No longer-term target has yet been set, but will be considered during the course of the LIP.

Figure 4.2: Target 2 - average bus journey times



	2009/10	2010/11	2011/12	2012/13	2013/14
103 Actual	10.0				
103 Projected	10.0	10.0	10.0	10.0	10.0
150 Actual	7.1				
150 Projected	7.1	7.1	7.1	7.1	7.1
368 Actual	31.2				
368 Projected	31.2	31.2	31.2	31.2	31.2

Source: iBus Run Time Data – Borough Roads, TfL, 2010

4.2.12 Based on previous experience, the aspects of the current LIP programme that it is considered will best serve to improve bus service reliability and limit delays include:

- Various traffic management measures, including rationalisation/upgrading of traffic signals;
- Junction improvement schemes, including the priority Merry Fiddler's junction;
- Travel planning and car share initiatives, including expansion of the Barking Town Centre Car Club;
- Passenger transport measures including new/improved bus priority measures;
- Review of parking arrangements and waiting and loading restrictions, particularly along key transport corridors and in town and district centres;

4.2.13 The main threats to our ability to improve bus service reliability and limit delays include rising traffic levels, particularly along roads where congestion is sensitive to small increases; and the location and duration of road closures by statutory undertakers for the repair/upgrade of utilities. Where these problems occur along roads which fall outside the borough's control (e.g. the TLRN, neighbouring borough roads), this has the potential to further impact on service reliability. As such a 'whole corridor' approach to tackling congestion and improving bus service reliability, in partnership with TfL and neighbouring boroughs, is required.

Improving Access for All

4.2.14 A key challenge of the MTS is to encourage further modal shift towards walking and cycling for short distance trips (i.e. trips between one and five kilometres). In recognition of this, boroughs are required to set targets on **walking mode share** and either **cycling mode share or cycling levels** in their LIPs.

4.2.15 Figures for Barking and Dagenham reveal that **37% of all trips originating in the borough are made on foot**.[2] This figure is higher than that for London as a whole, where walking mode share is around 31%. The mode share of cycling in London has increased by about 70% since 2001, although it continues to represent a relatively low proportion of travel (just 2% in 2009/10). **The mode share for cycling trips originating in Barking and Dagenham is currently 1%**.[3]

4.2.16 Data from TfL's London Travel Demand Survey (LTDS) reveals that **the number and rate of cycling trips in Barking and Dagenham have increased** in the last few years. The results of a series of borough-wide traffic counts also reveal a two-fold increase in the number of journeys made by cyclists. However, according to the most recent LTDS data, the **number and rate of walking trips in the borough have decreased** in the last few years. That said, given the lack of historical borough and LTDS data available, it is difficult to paint a realistic picture of walking and cycling trends at this stage.

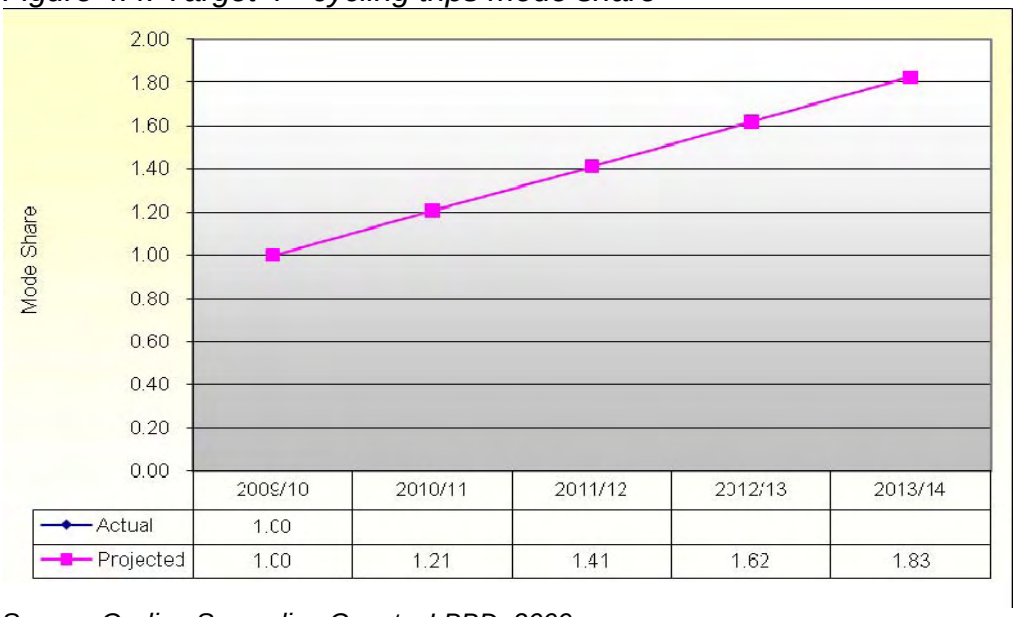
4.2.17 Despite this, and given the increased emphasis placed on improving the take up of walking and cycling across London (the MTS includes a London-wide target of achieving a 5% modal share for cycling by 2026), we have set long-term targets to **increase walking mode share in the borough from 37% (2007/08–2009/10 baseline average) to 38.5% by 2025/26** (37.38% by 2013/14 - see figure 4.3), **and increase cycling mode share from 1% (2007/08–2009/10 average) to 4.3% by 2025/26** (1.83% by 2013/14 - see figure 4.4).

[2] Travel in London, TfL, 2010
[3] Travel in London, TfL, 2010

Figure 4.3: Target 3 - walking trips mode share

Source: London Travel Demand Survey, TfL, 2009

Figure 4.4: Target 4 - cycling trips mode share



Source: Cycling Screenline Counts, LBBD, 2009

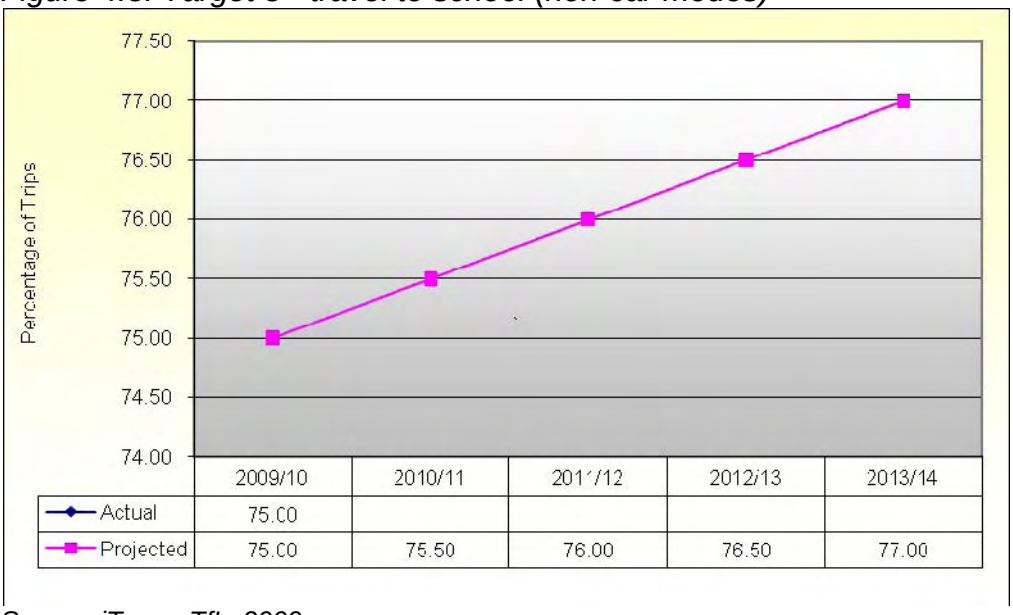
4.2.18 A variety of physical and behavioural walking and cycling measures, including new or improved footways and cycle lanes; accessibility improvements for disabled people; additional secure cycle parking; and promotion and publicity schemes, will inform our approach to increase the proportion of personal travel by these modes and our overarching objective of increasing accessibility to key services and facilities.

4.2.19 Whilst improving physical conditions for pedestrians and cyclists forms the basis of much of our corridors, neighbourhoods and supporting measures programme, achieving the target growth for walking and cycling also depends on the effectiveness of training, publicity and other 'soft' measures. Moreover, as the capacity and funding for

physical measures decreases, so our smarter travel programme will become increasingly important. Other potential threats to increasing the number of walking and cycling trips will be the availability/reliability of data. To address this, we are exploring the potential of installing a network of traffic counters across the borough, focusing on those areas where increased levels of walking and cycling can be expected as a result of investment.

4.2.20 A prime objective of our Sustainable Modes of Travel to School Strategy (SMOTS) and a key goal of our school travel plan programme, is to reduce the proportion of children who travel to school by car. Considerable success has been achieved in the first LIP with increases in the proportion of walking and cycling. However, travel by car is still high in some parts of the borough, and the long term aim is to reduce further the proportion of journeys to school by car. Accordingly, we have set a local target, in line with that in our SMOTS, to **increase the proportion of children travelling to school by non-car modes from 75% in 2009/10 to 77% in 2013/14**. Figure 4.5 shows the target trajectory with steady progress expected over the second LIP period.

