**SUPPLEMENTARY 1**

London Borough of
**Barking&Dagenham**

## THE CABINET

## Tuesday, 23 November 2010

**Agenda Item 6.**       **Draft Local Implementation Plan (Pages 1 - 124)**

Attached is the draft Local Implementation Plan document.

**Agenda Item 10.**       **Local Development Framework - Draft Biodiversity Supplementary Planning Document and Draft Trees and Development Supplementary Planning Document (Pages 125 - 235)**

Attached are the Draft Biodiversity Supplementary Planning Document and the Draft Trees and Development Supplementary Planning Document.

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

# Draft Local Implementation Plan 2011/12 – 2013/14

# October 2010

London Borough of
**Barking & Dagenham**

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# Contents

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# Foreword

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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. A steering group was established to oversee

development of the plan and to ensure it is fully integrated with these strategies. 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 Strategy and Three-Year Delivery Plan

Chapter 3 presents the strategy of the LIP and 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 LIP strategy 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 LIP strategy 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 strategy for the second LIP with a more effective range of measures. The main elements of the strategy 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 delivery plan for of the LIP and the associated financial issues are also set out in chapter 3. The funding allocation from TfL comprises three principal components:

- **Corridors and Neighbourhoods** (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);
- **Smarter Travel** (Including travel plans for schools, hospitals and businesses, plus more travel awareness/education and publicity initiatives potentially integrating with corridor/neighbourhood programmes);
- **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 £6.6 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 strategy and delivery plan (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, an overall strategy and a three-year programme of schemes 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*
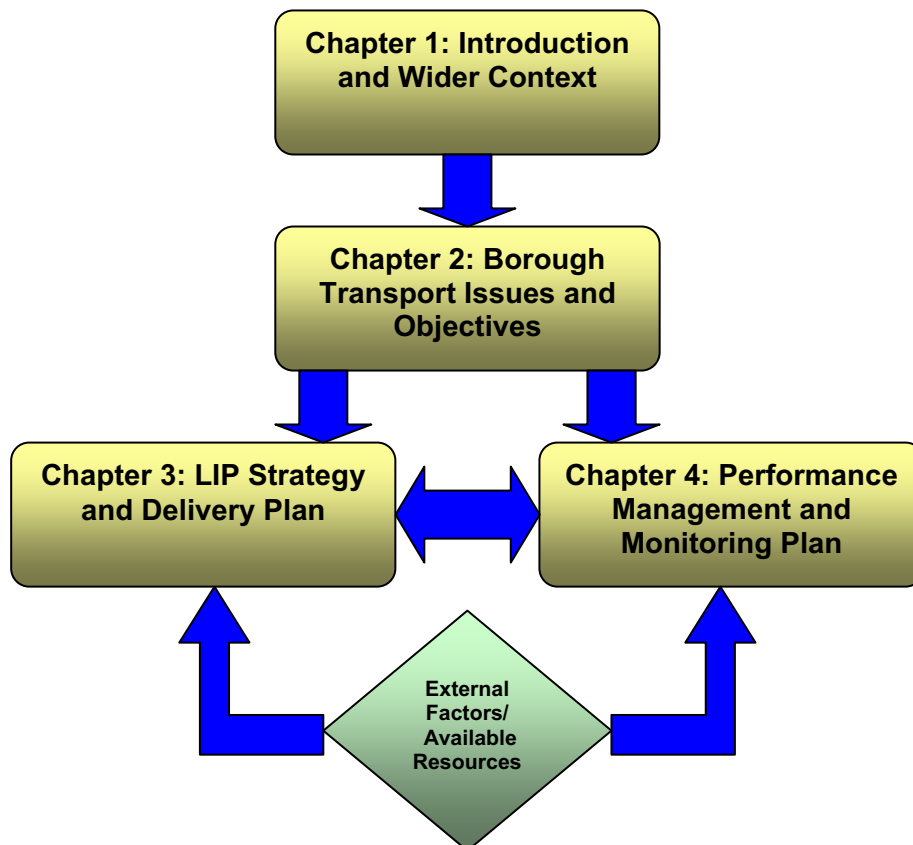


1.1.3 Along with every local authority in London, we produced our first LIP in 2005. This formed a funding bid for the years 2006/07 to 2010/11. The second round of LIPs focuses on the next three-year funding period leading up to 2013/14.

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 (overleaf) illustrates the relationship between the various plans.

*Figure 1.2: Relationship between the LIP and other plans/strategies*
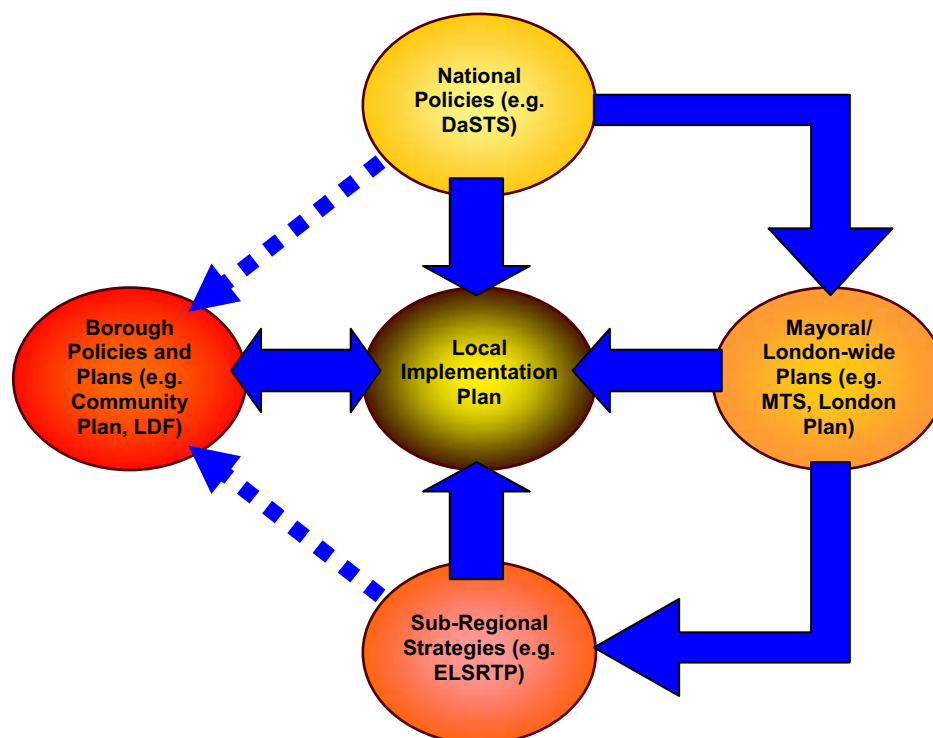
**National Priorities for Transport**

1.2.2 The Government's overall transport strategy was published in the DfT document '**Delivering a Sustainable Transport System**' in November 2008. The strategy is based on five key objectives which take full account of transport's wider impact on climate change, health, quality of life and the natural environment.

**National Transport Priorities:**

- To **support national economic competitiveness and growth**, by delivering reliable and efficient transport networks;
- To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of **tackling climate change**;
- To **contribute to better safety security and health** and longer life-expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health;
- To **promote greater equality of opportunity** for all citizens, with the desired outcome of achieving a fairer society;
- To **improve quality of life** for transport users and non-transport users, and to **promote a healthy natural environment**.

1.2.3 The strategy acknowledges that local authorities have a major role in delivering better transport, and identifies key strategies that local authorities can use to deliver these priorities. The Council has sought to embrace each of these strategies in the development of the LIP.

**Mayoral and other London-wide Plans**

1.2.4 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.

1.2.5 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 both 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.

1.2.6 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 Transport Strategy and Delivery Plan 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.

1.2.7   In addition, the LIP must address the 26 high level Mayoral outcomes set out in the MTS. 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<br>• 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)<br>• Improving public transport reliability<br>• Reducing operating costs<br>• Bringing and maintaining all assets to a state of good repair<br>• 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<br>• Improving road user satisfaction (drivers, pedestrians, cyclists)<br>• Reducing public transport crowding |
| | Enhancing the built and natural environment | • Enhancing streetscapes, improving the perception of the urban realm and developing 'better streets' initiatives<br>• 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<br>• 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<br>• Physical transport legacy<br>• Behavioural transport legacy |

*Source: Mayor's Transport Strategy, GLA, 2010*

1.2.8 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.

1.2.9 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**.

1.2.10 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.

1.2.11 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.

1.2.12 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.

1.2.13 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 transport strategy and delivery programme that is consistent with these plans and which advocates reducing pollution levels (in particular, cutting carbon dioxide levels), developing alternative technologies and using fewer resources.