Figure 4.5: Target 5 - travel to school (non-car modes)



Source: iTrace, TfL, 2009

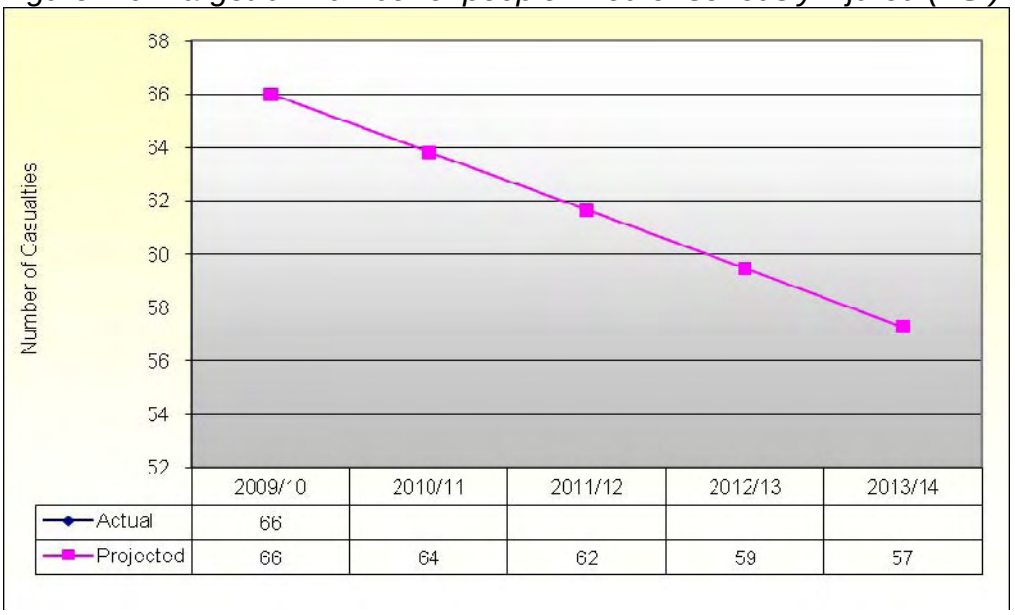
4.2.21 The target is considered realistic in light of previous success in promoting sustainable travel to schools through our school travel plan programme. Measures to promote walking (such as the 'Walk on Wednesdays' campaign) and to encourage cycling (e.g. providing new cycle parking at schools) are central to our overall programme. Achieving the reduction in transport by car is dependent on extending our successful partnerships with schools and on the support of parents. We will also need to understand better the factors that influence travel mode. No longer-term target has yet been set, but will be considered as part of the review of the current SMOTS.

Improving Safety and Security

4.2.22 Reducing casualties has been at the heart of the Council's policies on road safety, and **the number of people killed or seriously injured on our roads continues the downward trend.** Indeed, the borough has recorded a 58% reduction in the number killed or seriously injured, compared with the average for 1994-98, exceeding the target of 50% set by the Mayor in 2010. Overall, **the total number of casualties in Barking and Dagenham has fallen by 25% since 2003**.[4]

4.2.23 Boroughs are required to set targets on the **total number of people killed and seriously injured (KSI) from road traffic accidents and on total casualties**. The DfT have consulted on a series of national road safety targets, including to reduce the total number of people killed or seriously injured by at least 33% by 2020. Our long-term target relating to the number of killed or seriously injured (figure 4.6) mirrors that set by the DfT, and **we aim to reduce the total number of KSIs by 33% from 66 (the average value for 2004–2008) to 44 by 2020**. Our short-term target (figure 4.6) **is to reduce the total number of KSIs to 57 by 2013/14** (a 13.6% reduction).

Figure 4.6: Target 6 - number of people killed or seriously injured (KSI)



Source: London Road Safety Unit, TfL, 2009

4.2.24 No national targets have been proposed for total casualties. However, **our long-term target is to reduce the total number of casualties in Barking and Dagenham by 33% by 2020**. Our corresponding short-term target for total casualties (figure 4.7) **is a reduction from 650 (the 2004-2008 baseline average) to 570 by 2013/14** (a 12.3% reduction). Both targets are considered ambitious, but achievable given our good progress to date and our current road safety programme, with the

[4] London Road Safety Unit, TfL, 2009

particular emphasis we are placing on increased levels of education, publicity and training.

Figure 4.7: Target 7 - total casualties

Source: London Road Safety Unit, TfL, 2009

4.2.25 Reducing the number of child and powered two-wheeler casualties on our roads is a key aspect of our delivery plan approach to improve safety in Barking and Dagenham, particularly as the borough is amongst the poorest performing in terms of both the number of, and the rate of reduction in casualties in these areas. As such, we have set two local targets (see figures 4.8 and 4.9) which we will monitor closely. They include a target to **reduce the number of children killed or seriously injured (child KSIs) from 14 (the average value for 2006–2008) to 12 by 2013/14** (a 14.2% reduction), and a target to **reduce the number of motorcyclists killed or seriously injured (motorcyclist KSI) from 20 (the 2006–2008 baseline average) to 17 by 2013/14** (a 15% reduction). Both targets are predicated on achieving a 33% reduction in child and motorcyclist KSIs by 2020. The targets are considered ambitious, but achievable, given our current programme to improve road safety conditions in these areas.

Figure 4.8: Target 8 - number of children killed or seriously injured (child KSI)

Source: London Road Safety Unit, TfL, 2009

Figure 4.9: Target 9 - number of motorcyclists killed or seriously injured (motorcyclist KSI)

Source: London Road Safety Unit, TfL, 2009

4.2.26 Measures that were successfully adopted in the first LIP to reduce casualties on our roads included a variety of education, engineering and traffic management measures. A similar approach for the second LIP is expected to result in further reductions. In particular, we will give consideration to introducing new 20 mph zones, introduce new street lighting, and we are committed to continuing our successful borough-wide cycle training programme.

4.2.27 The main factor that could influence whether we achieve our casualty reduction targets is the accuracy of the data. However, as the data is

reported (and progress is measured) as three-year averages, this should reduce the potential for significant fluctuations by year. Additional factors that might affect our ability to meet our targets are delays to the implementation of schemes, and reduced funding allocations which may result in the overarching delivery programme having to be re-prioritised. The ability of TfL to reduce casualties on the TLRN will also determine whether or not we meet our targets.

Enhancing the Environment and Quality of Life

4.2.28 Transport is a major source of CO_2 emissions, accounting for some 19.3% (8.6 million tonnes) of Greater London's and **18.7% (157 kilo-tonnes) of Barking and Dagenham's total CO_2 emissions in 2008**.[5] Significant CO_2 savings are required from the transport sector if the **Mayor's target of a 60% reduction in London's CO_2 by 2025** (from a 1990 base) is to be achieved.

4.2.29 In recognition of the need to reduce our contribution to climate change, the Council is developing a Climate Change Strategy. This contains the ambitious target of **reducing borough CO_2 emissions by 60% by 2025** – mirroring that set by the Mayor for the whole of London. We have chosen to adopt this target in the LIP for the sake of consistency.

4.2.30 The MTS states that transport sector CO_2 emissions in the range of 5.3 to 4.6 million tonnes will be required in 2025 to meet the Mayor's target. Based on total Ground Based Transport (GBT) emissions in 2008, **a 45.3% reduction is required between 2008 and 2025. This equates to a 3.49% reduction per year, in respect of the previous year**. Taking this into account, the short-term target trajectory for Barking and Dagenham (**a 16.2% reduction in CO_2 emissions by 2013**) is illustrated in figure 4.10, below.

[5] Travel in London, TfL, 2010

Figure 4.10: Target 10 - borough-wide ground based transport CO_2 emissions

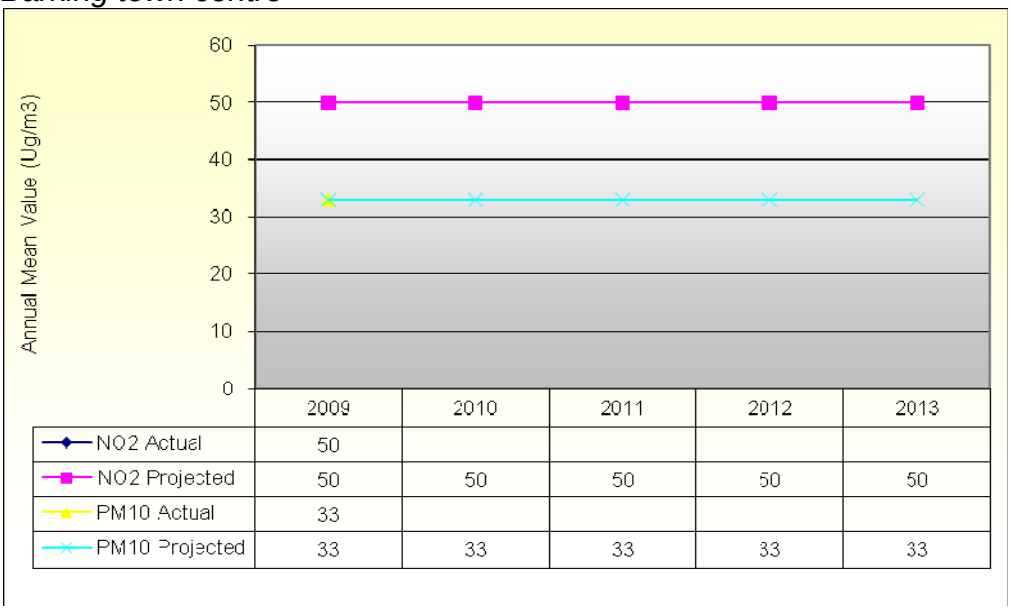
Source: London Energy and Greenhouse Gas Inventory (LEGGI), GLA, 2009

4.2.31 There is a range of measures available that, if effectively implemented, could help reduce CO_2 emissions in the borough. Meeting the ambitious MTS target, however, will require significant investment and the cooperation of a number of stakeholders. There is also concern that progress could be hampered by the anticipated growth in population, employment and traffic levels in the borough over the next decade. Specific measures included in the LIP Delivery Plan aimed at reducing CO_2 emissions in Barking and Dagenham include:

- Developing and implementing travel plans and promoting travel awareness initiatives with schools, businesses and new developments, with the aim of reducing the number of trips made by car;
- Promoting the uptake of cleaner, more environmentally friendly vehicles, including electric vehicles, principally through the Barking Low Carbon Zone Project;
- Implementation and promotion of new walking and cycling schemes, such as the 'Fitter for Walking' initiative and the Cycling on Greenways programme;
- Lorry management measures, including improved signing to route HGVs away from sensitive areas.

4.2.32 In recognition of the fact that pollution is a particular concern in Barking and Dagenham (the whole of the borough was declared an Air Quality Management Area in 2008), we have chosen to set a local target relating to **concentrations of fine particles (PM_{10}) and nitrogen dioxide (NO_2) in Barking Town Centre**, with a view to ensuring that **by 2013, average mean concentrations of both pollutants do not exceed 2006-2008 average baseline levels** (see figure 4.11).

Figure 4.11: Target 11 - average mean PM_{10} and NO_2 concentrations in Barking town centre



	2009	2010	2011	2012	2013
NO2 Actual	50				
NO2 Projected	50	50	50	50	50
PM10 Actual	33				
PM10 Projected	33	33	33	33	33

Source: London Air Quality Network, ERG, 2010

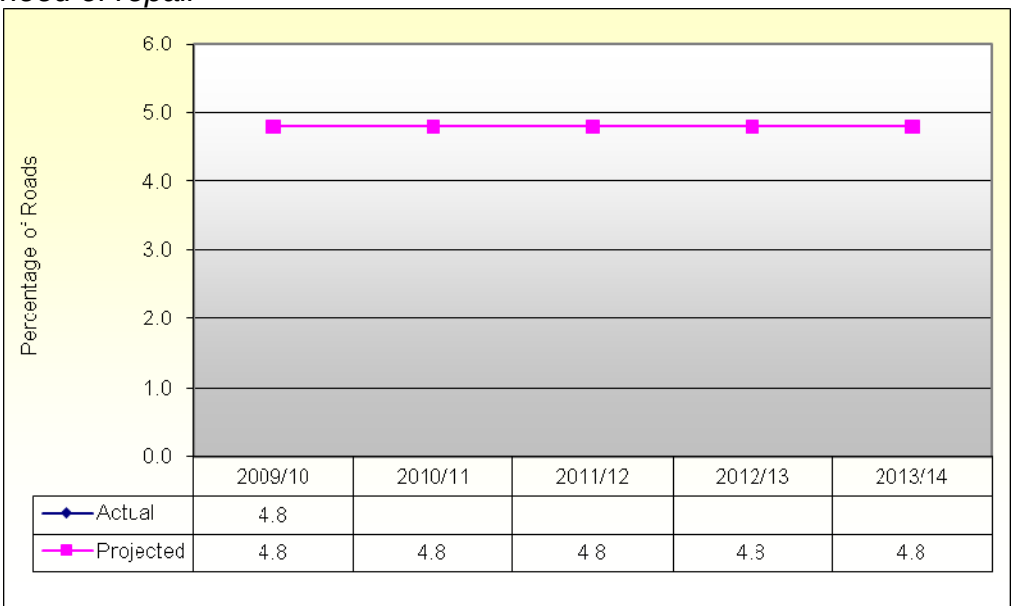
4.2.33 As with CO_2 emissions, there are a number of 'smarter travel' initiatives, traffic/demand management measures and, in some instances, walking and cycling measures, that have been identified as likely to have an impact on levels of pollution. However, without the use of complex modelling tools, it is impossible to say to what degree levels may change. Given that any reduction in average mean concentrations of PM_{10} and NO_2 as a result of LIP measures are likely to be off-set by a predicted increase in traffic levels[6] (much of which is generated outside the borough and is largely beyond our control), and other, non-transport related activities, it is considered that not exceeding 2006-2008 average mean PM_{10} and NO_2 concentrations is the most realistic target we could hope to achieve. No longer-term target has yet been set, but will be considered in light of progress during the course of the LIP.

Improving Management and Maintenance of our Assets

4.2.34 A well maintained highways network is essential to the safe and expedient movement of people and goods, as well as improving overall accessibility and enhancing the local street scene. Figure 4.12 sets out our target trajectory for **the proportion of our principal road network (excluding the TLRN) where maintenance should be considered**.

[6] East London Sub Regional Transport Plan - Challenges and Opportunities Report, TfL, 2010

Figure 4.12: Target 12 - proportion of borough principal road network in need of repair



Source: UKPMS Data, TfL, 2009

4.2.35 The overall condition of the road network in Barking and Dagenham has improved in recent years, with **the percentage of principal roads in the borough in need of repair having declined from 7.7% in 2004/05 to 4.8% in 2009/10 – a 37% improvement overall**.[7] Given the current position, and as a result of a reduction in our overall maintenance budget (both LIP and non-LIP funding), it is considered that any further improvements are unlikely to be achieved. As such, we have set a target to **maintain the proportion of the borough principal road network in need of repair at 2009/10 levels (4.8%) by 2017/18** (interim target of 4.8% by 2013/14).

4.2.36 Our strategy for future management and maintenance of the transport network is to make the most effective and efficient use of the existing infrastructure. Timely and effective maintenance is central to improving the borough's transport assets, as is the need to coordinate and effectively manage the implementation of all transport measures and maintenance programmes that impact on the highway. The development of a Network Management Plan is crucial in this regard.

4.2.37 Apart from the availability of funding, the principal risks to meeting the target include potential changes to survey methods, resulting in condition data that is not easily comparable; and severe winter weather conditions, such as those experienced in 2009/10, which could result in a deterioration in asset condition.

4.2.38 Due to the lack of available resources, data on the condition of other assets, such as non-principal roads and footways, is no longer

[7] UKPMS Data, TfL, 2010

collected by the borough. As such, **we are currently unable to set and monitor any local maintenance targets**.

LIP Monitoring Indicators

4.2.39 In addition to the various targets, the Council has identified a number of additional indicators it intends to monitor during the course of this LIP (see table 4.1). It is considered that the inclusion of these indicators, some of which relate to key borough priorities, will help demonstrate delivery of the LIP objectives. The additional monitoring requirements should not prove unduly onerous as, in the majority of cases, the borough already collects/monitors this information.

MTS Outputs

4.2.40 Information on how the borough will support the delivery of the Mayor's high level outputs (cycle parking, electric charging points, better streets, etc.) is set out in the Delivery Plan and Programme of Investment in chapter 3. We will provide further information on the number of specific interventions delivered as part of the annual reporting process.

4.3 Performance Management

4.3.1 The processes involved in performance management of the LIP targets are similar to that for the LIP Delivery Programme (see chapter 3, section 3.5). It comprises a clearly defined processes to **monitor target progress**; a robust system for **reviewing targets**; and methods to **identify and manage the risks to targets**.

4.3.2 Monitoring of each indicator/target is coordinated by the Transport Planning and Policy Team, who liaise with TfL and transport operators. The frequency with which data is updated varies but we are generally aware at any time of any indicators/targets that are not on track and of anywhere progress is sufficiently good to consider stretching the target.

4.3.3 The process of reviewing targets through the period of the second LIP emerges, in part, from the above monitoring system. We also recognise the need to ensure targets remain challenging and realistic. Targets may be stretched under the following conditions:

- The target has already been met (or will be met shortly);
- We are confident in the trend of the data (i.e. the improvement is real and sustainable and not, for example, a statistical anomaly);
- We have the capacity to implement further measures needed;
- Stretching the target is a higher priority than transferring resources to another area and ensuring another indicator is kept on track.

4.3.4 The same process may sometimes require a more realistic target in the light of experience.

4.3.5 As with the LIP programme, the principal risks associated with the delivery of the LIP targets include the quality of the data/information supplied; the failure to deliver planned measures; the relative effectiveness of selected measures; the role(s) of partners/stakeholders; and changes to funding levels.

4.3.6 The most obvious risk to meeting targets arises from the failure to deliver the planned programme. Monthly project management meetings help ensure that programme slippage is identified promptly, so that appropriate action can be taken to bring delivery back on track.

4.3.7 A more serious problem arises if the planned measures are all delivered and monitored effectively but do not prove to be as effective as anticipated. Risk in this category includes uncertainty over which measures are relevant and their potential impact in achieving targets. The risk is managed by:

- Observing good practice elsewhere and noting the effectiveness of different types of intervention;
- Reviewing the assumptions made about the impact of schemes;
- Reviewing the programme/strategy where necessary;
- Recognising that some indicators are affected by factors not in the borough's control (such as the weather);
- If appropriate, introducing additional indicators to provide evidence of change (e.g. monitoring of cycle parking to supplement data from automatic cycle counters).

4.3.8 There may also be occasions where, despite the risk management, the target proves too ambitious and a more realistic target has to be set.

4.3.9 Achieving the targets is dependent on the effectiveness of neighbouring authorities and TfL (in the case of the TLRN) in delivering their objectives and implementing their respective delivery programmes. In addition, the support/cooperation of other stakeholders (e.g. developers, businesses, transport operators, residents, etc.) is also crucial. In all cases, meeting our targets is dependent on extending our successful partnership arrangements.

4.3.10 All targets set at this stage are on the basis that funding will be as indicated in the original settlement letter from TfL. If a higher level of funding is available, then the programme can be extended and the targets stretched. Similarly, if funding is lower than the indicative amount, then the programme will need to be reduced, with corresponding reductions in the targets. The effect on targets of any major schemes has also yet to be considered. Future bids for major schemes will include the changes to current targets that can be expected together with targets for appropriate new local indicators.

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Annex A: LIP Assessment Criteria

A.1 Introduction

A.1.1 The table below set out the criteria and sub-criteria against which the Local Implementation Plan will be assessed by TfL. The Council is required to address a number of core requirements, including the need to identify a set of **Transport Objectives**, a costed and funded **Delivery Plan** and a **Performance Monitoring Plan**. The table also identifies where in the LIP the various issues have been addressed.