1.2.14 The **TfL Business Plan** defines the transport priorities and programmes to be delivered over the period 2009/10 – 2017/18, 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.

1.2.15 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

1.2.16 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.

1.2.17 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.

1.2.18 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**.

1.2.19 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 objectives, strategy and delivery programme of the LIP.

1.2.20 The **Thames Gateway Delivery Plan (TGDP)**, published by the Department for Communities and Local Government (DCLG) in 2007, sets out the plans for a £9 billon spending package aimed at boosting the economy of the Gateway, and improving the quality of life across the area. It includes backing for new jobs, major expansion in education, substantial increases in affordable housing, improvements to quality and design, investment in schools and health services as well as in transport improvements.

1.2.21 The TGDP concludes that better transport connections will help achieve economic growth in the Thames Gateway area. To this end, a number of priorities for investment have been identified, including East London Transit Phase 1b, 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 Strategy - '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 Strategy 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 strategy 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 will eventually supersede 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 and Barking Town Centre Area Action Plan documents have been found sound following Examinations in Public in April and May 2010. The Examination in Public on the Borough Wide Development Policies DPD was held in September 2010 with an Inspector's Report on this anticipated for November 2010.

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 **Sustainable Modes of Travel to School Strategy (SMOTS)**, with the aim of ensuring that all young people in the borough have access to safe, sustainable, routes to school and that availability and affordability of safe 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 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 there 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 are 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 other authorities, businesses, voluntary bodies 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 is to ensure that decisions and delivery more closely reflect the needs of local people. To achieve this, a wide

range of consultation measures are being 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.

**Cross Boundary and Partnership Working**

1.3.4 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.

1.3.5 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 lead 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

1.3.6    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.

1.3.7    **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.

1.3.8    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 will be carried out in early 2011, alongside the public consultation exercise on the draft LIP, after which the report may be revised and any comments taken on board in the final LIP.

1.3.9    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** will be carried out in early 2011, alongside the public consultation exercise on the draft LIP.

1.3.10   The EQIA will examine whether the Council is meeting its statutory duties under other relevant legislation, including obligations arising from the **Race Relations Amendment Act 2000** and the **Disability Discrimination Act (DDA) 1995**. 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 DDA. Further examples of how the DDA and other

such duties have been taken into consideration in the development of LIP are highlighted in the Strategy and Delivery Plan at chapter 3.

1.3.11 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 overall strategy and emerging three-year delivery programme 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 Strategy and Delivery Plan presented in chapter 3.

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**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**.

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## 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 potential for the development of up to 25,000 new homes. The River

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

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 strategies.

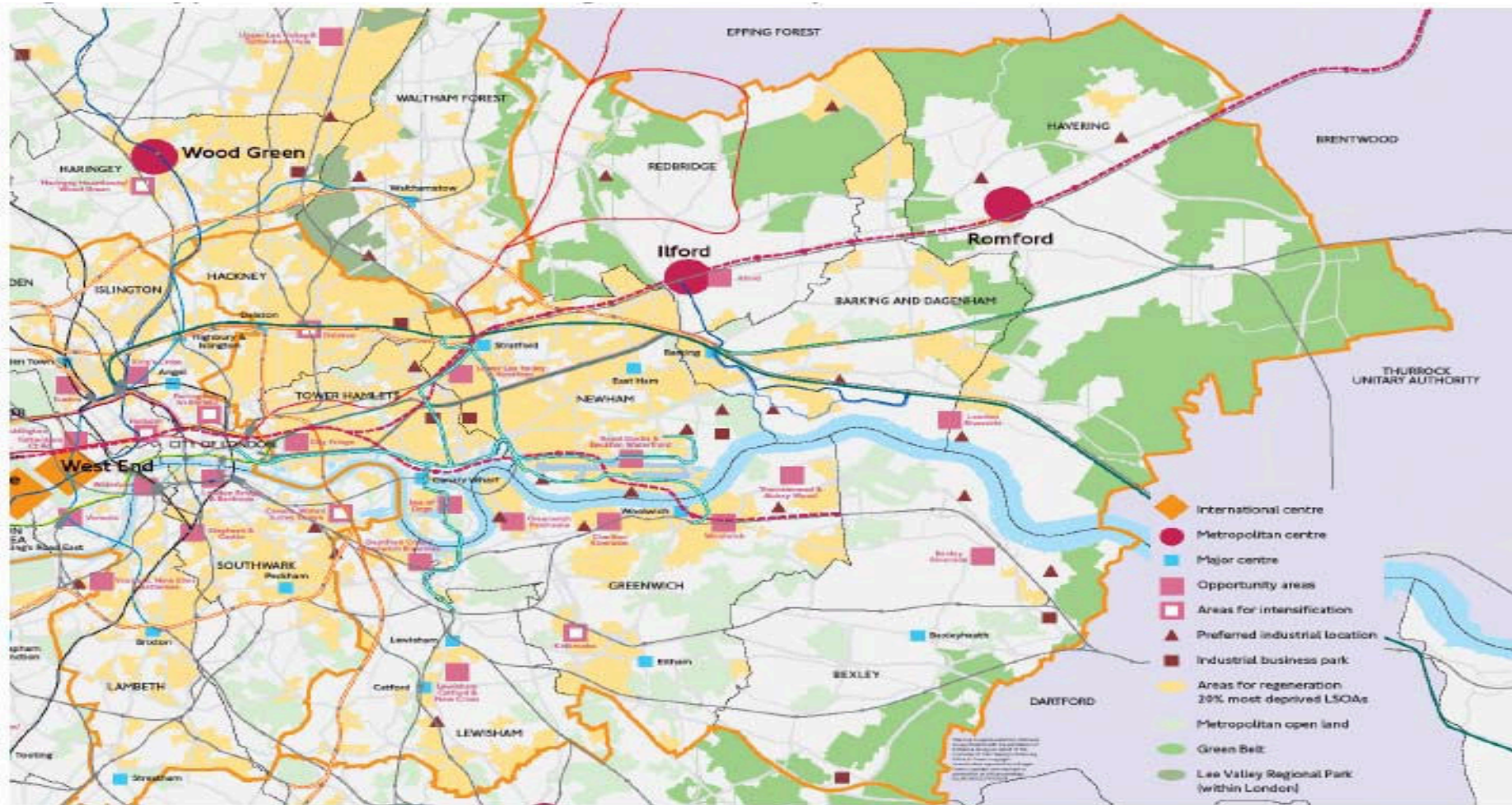*Figure 2.1: Location of the borough*

*Table 2.1: Summary of key borough facts and figures*

| Criteria/ Indicator | Key Characteristics/Statistics |
|---|---|
| Population | <ul><li>Historically stable, predominately white, working class population.</li><li>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.</li><li>Biggest increases to date witnessed in the under 16 and over 85 age groups.</li><li>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.</li><li>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%).</li></ul> |
| Deprivation | <ul><li>Barking and Dagenham is the 7th most deprived of the 33 London boroughs and the 11th of the 354 nationally.</li><li>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.</li></ul> |
| Employment | <ul><li>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.</li><li>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).</li><li>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.</li><li>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).</li></ul> |
| Education and Skills | <ul><li>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).</li><li>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).</li></ul> |
| Health | <ul><li>Health is a major issue in Barking and Dagenham. The Barking and Dagenham Joint Strategic Needs Assessment (JSNA) identifies that life</li></ul> |