Table A1: LIP Assessment Criteria

Criteria/Sub-criteria	Where issues are addressed in the LIP
MTS goals and SRTPs	
To what extent have the MTS goals and sub-regional priorities been taken into account in the LIP?	
A LIP must show how the MTS goals and the evolving STRPs have been taken into account in drawing up the transport objectives and Delivery Plan. If a particular goal or sub-regional challenge/opportunity is not a significant issue locally, the transport objectives section should explain why this is so.	Cpt 1, Sect 1.2 Cpt 2, Sect 2.5 Cpt 3, Sect 3.2
A clear timeframe should be given for when it is anticipated that the LIP Transport Objectives will be met (this can include 'ongoing' where appropriate).	Cpt 2, Sect 2.5
Evidence should be given of how transport provision/management relates to wider issues of education, health, employment, housing renewal, environmental protection and access to services and opportunities.	Cpt 1, Sect 1.2 Cpt 2, Sect 2.4 Cpt 3, Sect 3.2
Local corporate and statutory context	
How well does the LIP support and feed into the development of the council's wider corporate, community and statutory objectives?	
A LIP should be a corporate document that feeds into, and is influenced by, other corporate/local strategies (e.g. the Community Strategy, LSP, LAA, LDF, AQAP, NMD and other strategies for education, health and regeneration).	Cpt 1, Sect 1.2 Cpt 2, Sect 2.5 Cpt 3, Sect 3.2
There should be clear evidence that other service departments within the council are fully signed up to the LIP, have been involved in its development and are actively committed to delivering its objectives.	Cpt 1, Sect 1.3 Cpt 2, Sect 2.5 Cpt 3, Sect 3.5 Cpt 4, Sect 4.3
There should be clear evidence that the LIP outcome targets are aligned with objectives of other corporate/local strategies.	Cpt 4, Sect 4.2

Criteria/Sub-criteria	Where issues are addressed in the LIP
Situation analysis	
Is there a clear link between the problems, challenges and opportunities identified in the LIP's Transport Objectives and the MTS goals?	
The LIP transport objectives must be based on a robust and up-to-date local needs assessment and demonstrate a clear understanding of how these are grounded in the MTS goals and challenges.	Cpt 2, Sec t 2.5
A clear picture should be presented of the transport network(s) in the area covering current and likely future supply and demand for all important transport modes, asset condition and quality, and access to key services and opportunities.	Cpt 2, Sect 2.2 – 2.4
Information should be presented on the needs of any specific social groups, for example black and minority ethnic communities, older people, disabled people, young people and job seekers.	Cpt 1, Sect 1.3 Cpt 2, Sect 2.2; 2.4
Delivery plan	
Is there a clear Delivery Plan with a realistic programme of delivery and funding? Have the links to the MTS goals and LIP Transport Objectives been clearly identified? Are the main risks identified and addressed?	
A LIP must include a clear and robust Delivery/Investment Plan with the LIP funding totals clearly aligning with the indicative LIP allocations published by TfL in the Guidance on Developing the Second LIPs.	Cpt 3, Sect 3.2 – 3.4
The Delivery Plan should show a reasonable level and range of funding sources.	Cpt 3, Sect 3.3
It should also show a realistic timeline for delivery of the proposed packages/interventions, with a statement that it will be 'refreshed' at least every three years.	Cpt 3, Sect 3.2
The Delivery Plan must demonstrate that the timetable for implementing the LIP's proposals, and the date by which the proposals are to be implemented, are adequate for the purposes of implementing the LIP, as required by section 146(3)(c) of the GLA Act 1999.	Cpt 3, Sect 3.2; 3.5
There should be a clear demonstration of how the packages/interventions proposed will contribute to the MTS goals.	Cpt 3, Sect 3.2; 3.4
The Delivery Plan should include a short section on risk assessment and mitigation.	Cpt 3, Sect 3.5
Targets and monitoring progress	
To what extent does the LIP Monitoring Plan provide a framework for monitoring the	

Criteria/Sub-criteria	Where issues are addressed in the LIP
delivery of outcomes? ***To what extent does the Monitoring Plan identify and address risks to the achievement of the borough's outcome targets?***	
There should be a clear set of outcome targets that are consistent with the LIP mandatory indicators, with trajectories, preferably with supporting local targets (and trajectories) and performance indicators for measuring progress against these targets.	Cpt 4, Sect 4.2
Evidence should be presented that the targets selected are realistic, but stretching.	Cpt 4, Sect 4.2
Evidence should be presented of what actions the borough will take to deliver the target, referring clearly to the interventions proposed in the Delivery Plan.	Cpt 4, Sect 4.2
Evidence should be presented that a risk assessment has been carried out for each mandatory target.	Cpt 4, Sect 4.3
Evidence should be presented demonstrating how boroughs propose to monitor progress against targets.	Cpt 4, Sect 4.3
Consultation	
Have all the statutory consultees been consulted? ***Which other, additional consultees have been involved in either the preparation of, or the consultation on, the LIP?***	
Evidence must be presented for those statutory consultees who have been, or are being, engaged with.	Cpt 1, Sect 1.3
Evidence should be presented for any additional groups that have been consulted in the process of preparing the LIP and/or as part of the statutory consultation process.	Cpt 1, Sect 1.3

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Annex B: LIP Programme of Investment

B.1 Introduction

B.1.1 A more detailed schedule of the schemes that the Council is proposing under the LIP Maintenance and Corridor, Neighbourhood and Supporting Measures programmes for 2011/12 – 2013/14 is set out in table B1 (below). For each scheme an indication of costs and the measures proposed are given. It is considered that the programme will go some way to addressing a variety of local issues, whilst also being consistent with the Mayor's Transport Strategy.

Table B1: 2011/12 – 2013/14 LIP Programme of Investment

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs – 2011/12*	Indicative Costs – 2012/13*	Indicative Costs - 2013/14*
Maintenance Programme – Indicative Allocation:			**£357,000**	**£492,000**	**£492,000**
TfL Recommended Submission (allows for 25% reserve):			**£446,000**	**£615,000**	**£615,000**
Principal Road Resurfacing (Various Locations)	Carriageway resurfacing to be undertaken at following priority locations (subject to confirmation of funding levels and outcome of future condition surveys): 2011/12: • Longbridge Road (Cecil Avenue to Upney Lane) 2012/13: • Heathway (Hedgemans Road to Arnold Road) • A1306 (junction with Ballards Road) • Abbey Road (Northern Relief Road to Retail Park) • Rainham Road South/Ballards Road junction 2013/14: • Lodge Avenue (A13 to Porters Avenue) • Ripple Road (Lancaster Avenue to Tudor Road) • Longbridge Road (outside University of East London)	Abbey, Longbridge River, Village, Abbey, Gascoigne Eastbury, Mayesbrook, Becontree	£446,000	£615,000	£615,000
Bridge Assessment and Strengthening (Various	Bridge assessment and strengthening work to be undertaken at following priority locations (subject to confirmation of funding levels and outcome of future condition surveys):		£13,000	TBC	TBC

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs – 2011/12*	Indicative Costs – 2012/13*	Indicative Costs - 2013/14*
Locations)	2011/12: • Loxford Road Culvert 2012/13: • TBC 2013/14: • TBC	Abbey			
		TOTAL:	**£459,000**	**£615,000**	**£615,000**
Corridors, Neighbourhoods and Supporting Measures Programme Indicative Allocation:			**£1,741,000**	**£1,670,000**	**£1,432,000**
Barking Station Forecourt Public Realm Improvements (Station Parade)	Public realm improvement scheme designed to improve access arrangements and provide an improved interchange area outside the station. Includes proposals to relocate bus stops and taxi waiting areas, provision of improved cycle and pedestrian facilities, parking for disabled persons, improved lighting, signing and public transport information, and a greatly enhanced street scene.	Abbey	£900,000 *(includes £500,000 LIP funding and £400,000 funding from the LTGDC)*	-	-
Mayesbrook Park Access Improvements (Lodge Avenue/Porters Avenue)	Park access improvement scheme to support development of new sports centre in Mayesbrook Park. Work to focus on improving park access arrangements and improving safety, journey times and the public realm along Lodge Avenue. Specific measures to be confirmed but likely to include junction treatments, new/ improved cycling and pedestrian facilities and	Mayesbrook, Becontree, Eastbury	£381,000	-	-

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs – 2011/12*	Indicative Costs – 2012/13*	Indicative Costs - 2013/14*
	signing, improved bus stops and waiting/loading restrictions and the realignment of street furniture.				
Merry Fiddlers Junction Improvements	Large scale junction improvements scheme to support Council's 'Total Locality' initiative in Becontree Heath. First stage study will outline a range of interim road safety and accessibility improvements (focusing on improving pedestrian access) ahead of more comprehensive improvement works to tackle long standing congestion/pollution issues.	Whalebone, Heath, Valance	£150,000	£460,000	£400,000
Cycling on Greenways and Local Cycle Links (Various Locations)	In partnership with Sustrans we are working to develop a network of high quality green links between the boroughs parks and open spaces, complimented with leisure cycling routes, loops and links within each of these areas. Our immediate priorities for the following three years are new routes in Goresbrook Park, Mayesbrook Park, Central Park and Eastbrook End Country Park. Works would include defining existing and providing new routes, addressing missing links and ensuring appropriate safe cycling access. A key priority for 2011/12 is to implement new cycle links connecting Barking Riverside (in particular, the new Rivergate Centre) to Dagenham Dock and Barking stations.	Borough Wide	£150,000	£100,000	£50,000
Longbridge Road Shopping Parade Improvements (Robin Hood, Five Elms)	Continuation of programme to improve local shopping parades within the borough. In both areas work will be undertaken to improve the public realm outside the shops in order to halt the decline of these locally important parades. The proposed works will include new street furniture, improved car parking provision (particularly for disabled users), tree planting and	Becontree, Mayesbrook, Parsloes	£330,000 *(includes £150,000 LIP funding, £120,000 Council funding and*	£200,000	£250,000

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs – 2011/12*	Indicative Costs – 2012/13*	Indicative Costs - 2013/14*
	remedial works to pavements.		*£60,000 S106 funding)*		
Road Safety Improvement Schemes (Various Locations)	Small scale, site specific road safety improvements in support of our LIP objective to reduce the number of road casualties, and to complement our various corridor/neighbourhood initiatives. Sites are identified on a priority basis (i.e. number of casualties) and the nature of the measures implemented will be determined by the type of accident that occurs. Community engagement will be undertaken to ensure that the proposed measures are supported by residents/businesses. Priorities for 2011/12 include improvements to pedestrian crossings near Five Elms School (Heathway) and in Dagenham Road, traffic calming measures in Salisbury Avenue and parking/traffic restrictions in Wedderburn Road. Priorities for future years tbc.	Borough Wide	£100,000	£100,000	£50,000
Station Access Improvements (Dagenham East, Becontree and Chadwell Heath,)	Station access improvements schemes. 2010/11 - studies to identify cost of step free access at Dagenham East and Becontree stations. 2011/12 and 2012/13 - measures tbc, but may include improvements to pedestrian crossing facilities/footways, side road entry treatments, cycle parking, CCTV, direction signage/information and improved street lighting or ramps onto the platforms. Chadwell Heath scheme designed to complement the work undertaken to improve the public realm along Chadwell Heath High Road and proposed station improvements as part of the Crossrail scheme. Becontree station area has high pedestrian footfall, which is likely to increase as future developments emerge.	Whalebone, Valance, Mayesbrook, Goresbrook, Eastbrook, Village	£50,000	£300,00	£250,000