| 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.<br>• 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.<br>• 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.<br>• 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).<br>• 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 complimented by a network of open spaces and are linked by a network of wildlife corridors and public Rights of Way.<br>• A survey undertaken as part of the development of the Councils 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),<br>• 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 In terms of transport, 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.
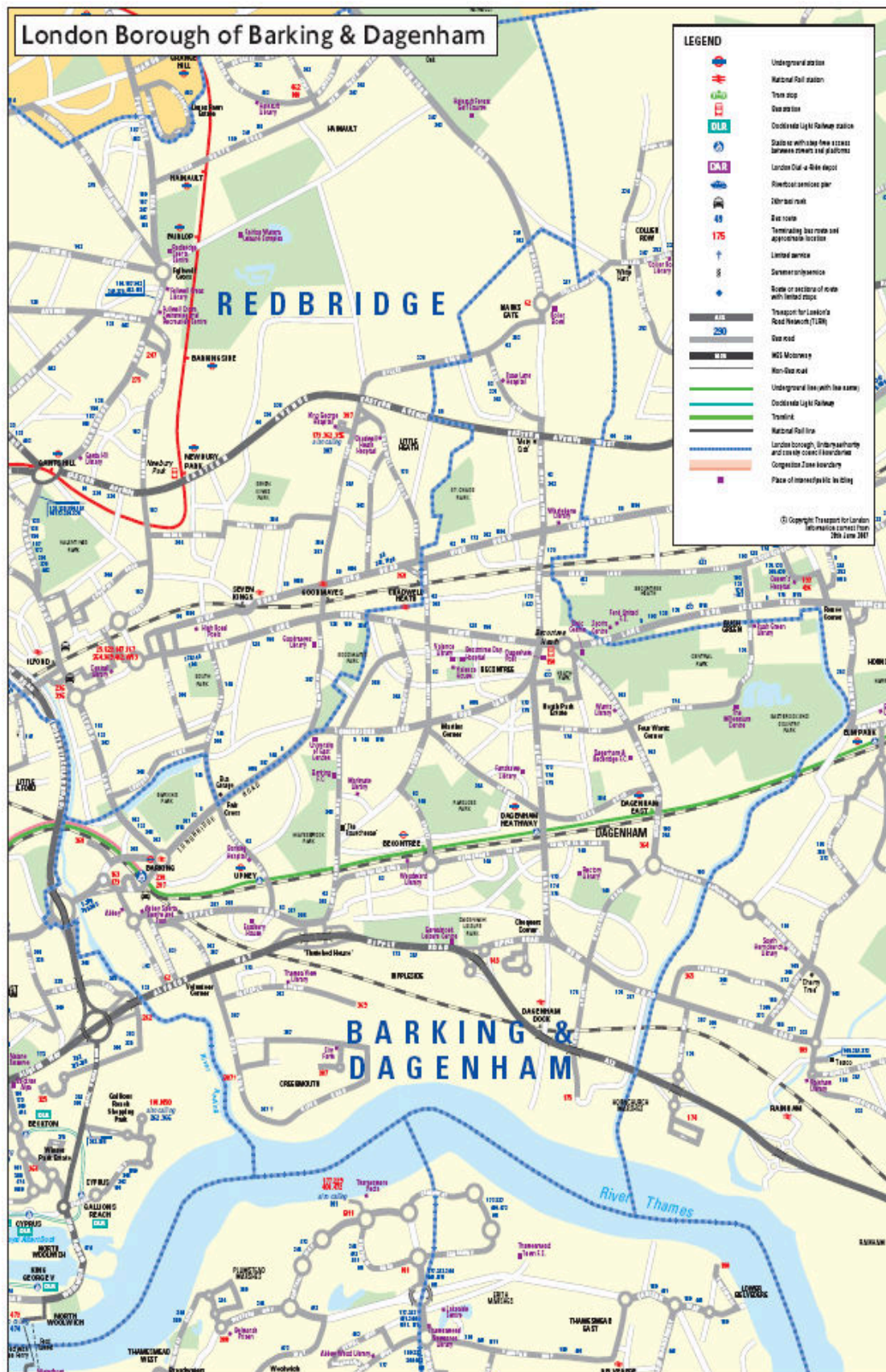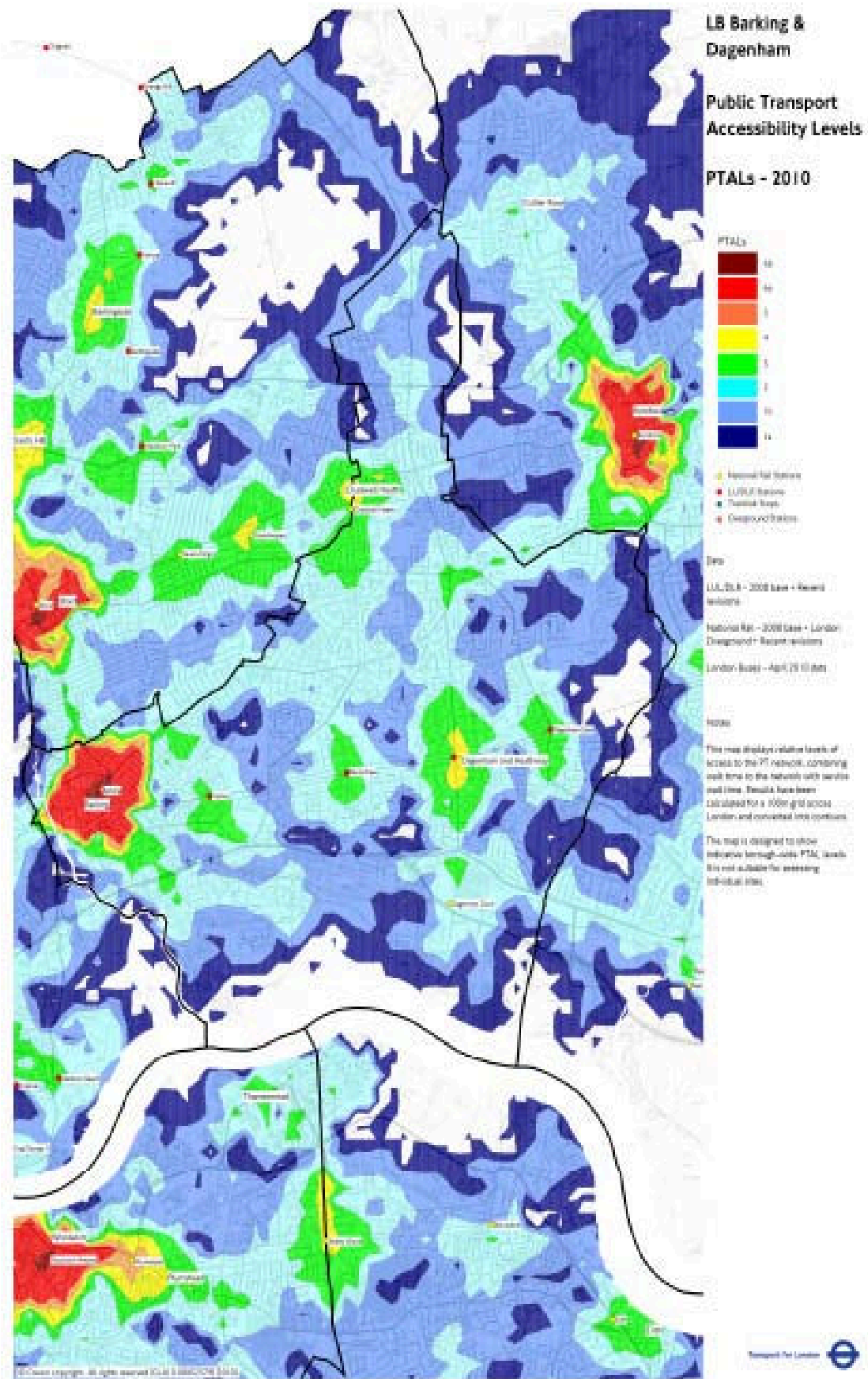
*Figure 2.2: Borough transport networks and services*

*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.<br>• 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.<br>• 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. |
| Rail | • Three train operators provide rail services to the borough; however direct access to the rail network is limited because there are only three train stations serving the borough - Barking, Dagenham Dock and Chadwell Heath (which falls just within the London Borough of Redbridge). They include:<br>  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 2011), 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.<br>  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 3 trains an hour in each direction;<br>  o **National Express East Anglia** connects London to Ipswich and beyond and calls at Chadwell Heath.<br>• 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%. <br><br> • 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. <br><br> • 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. <br><br> • 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. <br><br> • 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. <br><br> • 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.<br>• 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:<br>- 7km of **'Greenways'** routes, providing safe, continuous cycle links through a number of borough parks;<br>- Implementation of new/improved cycle lanes and crossing facilities, improving safety for cyclists on the **London Cycle Network**;<br>- Implementation of comprehensive **local cycling routes** linking key destinations in the borough; and<br>- The Barking to Tower Hill **Cycle Superhighway**, launched in July 2010 in collaboration with TfL.<br>• 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:<br>- Designated **'safe routes to schools'**, as a means of encouraging more children to walk to school;<br>- Eight **'Just Walk'** routes set up in the borough's parks, with the aim of encouraging people to walk to improve their health; and<br>- The **Thames Path** 'City to Sea' pedestrian/cycling route, and other local links to some of the 'strategic walking' routes in London.<br>• 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 19% 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. Total passenger kilometres travelled on public transport have risen by 70% since 1991;
- **Road traffic volumes in London have fallen** in recent years – down 3% since 2000. However, **road traffic congestion has been increasing in all areas of London** for some years;
- The **mode share of cycling in London has increased** – up 70% since 2001. However, the **mode share of walking in London remains at 2000 levels** – around 24%. The overall **number of walking trips in London has increased**;
- Some 142 million tonnes of freight were carried on the Capital's roads in 2008 – about 90% of all freight lifted in London. The **amount of rail freight moving through London is growing** at around 10% per annum. Total London rail freight lifted exceeded 7 million tonnes in 2008. However, **volumes of waterborne freight have remained relatively stable** in the last decade;
- 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 registered in 2009;
- The **number of journeys made by the Dial-a-Ride service in London has decreased** over recent years, although over 1.1 million trips were still made in 2008/09. The **number of subsidised journeys made under the Taxicard scheme has continued to increase**, with over 1.6 million journeys made in 2008/09.