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs – 2011/12*	Indicative Costs – 2012/13*	Indicative Costs - 2013/14*
Borough Low Carbon Zones	Environmental improvement/carbon reduction scheme linked to the designation of Barking Town Centre and Becontree Heath as Low Carbon Zones. Measures to include provision of solar powered street signage, cycle parking, car club bays and electric vehicle recharge points and business travel/freight logistic plans to promote sustainable travel and reduce the impact of goods deliveries.	Abbey, Gascoigne	£295,000 *(includes £50,000 LIP funding and £245,000 funding from the GLA)*	£50,000	-
Neighbourhood Area Improvements (Valance, Parsloes, Albion and Chadwell Heath areas)	Area improvement schemes aimed at tackling congestion and improving accessibility within local neighbourhoods. Works to be undertaken tbc, but may include review of existing parking supply/controls to meet current needs; range of accessibility improvements to footways/crossings/bus stops to improve condition for mobility impaired and to provide better routes to public transport links and key facilities; and range of traffic management/safety measures to address issues of localised congestion, speeding and safety concerns.	Valance, Parsloes, Albion, Chadwell Heath, Whalebone, Heath, Mayesbrook, Eastbrook	-	£250,000	£250,000
School Travel Plans	Continuation of work with schools to promote safe and sustainable travel. Funding earmarked for range of projects including review/update of travel plans, promotional events (e.g. Walk on Wednesdays) and small scale physical measures (e.g. cycle parking).	Borough Wide	£60,000	£60,000	£50,000
Business Travel Strategies	Continuation of work with businesses to develop/implement travel strategies to promote sustainable travel for employees. Funding also earmarked for freight/logistics plans to reduce the impact and increase the effectiveness of goods deliveries.	Borough Wide	£60,000	£60,000	£50,000

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs – 2011/12*	Indicative Costs – 2012/13*	Indicative Costs - 2013/14*
Cycle Training	Provision of cycle training to cyclists of all ages to promote cycling as a healthy and sustainable mode of travel. Funding also earmarked for promotional events.	Borough Wide	£60,000	£60,000	£50,000
Travel Awareness – Promotion and Events	Funding earmarked for a range of advertising/promotional material and a series of high profile events to engage business and residents to promote healthy and sustainable travel practices.	Borough Wide	£15,000	£15,000	£16,000
Road Safety Education/ Training/Publicity	Implementation of initiatives/events and production of training material/publicity leaflets aimed at promoting road safety. Focus will be on schools and vulnerable road users.	Borough Wide	£15,000	£15,000	£16,000
		TOTAL:	**£2,566,000**	**£1,670,000**	**£1,432,000**
Local Transport Funding Indicative Allocation:			**£100,000**	**£100,000**	**£100,000**
Minor Works (Various Locations)	Ad-hoc measures such as pedestrian access improvements, removal of street clutter (signage/furniture), implementation of cycle parking stands and new car club bays, etc.	Borough Wide	£70,000	£70,000	£70,000
Future Scheme Development (Various Locations)	Investigative studies to inform future LIP Corridor/ Neighbourhood based schemes. Focus will be on road safety/accessibility improvements. Key priority for 2011/12 will be to undertake a feasibility study into two way bus movements at the Goresbrook Road/Heathway junction as a precursor to	Borough Wide	£30,000	£30,000	£30,000

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs – 2011/12*	Indicative Costs – 2012/13*	Indicative Costs - 2013/14*
	improving local bus accessibility.				
		TOTAL:	**£100,000**	**£100,000**	**£100,000**
Other TfL Funding Allocations:			**£143,000**	**£135,000**	**£95,000**
Car Club Expansion	Implementation of additional parking bays and associated infrastructure to support the growth of Car Clubs in the borough. As part of our travel plan commitments, we are also exploring the potential of the Council joining the scheme as a corporate member.	Borough Wide	£15,000	£15,000	-
Biking Borough Initiative	Implementation of a range of measures geared to helping achieve a step change in attitudes towards cycling in the borough. Emphasis is on the development of cycle hubs, cycling communities and raising the profile of cycling locally. Specific initiatives to include implementation of new/improved cycle parking, provision of cycle training and production of promotional material and events.	Borough Wide	£128,000	£120,000	£95,000
		TOTAL:	**£143,000**	**£135,000**	**£95,000**
		GRAND TOTAL:	**£3,263,000**	**£2,520,000**	**£2,242,000**

** All funding is from TfL LIP allocation unless otherwise stated*

Annex C: LIP Major Schemes Programme

C.1 Introduction

C.1.1 A more detailed schedule of the schemes that the Council is proposing to submit to TfL under the LIP Major Schemes programmes during 2011/12 – 2013/14 is set out in table C1 (below). For each scheme an outline of the proposed measures is provided, together with information on costs and submission timescales, as well as an indication of the likely impacts on objectives/targets. It is considered that the programme will go some way to addressing a variety of local issues, whilst also being consistent with the Mayor's Transport Strategy.

Table C1: Major Schemes Programme - Proposed Schemes for Submission to TfL

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs/ Funding Sources	Submission Timetable	Links to LIP Objectives/Targets and MTS Outputs
Chadwell Heath Station Access Improvements	The Council is keen to implement a Station Access scheme at Chadwell Heath to complement the work undertaken to improve the public realm along the High Road and the planned development of the station as part of the Crossrail scheme. Measures likely to include improved pedestrian crossing facilities and footways, side road entry treatments, cycle parking, CCTV cameras, new signage/information and improved street lighting.	Whalebone; Chadwell Heath; Valence	£1,000,000 *(Major Schemes Funding - £700,000; LIP Funding - £300;000)*	2011/12	Objectives: C, E, F, I, J Targets: 1, 2, 6, 7, 8, 9, 12 MTS Outputs: Cycle Parking; Better Streets; Increase in Street Trees
Barking Riverside Cycling/Walking Corridor	Implementation of key section of NCN Route 13 cycle link connecting Barking Riverside development and Sustainable Industries Park development at Dagenham Dock. Development of the scheme will encourage cycling and walking for short-distance commuting trips between local residential and employment centres as well as facilitating long-distance recreational travel along the North East Thames Cycle Route.	Thames	£1,000,000 *(Major Schemes Funding - £800,000; Developer Funding - £100,000; LIP Funding - £100,000)*	2011/12	Objectives: B, C, D, F, H Targets: 3, 4, 5, 6, 7, 8, 9, 10 MTS Outputs: Cycle Highway Schemes; Cycle Parking

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs/ Funding Sources	Submission Timetable	Links to LIP Objectives/Targets and MTS Outputs
Green Lane Shopping Parade Enhancements	Green Lane is one of the larger District Centres within the borough and would benefit from general improvements to its public realm. Potential measures include the removal of street clutter (including realignment of street furniture), pavement works, CCTV, shop front improvements, tree planting and review of parking/loading arrangements and facilities.	Becontree; Valance; Whalebone	£1,500,000 *(Major Schemes Funding - £1,300,000; Council Funding - £200,000)*	2012/13	Objectives: C, E, F, I, J Targets: 1, 2, 6, 7, 8, 9, 12 MTS Outputs: Cycle Parking; Better Streets; Increase in Street Trees
Becontree Station Area Public Realm Improvements	The Gale Street/ Woodward Road/ Hedgemans Road area has been identified as a location that would benefit from further public realm improvement works. Its proximity to Becontree station means it has a particularly high pedestrian footfall. In addition, there are a number of significant proposed developments planned on various sites which would increase footfall further.	Mayesbrook; Goresbrook	£1,500,000 *(Major Schemes Funding - £1,000,000; LIP Funding - £250;000; Developer Funding - £250,000)*	2012/13	Objectives: C, E, F, I, J Targets: 1, 2, 6, 7, 8, 9, 12 MTS Outputs: Cycle Parking; Better Streets; Increase in Street Trees
Barking Station Parade/London Road Bus Corridor Enhancements	Scheme aimed at improving poor image of the station and transforming the experience of those using the area. Measures include improvements to Station Parade to create a high quality	Abbey	£2,000,000 *(Major Schemes Funding - £2,000,000)*	2013/14	Objectives: A, B, C, D, F, J Targets: 1, 2, 3, 4, 6, 7, 8, 9, 10, 11,

Scheme Name/ Location	Scheme Summary	Ward(s) Affected	Indicative Costs/ Funding Sources	Submission Timetable	Links to LIP Objectives/Targets and MTS Outputs
	frontage/public realm opposite the station and establishing a long term aspiration to close Cambridge Road to vehicular traffic and re-routing of the bus network through station parade.				12 MTS Outputs: Cycle Parking; Better Streets; Increase in Street Trees
Barking Town Centre/East Street Public Ream Improvements	Large scale street scene enhancement project to improve the image of the town centre 'gateway' area. A key measure includes the creation of two new public spaces – Leisure Square (located off Cambridge Road) and East Street Circus (adjacent to Linton Road). This is a long term aspiration which forms an integral part of the Barking Town Centre Masterplan.	Abbey	£3,000,000 *(Major Schemes Funding - £2,200,000; Developer Funding - £800,000)*	2013/14	Objectives: C, E, F, I, J Targets: 3, 4, 6, 7, 8, 9, 10, 11, 12 MTS Outputs: Cycle Parking; Electric Charging Points; Better Streets; Increase in Street Trees
		TOTAL:	**£10,000,000**		

Annex D: LIP Programme Risk Assessment

D.1 Introduction

D.1.1 As part of the Council's internal Capital Programme Monitoring (CPM) process, a risk assessment of the LIP programme has been undertaken. The principal risks associated with the delivery of the LIP programme include the failure to deliver planned measures; the relative effectiveness of selected measures; the quality of the data/information supplied; and changes to funding levels. A summary of the key issues identified in the risk assessment is set out in Table D1, below.