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 3% decrease in traffic volumes between 2000 and 2008. Traffic volumes in outer London have remained broadly stable over same period.<br>• 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).<br>• Journey time reliability on the local road network has decreased and estimated total daily vehicle delay has increased. |
| Journeys by Car | • Between 1993 and 2008, the proportion of journeys made by private motorised transport (principally car) in London has fallen from 50% to 41%.<br>• 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.<br>• Car ownership levels in London are lower than the rest of the UK, with some 40% of households not having access to a car. | • Just 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.<br>• The borough has lower than average households with one, two or more cars. |
| Public Transport Patronage | • Between 1993 and 2008, the proportion of journeys made by public transport in London rose from 24% to 33%.<br>• Total passenger kilometres travelled on the public transport network rose by almost 70% between 1991/92 and 2008/09.<br>• Bus network seeing a 93% 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.<br>• 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.<br>• 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 | • 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 2008). | • The mode share for cycling trips originating in Barking and Dagenham is currently 1.8%. 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 |
|---|---|---|
| | • 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.<br>• While the overall number of walking trips has increased, the mode share of walking in London by residents remains at 2000 levels (24%). | • Figures for Barking and Dagenham reveal that 37% of all trips originating in the borough are made on foot. |
| Freight Transport | • Circa 142 million tonnes of freight were carried on London's roads in 2008 – approximately 90% of all freight lifted in London. Of this, 58 million tonnes was moving wholly inside London.<br>• The trend for road freight vehicle kilometres operated in London has broadly followed that for freight tonnage, although there has been a move towards greater use of lighter goods vehicles.<br>• Waterborne freight handled at the Port of London amounted to 53 million tonnes in 2008 – 5% of all freight lifted in London.<br>• Circa 10% of all rail freight moved travels via London, although only 1% originates from there. The amount of rail freight moving through London has grown recently at around 10% per annum. Total London rail freight lifted exceeded 7 million tonnes in 2008. | • 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.<br>• 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.<br>• 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 2009.<br>• 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.<br>• The number of journeys made by the Dial-a-Ride service in London has decreased over recent years. However, over 1.1 million trips were made by the 50,000 users in 2008/09.<br>• Taxicard scheme members and the number of subsidised licensed taxi journeys made under this scheme have continued to increase, with over 1.6 million journeys made by the 83,000 members in 2008/09. | • There are currently 962 licensed taxi drivers operating in barking and the neighbouring boroughs of Havering, Newham and Redbridge.<br>• 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).<br>• 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 2, TfL, 2010*

*Figure 2.4: Borough traffic volumes (million vehicle kilometres)*
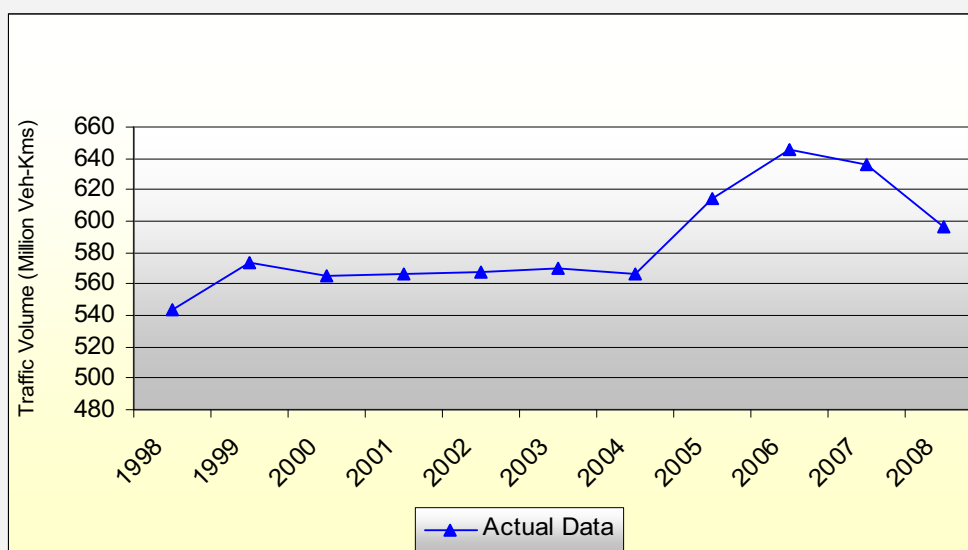


*Source: Road Statistics, DFT, 2009*

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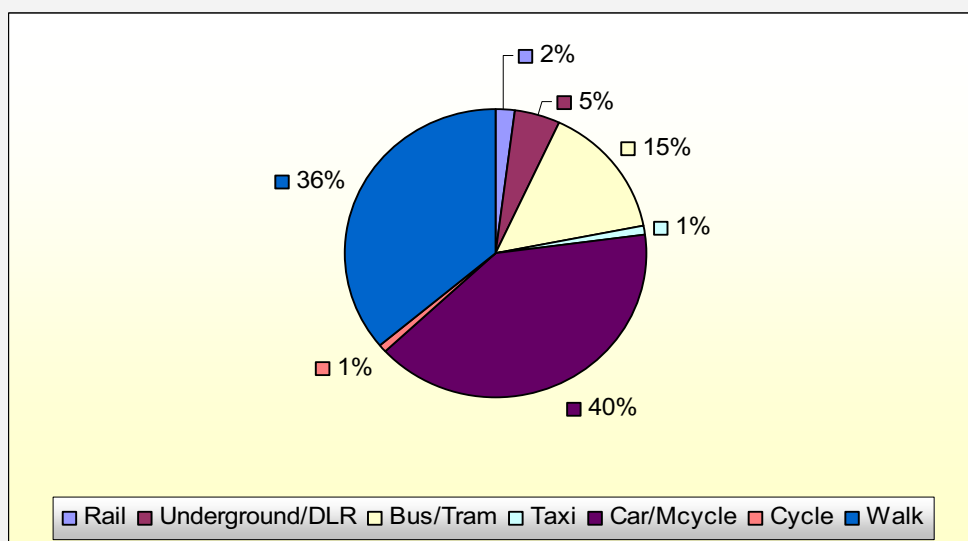


*Source: TfL Planning LTDS Survey, 2009*

**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 | <ul><li>22% of all trips (circa 3.8 million) made by London residents have an origin or destination in the East sub-region.</li><li>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.</li><li>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).</li><li>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.</li></ul> |
| Trip Rates | <ul><li>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.</li><li>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.</li></ul> |
| Mode of Travel | <ul><li>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%).</li><li>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.</li><li>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.</li><li>Trips made at the weekend are more likely to be made by car in all sub-regions.</li><li>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.</li></ul> |
| Trip Purpose | <ul><li>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.</li><li>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.</li></ul> |

*Source: London Travel Demand Survey 2006/07 – 2008/0/9, 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**;
- **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% 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 96.4% of scheduled Underground train kilometres and 97% of scheduled bus kilometres were operated in 2008/09 - this is despite the major works programme on the Underground and increased levels of congestion on the road network.<br>• Excess journey times on the Underground improved during 2008/09, despite the record levels of demand.<br>• 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.<br>• 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.<br>• The EWT figure for bus services in Barking & Dagenham in 2008/09 was 1.13 – an improvement of some 29% on the 1999/2000 figure of 1.60. |
| Public Transport Customer Satisfaction | • The composite mean score in 2008/09 for overall satisfaction of those travelling on the network with the operation of the principal public transport modes in London was 80/100.<br>• The mean score for satisfaction with bus journeys in London was 80/100, whilst the mean score for Underground services was 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 47% lower in 2008 than the 1994/98 average.<br>• The number of child fatalities and serious injuries decreased by 67% 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.<br>• 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 11% lower than the previous year, with the rate of crime falling to 10.8 crimes per million passenger journeys.<br>• Crime on the Underground/DLR has remained the same with the | • 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 |
|---|---|---|
| | crime rate remaining at 13.2 crimes per million passenger journeys. | |
| Environmental Issues/ Pollution | • Transport is a major source of $CO_2$ emissions, accounting for some 22% (9.7 million tonnes) of Greater London's total $CO_2$ emissions in 2008. Over three-quarters of this comes from road based transport.<br>• 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% over the same period.<br>• 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. This is despite significant improvements to road vehicle emissions in recent years. | • 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.<br>• 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. |
| Road Network Condition/ Satisfaction | • The condition of the principal road network in London appears to be improving. The percentage length of the network which is in poor overall condition and requires maintenance has fallen from 10% in 2004 to 4.9% in 2008.<br>• Satisfaction with the quality of streets and pavements has improved in the last three years and more residents were satisfied than dissatisfied. Walkers were the most satisfied (70%), whilst cyclists were the least satisfied (53%) with the quality of London's streets. | • The percentage of principal roads in the borough in need of repair, has declined from 11.9% in 2003/04 to 2.2% in 2008/09. In absolute terms this represents an improvement of -2.4%, whilst in percentage terms the improvement is 47.1%. |