Table D1: LIP Programme Risk Assessment

RISK MATRIX/ASSESSMENT TEMPLATE		
ASSESSMENT BY: Tim Martin DATE: 15/09/2010	DEPARTMENT: Finance & Commercial Services SERVICE: Regeneration & Economic Development	DIRECTOR: N/A HEAD OF SERVICE: Jeremy Grint GROUP MANAGER: Daniel Pope
COUNCIL'S VISION:	Together we will Build Communities and Transform Lives	
COUNCIL'S CORE OBJECTIVE:	Achievement of the 7 Community Priorities	
BUSINESS OBJECTIVE:	Delivery of the 2011/12 – 2013/14 Local Implementation Plan Funding Programme	
ASSESSMENT TYPE:	Both Threat	

Details of Risk/Opportunity, Including Impacts/Consequences	**Owner**	**Assessment of Risk/Opportunity**		
		(Assume NOTHING in place)		
1	**2**	**3**	**4**	**5**
		Impact	**Likelihood**	**Rating**
A. Failure to deliver programme due to lack of staff resources - could result in a reduction of funding from TfL.	Regeneration & Economic Development/ Customer Services/ Capital Delivery	3	3	9
B. Failure to submit regular and accurate reports/claims to TfL - could	Project Managers/	3	3	9

result in a reduction of funding from TfL.	Finance Teams			
C. Failure to secure future funding - could result in schemes with multiple phases left incomplete.	Transport Planning & Policy	3	3	9
D. Unforeseen external factors (e.g. emergency utility company works) - could result in project delays.	Project Managers	3	2	6
E. Failure to claim back funds/expenditure from TfL - could result in Council having to meet costs from internal budgets/prudential borrowing.	Finance Teams	3	3	9

Controls/Enablers	Resources Required	Status (e.g. implemented, in progress, proposed)	% Complete	Review Frequency	Date of Next Review	Owner
6	7	8	9	10	11	12
A. Confirm capacity to deliver projects internally and externally through appointment of consultants.	Project Teams and Consultants	Implemented	100	Annually	Sept 2011	Regeneration & Economic Development/ Customer Services/ Capital Delivery
B. Regular reporting on project progress/spend and regular claims.	Officer time/appointment of dedicated Finance Officer	In progress	50	Annually	Sept 2011	Project Managers/ Finance Teams
C. Failure to secure future funding -	Officer time	In progress	50	Annually	Sept 2011	Transport

could result in schemes with multiple phases left incomplete.						Planning & Policy
D. Unforeseen external factors (e.g. emergency utility company works) - could result in project delays.	Cooperation from internal/external agencies	Implemented	100	Annually	Sept 2011	Project Managers
E. Failure to claim back funds/expenditure from TfL - could result in Council having to meet costs from internal budgets/prudential borrowing.	Appointment of dedicated Finance Officer/portal training for finance staff	In progress	50	Annually	Sept 2011	Finance Teams

Reassessment of Risk/Opportunity			**Review Frequency**	**Date of Next Review**
(After measures put in place)				
Impact	**Likelihood**	**Rating**		
13	**14**	**15**	**16**	**17**
A. 2	2	4	Annually	Sept 2011
B. 2	1	2	Annually	Sept 2011
C. 2	1	2	Annually	Sept 2011
D. 2	2	4	Annually	Sept 2011
E. 2	1	2	Annually	Sept 2011

Annex E: LIP Targets Summary

E.1 Introduction

E.1.1 Further information on the mandatory and local targets included in the LIP is provided in table E1 (Proforma B), below. For each indicator, a definition of the target is given, along with information on target dates and values, target trajectory, and data sources. Information on the systems and measures in place for monitoring progress of targets is set out in chapter 4 – Performance Management and Monitoring Plan.

Table E1: LIP Targets Summary (Proforma B)

Locally specific targets for mandatory indicators v1.0

Core indicator	Definition	Year type	Units	Base year	Base year value	Target year	Target year value	Trajectory data				Data source
Mode share of residents	% of trips by walking	Financial	%	2009/10 (2005-2008 average)	37	2013/14	37.38	2010/11	2011/12	2012/13	2013/14	LTDS
								37.09	37.19	37.28	37.38	
Mode share of residents	% of trips by cycling	Financial	%	2009/10 (2005-2008 average)	1	2013/14	1.83	2010/11	2011/12	2012/13	2013/14	LTDS; Manual and Automatic Traffic Counts (Borough)
								1.21	1.41	1.62	1.83	
Bus service reliability	Excess wait time in mins	Financial	Mins	2009/10	1.2	2013/14	1.2	2010/11	2011/12	2012/13	2013/14	iBus
								1.2	1.2	1.2	1.2	
Asset condition - principal roads	% length in need of repair	Financial	%	2009/10	4.8	2013/14	4.8	2010/11	2011/12	2012/13	2013/14	Detailed Visual Inspection (DVI) data supplied for each borough to TfL by LB Hammersmith and Fulham
								4.8	4.8	4.8	4.8	
Road traffic casualties	Total number of people killed or seriously injured	Financial	Number	2009/10 (2004-2008 average)	66	2013/14	57	2010/11	2011/12	2012/13	2013/14	London Road Safety Unit
								64	62	59	57	
Road traffic casualties	Total casualties	Financial	Number	2009/10 (2004-2008 average)	650	2013/14	570	2010/11	2011/12	2012/13	2013/14	London Road Safety Unit
								629	609	590	570	
CO2 emissions	CO2 emissions	Calendar	Tonnes/year	2008	157	2013	131	2010	2011	2012	2013	GLA's London Energy and Greenhouse Gas Emissions Inventory (LEGGI)
								146.24	141.14	136.22	131.47	

Additional (non-mandatory) local targets

Local indicator	Definition	Year type	Units	Base year	Base year value	Target year	Target year value	Trajectory data				Data source
Modes share of pupils	% of trips by non-car modes	Financial	%	2009/10	75	2013/14	77	2010/11	2011/12	2012/13	2013/14	Travel Plan Monitoring (Borough)
								75.5	76	76.5	77	
Bus service reliability (Route 103)	Average bus journey times	Financial	Mins	2009/10	10	2013/14	10	2010/11	2011/12	2012/13	2013/14	iBus
								10	10	10	10	
Bus service reliability (Route 150)	Average bus journey times	Financial	Mins	2009/10	7.1	2013/14	7.1	2010/11	2011/12	2012/13	2013/14	iBus
								7.1	7.1	7.1	7.1	
Bus service reliability (Route 368)	Average bus journey times	Financial	Mins	2009/10	31.2	2013/14	31.2	2010/11	2011/12	2012/13	2013/14	iBus
								31.2	31.2	31.2	31.2	
Road traffic casualties	Total number of motorcyclist KSIs	Financial	Number	2009/10 (2006-2008 average)	20	2013/14	17	2010/11	2011/12	2012/13	2013/14	London Road Safety Unit
								19	19	18	17	
Road traffic casualties	Total number of child KSIs	Financial	Number	2009/10 (2006-2008 average)	14	2013/14	12	2010/11	2011/12	2012/13	2013/14	London Road Safety Unit
								14	13	13	12	
PM10 concentrations	PM10 concentrations	Calendar	Mean Value	2009 (2006-2008 average)	33	2013	33	2010	2011	2012	2013	London Air Quality Network (ERG)
								33	33	33	33	
NO2 concentrations	NO2 concentrations	Calendar	Mean Value	2009 (2006-2008 average)	50	2013	50	2010	2011	2012	2013	London Air Quality Network (ERG)
								50	50	50	50	

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Annex F: LIP Strategic Environmental Assessment – Environmental Statement

F.1 Introduction

F.1.1 The Council has a legal duty to undertake a **Strategic Environmental Assessment (SEA) as part of the development of the LIP**. This Environmental Statement summarises how the SEA process has been taken into account in the development of the second LIP and covers:

- An overview of the SEA process and a summary of the main findings of the Environmental Report;
- Changes to/deletions from the final LIP in response to the main findings of the Environmental Report;
- Ways in which responses to consultation have been taken into account;
- Performance monitoring recommendations.

F.2 Overview of the SEA process

F.2.1 Under the terms of the Environmental Assessment of Plans & Programmes Regulations 2004, Local Implementation Plans are identified as one of the types of plans and programmes that need to undergo Strategic Environmental Assessment. The purpose of an SEA is to determine whether a plan could place the environment at risk of damage and to identify opportunities for the environment to be improved.

F.2.2 The SEA of the draft LIP was carried out by the Council's Planning Policy Team. As part of the SEA process, an Environmental Report was produced that highlighted the likely significant environmental effects of the measures contained within the draft LIP and proposed suitable alternatives. The full Environmental Report is available on the Council website at www.lbbd.gov.uk

F.2.3 The SEA examined the extent to which the individual components of the LIP and the LIP as a whole could present risks of damage and opportunities for benefit to different aspects of the environment (e.g. biodiversity; flora and fauna; water and soil; population and health; air quality and climatic factors; and cultural heritage and landscape). The extent to which each of the identified risks and opportunities could be considered to be 'significant' at the local level was assessed. The findings of those assessments were used to determine which aspects of the environment might be placed at greatest risk and which were most likely to benefit from the LIP.

F.3 Summary of main findings

F.3.1 The SEA examined three main components of the draft LIP – namely the Plan objectives; the alternative strategies that had been considered; and the schemes that would be used to put the LIP into action. A summary of the key findings of the assessment is set out in table F1, below:

Table F1: LIP SEA – Summary of main findings

Aspect of the Environment	Potential Impacts
Biodiversity, flora and fauna	The LIP may have significant negative effects on biodiversity for three areas of work: • Access improvements to Mayesbrook Park may lead to polluted runoff from roads and car parks into the Mayesbrook waterway. • There may be significant negative impacts on biodiversity where cycleways that are developed or improved are adjacent to SINCs and/or natural habitats such as water or woodland. For example, lighting of cycleways through parks and on routes that are adjacent to Sites of Importance for Nature Conservation, such as the Goresbrook may have negative impacts on species such as bats and water voles. • Work to strengthen bridges where they are close to, or cross over waterways, may damage or disturb wildlife, and pollute the waterway.
Population and health	There is a potentially significant positive effect for the proposed Barking Station Forecourt Public Realm Improvements. The long term improvements to accessibility, in particular for the mobility impaired, improved integration between sustainable travel modes and significant public realm improvements will have benefits for health for large sections of the community.
Water and soil	There are potentially significant negative effects for water quality from two areas of the LIP programme: • Access improvements to Mayesbrook Park may increase polluted runoff from associated roads and car parking into the Mayesbrook waterway. This is a sensitive receptor that already suffers from poor water quality. • Strengthening bridges, where they are close to natural or semi-natural habitats such as waterways, woodland or scrub may have a significant negative impact on biodiversity. An ecological assessment for bridges that are close or cross such habitats should be part of the detailed planning for the work.