*Source: Travel in London Report 2, TfL, 2010*

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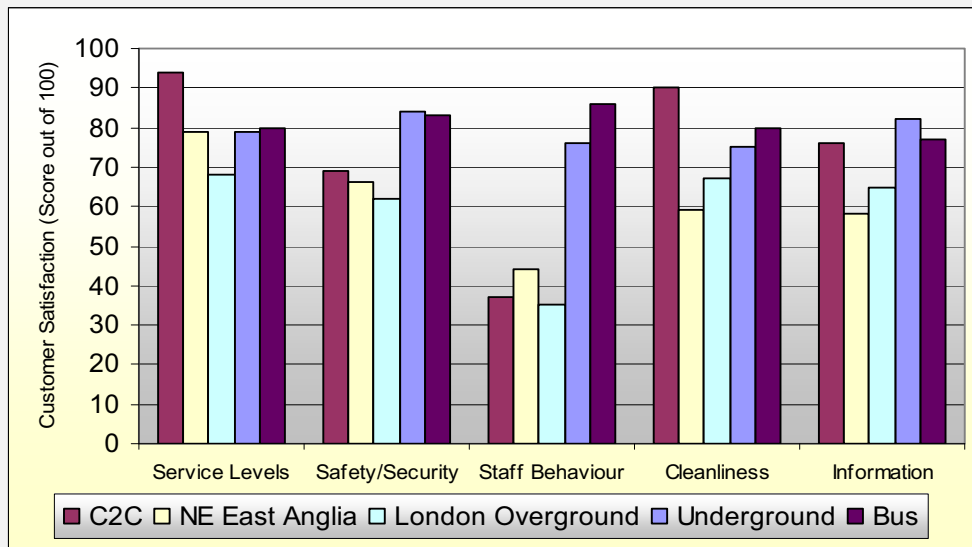


*Source: Passenger Focus, 2009*

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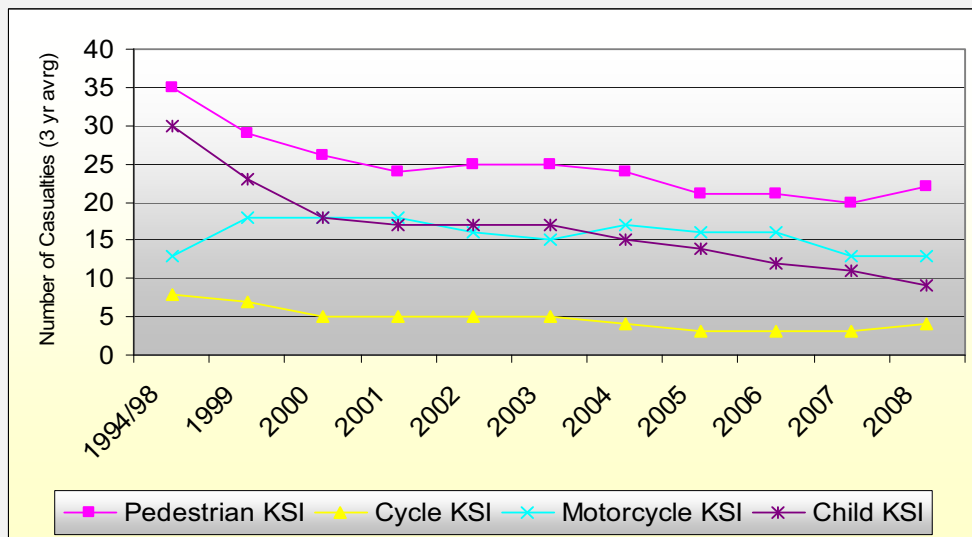


*Source: TfL London Road Safety Unit, 2009*

## 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 strategies 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.<br>• 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.<br>• 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.<br>• 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:<br>**Bus -**<br>  o Access from areas north of the A13 to the employment areas south of the A13;<br>  o Barking to Queen's hospital;<br>  o Access generally to Barking College;<br>  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.<br>• Any review of the number 5 bus service needs to look at scope of routing it to Queen's hospital<br>• Junction improvement schemes to reduce bottlenecks (e.g. A13/Renwick Road junction, A112/A12, A124/A406 and A1153/A13).<br>• 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; <br> o Bus accessibility with the Barking Riverside and South Dagenham Key Regeneration Areas. <br> **Rail -** <br> o Access to Stratford from Baking Town Centre; <br> o Quality of interchange with bus services at Barking Station and Dagenham Dock Station; <br> o Access to rail/underground stations at Barking Riverside. <br><br> • 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. <br> • 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. <br> • New developments, particularly in London Riverside, will provide impetus for new bus routes, especially north-south routes. <br> • 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. <br> • DLR extension to Dagenham Dock will link London Riverside with Docklands and Central London. <br> • Completion of the borough's cycle and walking network will encourage more cycling and walking. |
| | Delivering an efficient and effective transport system for people and goods | • Performance of road network has worsened. Average journey speeds and journey time reliability have fallen and congestion has worsened. <br> • 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. <br> • 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. <br> • More efficient control/management of on-street parking and waiting and loading restrictions to ease congestion and smooth traffic flow. <br> • Further promotion of Smarter Travel methods (e.g. Travel Plans, Car Clubs) to reduce car commuting and peak hour congestion. <br> • Partnership working with lorry operators to support the efficient working of freight operations. <br> • Greater use of rivers and rail to transport freight. The |

| MTS Goals | MTS Challenges | Problems | Opportunities |
|---|---|---|---|
| | | and number of structures.<br>• Issues over ownership/responsibility of various assets/structures and differing stakeholder priorities making it difficult to coordinate maintenance.<br>• Congestion caused by on-street parking and lack of adequate enforcement.<br>• Lack of availability of and growing demand for public and private parking spaces. This results in increased traffic generation/environmental impacts.<br>• 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.<br>• Adoption of asset management plan approach to improve management/maintenance of highways network and structures.<br>• 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.<br>• 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.<br>• 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.<br>• 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.<br>• 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.<br>• Increase in HGV movements has associated environmental impacts (e.g. increased pollution, noise, vibration, etc.). | in 2008 with a view to tackling pollution problems.<br>• 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.<br>• Increase in HGV movements has associated environmental impacts (e.g. pollution/noise). | • Increased use of noise reducing road services in sensitive areas.<br>• 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.<br>• Provision of cycle training for adults and school children provides an opportunity to maximise the benefits achieved from infrastructure investment.<br>• 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.<br>• 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.<br>• Provision of improved cycle parking facilities.<br>• Make sure new developments achieve the Secure by Design standard and car parks achieve the ParkMark 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).<br>• 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.<br>• 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.<br>• 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.<br>• Station accessibility issues, compounded by low number of stations and lack of step-free access.<br>• Accessibility/cost of public and private transport an issue for some, particularly the elderly and disabled.<br>• Many journeys in outer London involve more than one bus route and for each change a separate ticket must be bought.<br>• Currently there are no machines at Barking Station which enable Oyster Card to be topped up. | • Public realm/accessibility improvements at key interchanges and bus stops. Better waiting facilities at Becontree Heath which is a major bus interchange.<br>• Roll-out of Real-Time Passenger Information particularly Countdown along key bus routes and at major interchange points.<br>• New demand-responsive bus services, particularly for those unable to use public transport/private vehicles due to accessibility/cost issues.<br>• Opportunity to seek S106 funding to achieve step free access at Dagenham East. Crossrail should deliver step free access at Chadwell Heath station.<br>• New Underground trains due in 2013 will introduce step free (train - platform access) at Barking, Upney, Dagenham Heathway and Dagenham East stations.<br>• Press TfL to introduce time based rather than route based ticketing arrangements which enable people to change services without being penalised.<br>• Introduce Oyster pay as you go top-up and season ticket renewal machines. C2C ticketing arrangements need to be more closely aligned to those of TfL Underground and Overground services. |

| MTS Goals | MTS Challenges | Problems | Opportunities |
|---|---|---|---|
| | Supporting regeneration and tackling deprivation | • New homes 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.<br>• Car mode share remains high in the East London sub-region, compared to other sub-regional areas.<br>• If prosperity rises it is likely that the borough's low car ownership levels will also rise.<br>• Low take-up of cycling often due to inadequate cycle provision in some new developments. Result is mode share of cycling remains low.<br>• Increase in HGV movements has associated environmental impacts (e.g. increased pollution, noise, vibration, etc.). | • New developments made more cycle friendly.<br>• 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.<br>• Close working with the freight industry to develop effective lorry management measures to limit the impact of emissions and reduce fuel consumption.<br>• Electrification of the Barking to Gospel Oak line<br>• 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.<br>• Extensive highway network and large number of structures makes a heavy demand on materials/resources.<br>• 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.<br>• 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.<br>• Ensure design and layout of streets and pathways provide sufficient shade through tree planting.<br>• 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 Strategy, 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,

and Climate Change Strategy, have played an integral role in helping to shape LIP objectives.