F.4 SEA Recommendations/Development of the final LIP

F.4.1 Table F2, below, sets out the LIP responses to the recommendations made in the Environmental Report. In accordance with the SEA guidance, we have also indicated where no changes have been made, and the reasons for this.

Table F2: LIP responses to Environmental Report recommendations

Recommended Mitigation/ Enhancement Measures	LIP Response to Recommendations
Improvements to walking routes to the station should be included in the LIP's Programme of Investment and in the Barking Station Master Plan.	To be considered as part of the proposed Barking Town Centre/East Street Public Realm Improvements Major Scheme.
Cycle hire facilities and significant cycle parking should be include in the Barking Station Master Plan.	Additional cycle parking proposed as part of the Barking Station Forecourt Public Realm Improvement scheme and as part of the Barking LCZ initiative. The Council is also lobbying TfL to extend the Mayor's Cycle Hire Scheme to Barking.
Measures to prevent polluted runoff from roads and car parks entering the Mayesbrook should be implemented as part of the access improvements.	Not in scope of Mayesbrook Park Access Improvements scheme. Issues to be considered as part of wider park/sports centre development scheme.
Introduce a target for increasing the number of cycling journeys and specify measures such as on road cycling routes that will be needed to help reach this target.	The LIP already contains a target to increase the mode share of cycling in the borough and the measures required to achieve it.
An ecological assessment should be carried out prior to the final design of any route that is adjacent or through SINCS and parks or close to habitats such as water, trees and scrub. Lighting may need to be restricted or absent from routes that impact on sensitive receptors. Routes may need to be altered to avoid negative impacts on biodiversity.	Major Schemes may be subject to ecological assessments where it is considered the project will give rise to significant ecological effects, but it is not necessary/practical to screen every transport scheme.
Ensure sufficient cycle parking is included in the programme of improvements.	The majority of schemes in the LIP contain proposals to install new cycle parking facilities. This is one of the Mayor's High Level Outputs.
Include seating in the programme of improvements and at suitable locations on main walking routes.	To be considered as part of the proposed Public Realm Improvements and Shopping Parade Enhancements Major

Recommended Mitigation/ Enhancement Measures	LIP Response to Recommendations
	Schemes.
Parking provision should be based on an analysis of actual use. A survey showing how people travel to local shops may show that parking is not necessarily the best use of space.	The LIP does not contain any proposals for significant new car parking facilities. An assessment of use/need is undertaken as a matter of course in the development of those transport schemes which may impact on the supply/location of parking provision.
Additional considerations, such as the use of a route or area by vulnerable groups such as children or elderly people should also be part of the process of prioritisation for road safety measures.	A programme of road safety improvements is already included in the LIP. Sites are identified on a priority basis (i.e. number of casualties) and the nature of the measures implemented will be determined by the type of accident that occurs. Community engagement will be undertaken to ensure that the proposed measures are supported by residents/businesses.
The use of area-wide 20mph limits for residential streets should be included in the LIP Programme of Investment as one of the measures used to reduce road casualties in the borough.	The LIP already contains a statement to the effect that the Council would be willing to pilot a borough-wide 20 mph zone. Should this not be feasible, it is intended to roll-out further 20 mph zones to reduce traffic speeds on the borough's roads.
Negotiate targets for percentage of children walking, cycling or using public transport to get to school as part of the School Travel Plans process for each school. Similar targets can be negotiated of employees travel in Business Travel Strategies.	The LIP already contains a target to increase the proportion of children travelling to school by non-car modes. Consideration will be given to including a similar target during the course of the LIP for journeys to work as part of the work undertaken to help companies develop business travel strategies.
Seek LIP funding towards physical infrastructure which can result in more attractive routes to and from school and to and from places of work. Work with schools to identify appropriate locations for: • creating playable spaces on the routes to and from school which are accessible via walking and cycling • playable spaces that are placed away from busy roads • playable routes within and between neighbourhoods • playable streets – such as home zones.	The need to improve safety and security on the borough's transport network is one of the main LIP priorities. A variety of education, engineering and enforcement measures are being considered to achieve our objectives, including: • new signalled/unsignalled crossings; • the introduction of CCTV cameras and new street lighting; • effective road safety education and training and publicity campaigns; • the introduction of innovative traffic calming measures; • consideration to introducing Home Zones in residential areas;

Recommended Mitigation/ Enhancement Measures	LIP Response to Recommendations
Include cycle training aimed at specific target groups, such as women and girls, in the cycle training programme.	A borough-wide cycle training programme has been in operation since 2005, and provides residents, employees, students and school pupils with access to free cycle training. The programme is central to our work to improve road safety and reduce the number of casualties on our roads and will continue during the course of the LIP.
Include repair of pavements within this budget area.	Packages of highway maintenance schemes, including the repair of footways are already proposed in the LIP, subject to the availability of funding.
An ecological assessment of bridges that cross water or are adjacent to water / woodland should be carried out and any mitigation measures put in place before work commences.	Bridge strengthening schemes may be subject to ecological assessments where it is considered they will give rise to significant ecological effects, but it is not necessary/practical to screen every scheme.

F.5 Consultation

F.5.1 Consultation on the Environmental Report was carried out in January 2011, alongside the public consultation exercise on the draft LIP. Consultation was undertaken with three key statutory bodies - Natural England, English Heritage and the Environment Agency. Only one response was received and a number of recommendations were made. These were considered and, where appropriate, taken on board in the development of the final LIP (see Annex H for further details).

F.6 Performance monitoring recommendations

F.6.1 The environmental effects of the LIP are required to be monitored. To this end, the Environmental Report recommends a number of monitoring measures/indicators be included in the LIP (see table F3, below).

Table F3: Monitoring recommendations

Aspect of the Environment	Monitoring Measures/Indicators
Biodiversity, flora and fauna	The water quality of waterways in the borough should be monitored as water quality can have a serious impact on wildlife that is dependent on this habitat. Data on the water quality of the Rivers Roding, Beam, Mayesbrook and Goresbrook should be collected. Data on the achievement of targets set out in the Local Biodiversity Action Plan and the area, number and conditions of Sites of Importance for Nature Conservation should also be collected.
Population and health	Information should be collected on: • Changes in population; • The percentage of pedestrian and cycling journeys; • Transport links to deprived areas, access to services and facilities; • The number of deaths or illnesses attributed to transport related pollution; • The number of killed or seriously injured road casualties each year; • The number of successfully implemented school and work travel plans.
Water and soil	The water quality of waterways, including the Rivers Roding, Beam, Mayesbrook and Goresbrook should be monitored. In addition data should be collected on the extent of roads and public open spaces that are at risk of flooding and the number of pollution incidences on roads that may cause land or water contamination.
Air Quality and Climatic Factors	Data on the number of days when air pollution is over Air Quality Management Strategy (AQMS) levels should be collected. Information on emissions from private vehicles and public transport as well as from the Council's transport fleet should also be collected. Information on the percentage of cycle, pedestrian and public transport modes will also assist with monitoring for impact on climate change.
Cultural Heritage and Landscape	Information should be collected on • The loss of locally listed or statutory listed heritage assets; • Projects aimed at improving the streetscape; • The number of design awards.

F.6.2 In several cases (for example, regarding issues of population and health), monitoring data is already collected and relevant indicators included in the LIP. We will explore the value of setting indicators on the environmental aspects for inclusion in the future. However, it would probably be difficult to attribute changes to them to specific actions in the LIP.

F.7 Summary

F.7.1 In general, the LIP has a positive or neutral effect on many aspects of the environment and the population. The LIP will promote public transport, walking and cycling and seek to reduce congestion. These measures should benefit the community by improving health and wellbeing.

F.7.2 the Environmental Report indicates that some negative impacts on biodiversity and water quality could arise from certain areas of the LIP Programme of Investment. However ecological studies and the detailed design of proposals can reduce or avoid such impacts. A number of recommendations have been made to improve the positive effects of the LIP and to mitigate significant negative effects.

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Annex G: LIP Equality Impact Assessment

G.1 Introduction

G.1.1 The Council has a duty under race, disability and gender legislation to carry out an **Equality Impact Assessment (EQIA) of the LIP**. This should identify whether or not (and to what extent) the LIP has an impact (positive or negative) on a particular equality target group, or whether any adverse impacts identified have been appropriately mitigated. To meet the EQIA guidelines, a **Full Impact Assessment** was carried out in February 2011, following the completion of the public consultation exercise on the draft LIP.

G.1.2 The Equality Impact Assessment indicates that the overall impact of the LIP on target groups is likely to be positive. To a large extent this is to be expected because:

- The MTS was subject to its own EIA during its development. The LIP is broadly in accordance with the MTS and, as such, its impact is seen as largely positive;
- The LIP is driven by the Council's Community Plan in which key priorities include ensuring that Barking and Dagenham becomes a safer borough and a borough of opportunity for all young people;
- The LIP is focused on securing improvements to transport in the borough for all. In particular, measures aimed at tackling congestion and improving access/connectivity are likely to benefit all target groups;
- Improving safety and security is a key aim of the LIP - often of particular significance for the welfare of more vulnerable groups, such as the young, elderly and women;
- Whilst measures to enhance the environment and improve quality of life will benefit everyone, they are likely to have a more differential impact for certain target groups (e.g. the young and the elderly).

G.1.3 The experience gained in implementing the first LIP, the advances in technology and wider innovations have all helped to produce a strategy for the second LIP with a more effective range of measures. The proposals in the LIP have been developed to prioritise schemes that deliver the best value for money and make the best use of existing assets. Central to the second LIP is the wide-ranging consultation, participation and partnership working that has been undertaken and which will continue to inform the planning and implementation of our transport schemes and programmes.

G.1.4 An **Action Plan**, based on the challenges and opportunities identified in the EQIA is set out in table G1, below.

Table G1: LIP EQIA Action Plan

Category	Actions	Target date
Improving involvement and consultation	More regular dialogue/engagement via fora such as PTLG with different equality groups to ensure we take on board their issues/concerns when developing/implementing transport schemes/measures.	Jan 2012
Improving data collection and evidence	Liaise with partners/stakeholders to ascertain what transport/service user data exists and identify any gaps that exist.	Jan 2012
Improving assessment and analysis of information	Closer partnership working with access groups to monitor effectiveness of policies/measures and to identify areas of weakness. Include Learning Disabilities users on Access Groups.	Jan 2012
Developing procurement and partnerships arrangements to include equality objectives and targets within all aspects of the process (including monitoring of the contract/commission)	Ensure that staff have sufficient knowledge of procurement requirements and follow best practice at all times.	Jan 2012
How will you monitor evaluate and review this EQIA (including publishing the results)?	Review of EQIA to be undertaken in partnership with stakeholders/user groups by Jan 2013 to ensure relevant issues are being addressed.	Jan 2013

Annex H: LIP Public Consultation Summary

H.1 Introduction

H.1.1 Consultation on the draft LIP2 was undertaken with a range of statutory and local stakeholders and the general public in January 2011. Organisations contacted included several key government bodies (e.g. London Thames Gateway Development Corporation and London Development Agency), neighbouring boroughs, transport and environment groups (e.g. train operating companies, friends of the earth), transport user groups (e.g. London Cycling Campaign, Ramblers Association), access and equalities groups (e.g. Barking and Dagenham Access Group, Disability and Equality Forum), volunteer and community groups, PCTs and health organisations, emergency services and safety groups (e.g. Metropolitan Police, Fire Brigade), and business and enterprise groups (e.g. Chamber of Commerce, Dagenham Dock Employers Forum).

H.1.2 In total, eight responses to the consultation exercise were received. These included comments made by TfL, London Travelwatch, the LTGDC, DABD and the local branch of the London Cycling Campaign. All these organisations were broadly in support of the approach/content of the LIP and suggested a number of improvements/additions that would add further emphasis to certain projects/initiatives. Details of the comments made and the recommended course of action are set out in table H1, below.

Table H1: LIP Public Consultation Summary

Consultee	Method/ Date of Response	Response Summary	Officer Response/Action
LB Redbridge	Email – 30/12/2010	• Broad support for LIP aims/objectives • Highlights poor public transport connectivity between the boroughs, especially in Little Heath area. • Acknowledges that additional bus services required from both boroughs to Queens Hospital. • Supports plans to improve access to Chadwell Heath station and is willing to be involved in scheme development. • Suggests greater emphasis on movement of freight by water, particularly in relation to development of Barking Riverside.	• Comments acknowledged. • Additional emphasis to be made to relevant text to show LB Redbridge support.
Disablement Association of Barking & Dagenham (DABD)	Email – 13/01/2011	• Issues raised concerning public transport accessibility. Early consultation with access groups required when new infrastructure/equipment is developed to ensure all access issues are addressed. • Highlights poor public transport access to Queens Hospital and other clinics/health facilities in the area and states need for action to address this. • Confirmed that Council has now withdrawn funding for the local Community Transport Scheme meaning that services provided to certain individuals/groups are no longer subsidised. Result is that certain services/facilities are no longer accessible to some.	• Comments acknowledged. • Consideration to be given to other possible options/funding sources to improve accessibility to key services/facilities by vulnerable groups.
London Cycling Campaign –	Email – 01/02/2011	• Suggests that objectives could be prioritised/ranked in	• Comments acknowledged.

Consultee	Method/ Date of Response	Response Summary	Officer Response/Action
Barking & Dagenham Branch		order of importance. • Suggests a borough-wide 20 mph zone would be more effective in reducing casualties than individual zones. Would also reduce street clutter and be more cost effective. • Highlights the need to improve the permeability of the borough for cycling, particularly in Barking Town Centre.	• No plans to prioritise objectives – are all of equal importance for different reasons. • Added emphasis to 20 mph zones and improving cycling permeability to be given in LIP.
Transport for London (TfL)	Email – 03/02/2011	• Overall a very sound submission, but a number of additional actions are required. *Delivery Plan –* • Section on how borough will address High Priority Outputs. • Additional information on other funding sources and timescales for interventions. • Indication as to whether any Major Schemes are to be advanced. *Consultation -* • List of statutory consultees required. *Performance Management -* • Clarification of road safety baseline targets. • Give consideration to reducing number of local targets.	• Comments acknowledged. • Some issues already addressed. • Consideration to be given to reducing number of local targets, where appropriate.
London Travel Watch	Email – 03/02/2011	• Welcomes the fact that LIP acknowledges the importance of bus services. However, suggests that additional emphasis is placed on improving bus stop accessibility. • Suggests continued implementation of bus priority schemes to improve attractiveness of the bus.	• Comments acknowledged. • LIP Corridor/Neighbourhood schemes to consider bus stop accessibility enhancements as a matter of course.

Consultee	Method/ Date of Response	Response Summary	Officer Response/Action
		• Suggests that LIP includes a local target for bus journey time. • Concerns expressed that plan proposals are not substantive enough to address congestion issues in the borough. • Welcomes the target to increase levels of cycling in the borough, but concerned that proposals are not substantive enough to achieve this. • Welcomes the proposal to increase cycle parking, but should be catered for partially on carriage-way. • Welcomes the commitment to Better Streets agenda. Emphasis should be placed on tackling basic problems (e.g. dropped kerbs, entry treatments, etc.) • Suggests that smarter travel initiatives are supported by additional restraint/reallocation measures to ensure no new trips are created.	• Borough to undertake a review of all bus priority measures to assess their effectiveness before proposing additional measures. • Consideration to be given to reviewing draft targets as appropriate. • Proposals for new cycle parking/public realm improvements will take into consideration local needs/space considerations.
English Heritage	Email – 03/02/2011	• Protection of historic environment needs to be given a higher priority in the LIP, especially in the objectives – current emphasis placed solely on environmental enhancement. • Suggests that an overview of the historic environment is given to ensure that it is identified as a transport issue and that delivery plan priorities include the need to protect heritage assets where appropriate.	• Comments acknowledged. • Consideration to be given to including reference to boroughs historic environment and highlighting mitigation measures to protect/enhance it, where appropriate.
London Thames Gateway Development	Letter – 03/02/2011	• Welcomes the support expressed for projects important to the ongoing regeneration of London Riverside. However, reference to Dagenham Dock Station, Beam Park Station	• Comments acknowledged – reference to other major projects to be included in LIP.

Consultee	Method/ Date of Response	Response Summary	Officer Response/Action
Corporation (LTGDC)		and new River Roding bridges required.	
LB Havering	Email – 04/02/2011	• Broad support for LIP aims/objectives. • Acknowledges that additional bus services required from both boroughs to Queens Hospital. • Would welcome closer partnership working with borough to explore possibility of expanding Mayor's Cycle Super Highway to LB Havering.	• Comments acknowledged. • Additional emphasis to be made to relevant text to show LB Havering support.

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Glossary

AAP	Area Action Plan
AQMA	Air Quality Management Area
CDRS	Crime and Disorder Reduction Strategy
CO_2	Carbon Dioxide
CPM	Capital Programme Monitoring
CPZ	Controlled Parking Zone
CCTV	Closed Circuit Television
DaSTS	Delivering a Sustainable Transport System
DBFO	Design, Build, Finance and Operate
DCLG	Department for Communities and Local Government
DDA	Disability Discrimination Act
DfT	Department for Transport
DLR	Docklands Light Railway
DPD	Development Policy Document
DRT	Demand Responsive Transport
EDS	Economic Development Strategy
ELSRTP	East London Sub-Regional Transport Plan
ELT	East London Transit
EQIA	Equality Impact Assessment
EWT	Excess Waiting Time
FQP	Freight Quality Partnership
FTA	Freight Transport Association
GBT	Ground Based Transport
GLA	Greater London Authority
HCA	Homes and Community Agency
HGV	Heavy Goods Vehicle
JSNA	Joint Strategic Needs Assessment
KSI	Killed or Seriously Injured
LAA	Local Area Agreement
LBBD	London Borough of Barking and Dagenham
LCACC	London City Airport Consultative Committee
LCZ	Low Carbon Zone
LDA	London Development Agency
LDF	Local Development Framework
LEGGI	London Energy and Greenhouse Gas Inventory
LEPT	London European Partnership for Transport
LIP	Local Implementation Plan
LoBEG	London Bridge Engineers Group
LROAPF	London Riverside Opportunity Area Planning Framework
LTDS	London Travel Demand Survey
LTGDC	London Thames Gateway Development Corporation
LUL	London Underground Limited
MTS	Mayor’s Transport Strategy
NATA	New Approach to Appraisals
NHS	National Health Service
NMD	Network Management Duty
NO_2	Nitrogen Dioxide

ODA	Olympic Delivery Authority
OLG	Orbital London Group
ONS	Office for National Statistics
PHV	Private Hire Vehicle
PIE	Public Information Exchange
PM_{10}	Fine Particles
PTAL	Public Transport Accessibility Level
PTLG	Public Transport Liaison Group
RHA	Road Haulage Association
ROWIP	Rights of Way Improvement Plan
RUS	Rail Utilisation Strategy
S106/278	Section 106/278 Agreement
SEA	Strategic Environmental Assessment
SDS	Sustainable Development Strategy
SMOTS	Sustainable Modes of Travel to School Strategy
STP	School Travel Plan
TfL	Transport for London
TGDP	Thames Gateway Development Plan
TGLP	Thames Gateway London Partnership
TGTPN	Thames Gateway Travel Plan Network
TIP	Transport for London Road Network Improvement Plan
TLRN	Transport for London Road Network
UDP	Unitary Development Plan
VMS	Variable Message Signing
WTP	Workplace Travel Plan

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London Borough of
Barking & Dagenham