2.5.6   Consultation on the LIP will ensure that the views of Barking and Dagenham residents, businesses, organisations and amenity groups, as well as a range of other stakeholders, will be taken into account in finalising the objectives. Details of the wide ranging consultation planned or currently underway 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/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 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 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 are the key drivers behind objectives I and J**.

*Table 2.7: Strategic LIP objectives*

| Objectives | MTS Goals | | | | | Community Plan Priorities | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Supporting economic development | Enhancing quality of life | Improving safety and security | Improving transport opportunities | Dealing with climate change and improving resilience | 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. | | ✓✓ | ✓ | ✓✓ | | ✓ | | ✓✓ | | | ✓✓ |
| **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 | | ✓✓ | ✓✓ | | | ✓✓ | | | | | ✓ |

| Objectives | MTS Goals | | | | | Community Plan Priorities | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Supporting economic development | Enhancing quality of life | Improving safety and security | Improving transport opportunities | Dealing with climate change and improving resilience | 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 |
| 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, quality and value of our transport assets. | ✓ | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | |
| **J. Maintaining and improving the public realm to enhance the local environment and to create distinctive public places.** | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | |
| KEY:<br>✓✓ High contribution to goals/priorities<br>✓ Lower contribution to goals/priorities | | | | | | | | | | | |

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# 3. LIP Strategy and Delivery Plan

## 3.1 Introduction

3.1.1 This chapter sets out the **overall strategy and delivery plan for the LIP**. The strategy and associated transport measures form the framework for the development of the delivery plan, which, in turn, are designed to meet our objectives, and to address the transport problems and opportunities identified in the last chapter.

> **Chapter 3 sets out:**
>
> - The **overarching strategy and the associated range of measures**, and the **priorities for implementing the strategy**;
> - **Funding sources** for implementing the delivery plan;
> - The detailed **programme of investment**, including information on the **Annual Spending Submission**;
> - Details of the **methodology used for monitoring progress of the delivery plan**, and identification of potential **risks and associated mitigation measures**.

## 3.2 LIP Strategy

3.2.1 The driving principles behind the LIP strategy 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 strategy 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 strategy 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 strategy 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: Strategy matrix – influence of measures on objectives*

| LIP Objectives | Strategy 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:<br>✓✓ High contribution to objectives<br>✓ Lower contribution to objectives | | | | | | |

**Priorities for Implementing the Strategy**

3.2.4 The priorities for implementing the LIP strategy 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 strategy are of equal importance. However, from a geographic perspective there are certain areas of the borough where some elements of the strategy 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.<br><br>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.<br><br>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.<br><br>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 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 The strategy and associated measures for the LIP relate primarily to the period 2011/12 to 2013/14. However, there are a number of more long-term priorities – 2014/15 and beyond – which are equally as important and which form part of our long-term aspirations for the borough, as illustrated in the Barking and Dagenham Community Plan.

**Improving Connectivity and Tackling Congestion**

3.2.7 The strategy is aimed at improving 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 strategy 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.

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**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 £500,000 improvement scheme to the station forecourt which:

- Doubles the amount of public open space in front of the station;
- 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;
- Declutters the forecourt area by removing unnecessary signage, lighting and bus shelters with replaces them with a high quality

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

> 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/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 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;
> - Alleviate the poor air quality suffered along the A13 where $NO^2$ and $PM_{10}$ standards are routinely breached;

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[2] Survey sample of 321 people.

- 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. With the continued doubts about the implementation of DLR, 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 the Thames Gateway Travel Plan Network.
- **Expand the Barking Town Centre 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 Town Centre Car Club:**

Launched in July 2009 in partnership with operators Streetcar, **the Barking Town Centre 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 town centre locations, 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 accessibility strategy 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 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 the merits of 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 Disability Discrimination 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 October 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 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 The safety strategy 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 accident 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 strategy 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 This part of our strategy is intended 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 **Barking Low Carbon Zone project**, run in partnership with the GLA and the LDA (see below).

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**The Barking Low Carbon Zone Project:**

The **Low Carbon Zones (LCZs) Project** is a community led approach to cutting the capital's CO2 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 Barking 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 CO2 emissions by 2025. In addition, the Barking 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;

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- 'Grow Your Own' starter kits;
- EcoTeams, a community support programme providing advice on sustainability issues;
- A years free registration to the Barking Town Centre 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 strategy 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 strategy for future management and maintenance of the transport network is to make the most effective and efficient use of the existing infrastructure and, where appropriate, to secure improvements to the local street scene (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 Strategy to create a 'safer and cleaner' borough and also help make the borough 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.

## 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 £2.2 million each year, is broken down into a number of distinct categories (see table 3.3, 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 3.3: Barking & Dagenham LIP funding allocation: 2011/12 – 2013/14*

| LIP Funding Category | 2011/12 (Confirmed) £000s | 2012/13 (Indicative) £000s | 2013/14 (Indicative) £000s |
|---|---|---|---|
| Maintenance* | 357 | 360 | 360 |
| Corridors and Neighbourhoods | 1,604 | 1,607 | 1,607 |
| Smarter Travel | 212 | 213 | 213 |
| Local Transport Fund | 100 | 100 | 100 |
| **TOTAL** | **2,273** | **2,280** | **2,280** |

*\* Annual submission based on condition survey information. TfL suggested submission ceiling is £446,000 in 2011/12.*

3.3.2　**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.

3.3.3　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. **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.

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

- **London Development Agency (LDA)**. The LDA 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 Thames Gateway Development Corporation (LTGDC)**. The Council is working closely with the Development Corporation and the LDA 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;

- **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, Corridor/Neighbourhood and Smarter Travel programmes for 2011/12 – 2013/14 is set out in table 3.4 (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.

*Table 3.4: LIP programme of investment 2011/12 – 2013/14 (Proforma A)*

| Programme areas | | Funding source | Ongoing scheme? | Funding (£,000s) | | | | MTS goals | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2011/12 | 2012/13 | 2013/14 | Total | Econ. devt and pop growth | Quality of life | Safety and security | Opportunities for all | Climate change |
| Corridors and Neighbourhoods | **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 | | ✓ | ✓ | ✓ | |
| | | **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** | | 400 | 0 | 0 | 400 | ✓ | ✓ | ✓ | ✓ | |
| | **Merry Fiddlers Junction Improvements** - Large scale junction improvements scheme to support Council's 'Total Locality' initiative in Becontree Heath. | **LIP allocation** | | 179 | 507 | 507 | 1,193 | ✓ | ✓ | ✓ | ✓ | ✓ |
| | **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 | 100 | 350 | | ✓ | ✓ | ✓ | ✓ |
| | **Longbridge Road Shopping Parade Improvements** - Continuation of programme to improve local shopping parades within the | **LIP allocation** | | 125 | 225 | 300 | 650 | ✓ | ✓ | ✓ | ✓ | ✓ |

| Category | Description | Funding | | Y1 | Y2 | Y3 | Total | Green | Yellow | Orange | Blue | Red |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | borough. Work will be undertaken to improve the public realm outside the shops. | | | | | | | | | | | |
| | **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 | 100 | 300 | | ✓ | ✓ | ✓ | |
| | **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** | | 75 | 300 | 300 | 675 | ✓ | ✓ | ✓ | ✓ | |
| | **Barking Town Centre Low Carbon Zone** - Environmental improvement scheme linked to Barking's designation as a Low Carbon Zone. | **LIP allocation** | | 75 | 75 | 0 | 150 | | ✓ | | | ✓ |
| | **Neighbourhood Area Improvements** - Area improvement schemes aimed at tackling congestion and improving accessibility within local neighbourhoods. | **LIP allocation** | | 0 | 300 | 300 | 600 | ✓ | ✓ | ✓ | ✓ | |
| Smarter Travel | **School Travel Plans** - Continuation of work with schools to promote safe and sustainable travel. | **LIP allocation** | | 62 | 63 | 63 | 188 | | ✓ | ✓ | | ✓ |
| | **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 | 60 | 180 | ✓ | ✓ | | ✓ | ✓ |
| | **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 | 60 | 180 | | ✓ | ✓ | | ✓ |
| | **Travel Awareness (Promotion and Events)** - Promoting healthy/sustainable travel practices to businesses and residents. | **LIP allocation** | | 15 | 15 | 15 | 45 | ✓ | ✓ | ✓ | | ✓ |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **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 | 15 | 45 | | ✓ | ✓ | | |
| **Integrated transport total** | | | | 2,216 | 1,820 | 1,820 | 5,856 | | | | | |
| Maintenance | **Principal Road Resurfacing** - Carriageway resurfacing at priority locations. | **LIP allocation** | | 446 | 450 | 450 | 1,346 | ✓ | ✓ | ✓ | | ✓ |
| | | Council revenue | | TBC | TBC | TBC | 0 | | | | | |
| | **Bridge assessment and strengthening** - Prioritised locations | **LIP allocation** | | TBC | TBC | TBC | 0 | ✓ | | | | |
| **Maintenance total** | | | | 446 | 450 | 450 | 1,346 | | | | | |
| Major Schemes | **TBC**. | **LIP allocation** | | TBC | TBC | TBC | 0 | | | | | |
| **Major Scheme total** | | | | 0 | 0 | 0 | 0 | | | | | |

## 3.5    Performance Management

3.5.1    The processes involved in performance management of the LIP programme comprise three interwoven strands:

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

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.

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.

3.5.4    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.

3.5.5    As part of the scheme prioritisation process, 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.

3.5.8    The LIP programme has been put together 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 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.

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# 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 strategy and delivery plan (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 highway 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'.

4.2.2.  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**.

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

4.2.4   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**

4.2.5   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 C of the LIP.

*Table 4.1: LIP indicators/targets*

| Category | Indicator/Target | Data Source/Monitoring | Strategy Measures to Achieve Targets |
|---|---|---|---|
| **Improving Connectivity and Tackling Congestion** | | | |
| Core Target | 1. Maintain bus excess wait time on high-frequency routes at 2008/09 levels by 2013/14 | • Quality of Service Indicators (TfL) | • Public transport initiatives<br>• Smarter travel initiatives<br>• Traffic/demand management measures |
| Local Target | 2. Maintain average bus journey times on borough priority routes at 2008/09 levels by 2013/14 | • iBus run time Data (TfL) | • Public transport initiatives<br>• Smarter travel initiatives<br>• Traffic/demand management measures |
| Monitoring Indicator | • Traffic volumes on borough principal roads<br>• Car club membership | • National Road Traffic Survey (DfT)<br>• Automatic Traffic Counts (Borough)<br>• Car club data (Streetcar) | N/A |
| **Improving Access for All** | | | |
| Core Target | 3. Increase the proportion of walking trips from 37% (2009/10 baseline) to 37.5% in 2013/14<br>4. Increase the proportion of cycling trips from 1.8% (2009/10 baseline) to 2.65% in 2013/14 | • London Travel Demand Survey (TfL)<br>• Manual and Automatic Traffic Counts (Borough) | • Cycling and walking measures<br>• Safety and security measures<br>• Highways/public realm enhancements |
| Local Target | 5. Increase the proportion of children travelling to school by non-car modes from 75% in 2008/09 to 77.5% in 2013/14 (NI198) | • Travel Plan Monitoring (Borough)<br>• iTrace (TfL) | • Public transport initiatives<br>• Cycling and walking measures<br>• Safety and security measures<br>• Smarter travel initiatives |
| Monitoring Indicator | • Bus service frequency/patronage<br>• Number of DDA compliant bus stops | • Passenger Surveys/Ticket Sales; Quality of Service Indicators (TfL)<br>• Borough Records | N/A |

| Category | Indicator/Target | Data Source/Monitoring | Strategy Measures to Achieve Targets |
|---|---|---|---|
| **Improving Safety and Security** | | | |
| Core Target | 6. Reduce the number of people killed and seriously injured in road collisions by 12.5% by 2013/14 (from 2006–2008 average) (NI 147)<br>7. Reduce the total number of road casualties by 12.5% by 2013/14 (from 2006-2008 average) | • Modal Policy Unit (TfL)<br>• STATS19 Database (Met Police) | • Cycling and walking measures<br>• Safety and security measures<br>• Traffic/demand management measures<br>• Highways/public realm enhancements |
| Local Target | 8. Reduce the number of pedestrian KSIs by 13.5% by 2013/14 (from 2006–2008 average)<br>9. Reduce the number of cyclists KSIs by 12% by 2013/14 (from 2006–2008 average) | • Modal Policy Unit (TfL)<br>• STATS19 Database (Met Police) | • Cycling and walking measures<br>• Safety and security measures<br>• Traffic/demand management measures<br>• Highways/public realm enhancements |
| Monitoring Indicator | • Total number of child casualties<br>• Total number of powered two-wheeler casualties<br>• Total recorded crimes on local bus network | • Modal Policy Unit (TfL)<br>• STATS19 Database (Met Police)<br>• 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 16% by 2013 (from 2008 levels) | • London Energy and Greenhouse Gas Inventory (GLA) | • Public transport initiatives<br>• Cycling and walking measures<br>• Smarter travel initiatives<br>• Traffic/demand management measures |
| Local Target | 11. No increase in Barking average mean $PM_{10}$ and $NO_2$ concentrations by 2013 (from 2008 baseline) | • London Air Quality Network (ERG) | • Public transport initiatives<br>• Cycling and walking measures<br>• Smarter travel initiatives<br>• Traffic/demand management measures |
| Monitoring Indicator | • Number of adults and children participating in regular physical activity (LAA Target)<br>• Number of businesses signing up to travel plans | • Barking & Dagenham Partnership<br>• Travel Plan Monitoring (Borough)<br>• iTrace (TfL) | N/A |

| Category | Indicator/Target | Data Source/Monitoring | Strategy 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 2008/09 levels by 2013/14 | • Visual Inspection Data (LB Hammersmith & Fulham) | • Traffic/demand management measures<br>• 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)<br>• Street Lighting Register (Borough) | N/A |
| **MTS Outputs** | | | |
| Output Indicators/ Targets | A. Cycle highway schemes | • Borough Records<br>• Surface Transport (TfL) | • Cycling and walking measures<br>• Safety and security measures |
| | B. Cycle parking | • Borough Records | • Cycling and walking measures<br>• Safety and security measures |
| | C. Electric charging points | • Borough Records | • Smarter travel initiatives |
| | D. Better streets | • Borough Records<br>• Surface Transport (TfL) | • Safety and security measures<br>• Traffic/demand management measures<br>• Highways/public realm enhancements |
| | E. Cleaner local authority fleets | • Borough Records | • Public transport initiatives<br>• Smarter travel initiatives |
| | F. Net increase in street trees | • Borough Records | • Highways/public realm enhancements |

**Improving Connectivity and Tackling Congestion**

4.2.6 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.

4.2.7 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].

4.2.8 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 1.13 minutes (2008/09 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 target to **maintain bus excess wait time on high-frequency routes at 2008/09 levels by 2013/14**. The target trajectory for this indicator is shown in figure 4.1, below.

*Figure 4.1: Target 1 - bus excess wait time*
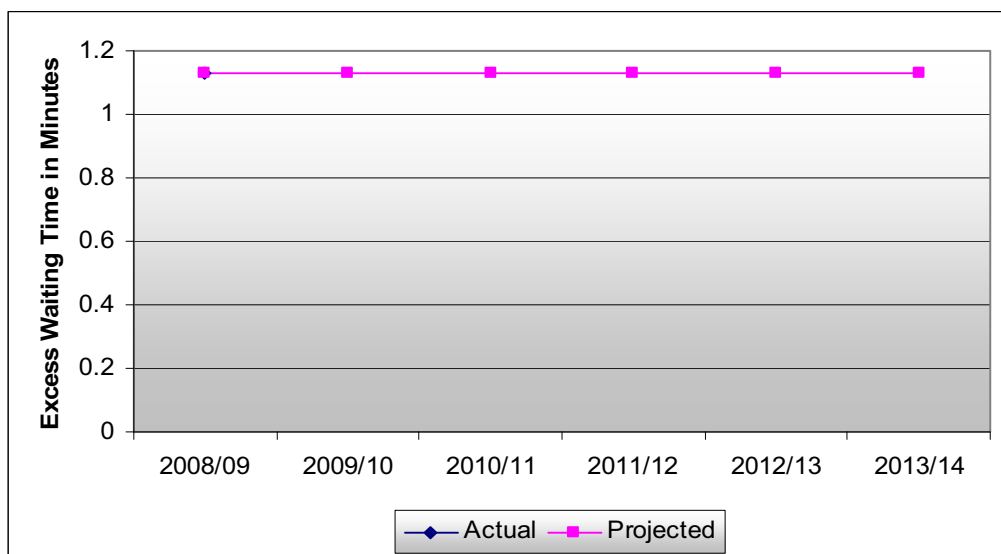


*Source: Quality of Service Indicators, TfL, 2009*

4.2.9 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**

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

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

4.2.10 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 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 (xx mph on route xx and xx mph on route xx ), 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*

INSERT GRAPH – AWAITING INFO

*Source: iBus Run Time Data, TfL, 2010*

4.2.11 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;

4.2.12 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.

**Improving Access for All**

4.2.13 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.

4.2.14 Figures for Barking and Dagenham reveal that **37% of all trips originating in the borough are made on foot**.[2] This figure is significantly higher than that for London as a whole, where walking mode share remains at 24%, the same as it was in 2000. 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 2008). **The mode share for cycling trips originating in Barking and Dagenham is around 1.8%**.[3]

4.2.15 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.

4.2.16 Despite this, and given the increased emphasis placed on improving the take up of walking and cycling across London (the MTS has set targets to increase walking and cycling mode share in outer London by 1.5% and 4.3% respectively by 2026), we have set targets to **increase walking mode share in the borough from 37% (2006/07–2008/09 baseline average) to 37.5% by 2013/14** (see figure 4.3), **and increase cycling mode share from 1.8% (2006/07–2008/09 average) to 2.65% by 2013/14** (see figure 4.4).

*Figure 4.3: Target 3 - walking trips mode share*
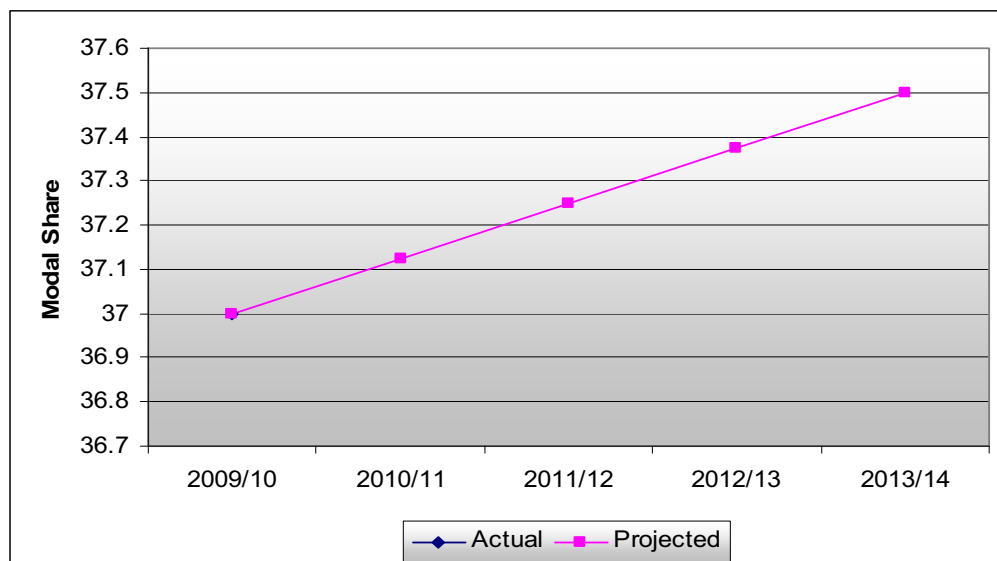


*Source: London Travel Demand Survey, TfL, 2009*

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

*Figure 4.4: Target 4 - cycling trips mode share*
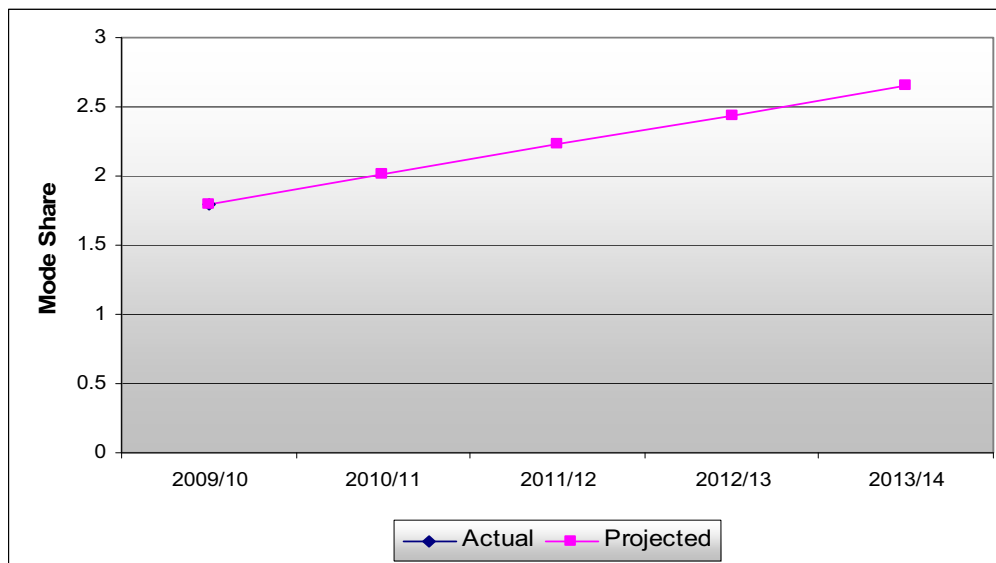


*Source: Cycling Screenline Counts, LBBD, 2009*

4.2.17 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 strategy to increase the proportion of personal travel by these modes and our overarching objective of increasing accessibility to key services and facilities.

4.2.18 Whilst improving physical conditions for pedestrians and cyclists forms the basis of much of our corridors and neighbourhoods 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.

4.2.19 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 to **increase the proportion of children travelling to school by non-car modes from 75% in 2008/09 to 77.5% 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)*
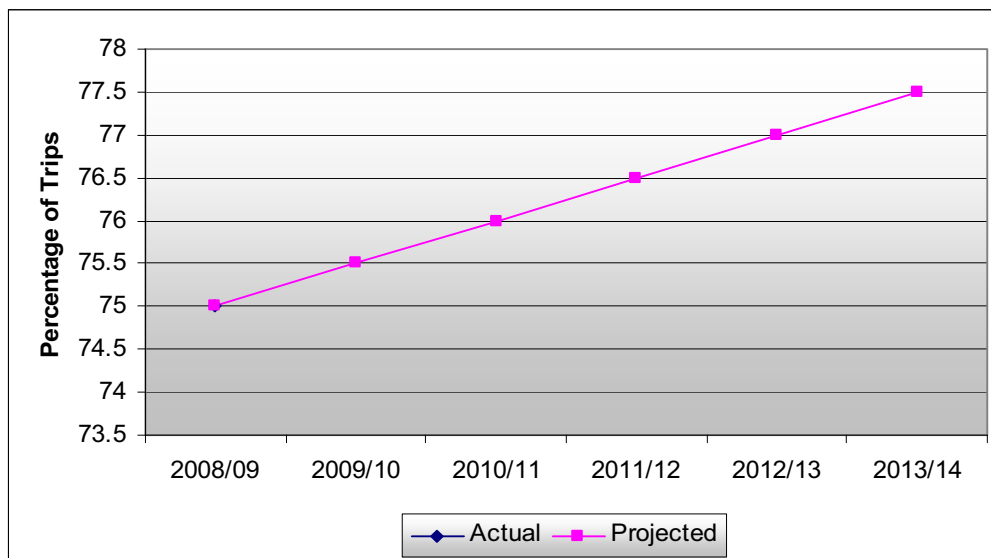


*Source: iTrace, TfL, 2009*

4.2.20 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**

4.2.21 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]

4.2.22 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 (from a 2006–2008 baseline). Our 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**

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[4] London Road Safety Unit, TfL, 2009

**number of KSIs from 63 (the average value for 2006–2008) to 55 by 2013/14** (a 12.5% reduction). No national targets have been proposed for total casualties. However, we aim to reduce the total number of casualties in Barking and Dagenham by 33% by 2020 (from a 2006-2008 baseline). Our corresponding LIP target for total casualties (figure 4.7) **is a reduction from 643 (the 2006-2008 baseline average) to 563 by 2013/14** (a 12.5% reduction). Both targets are considered ambitious, but achievable given our good progress to date and our current road safety programme, with the particular emphasis we are placing on increased levels of education, publicity and training.

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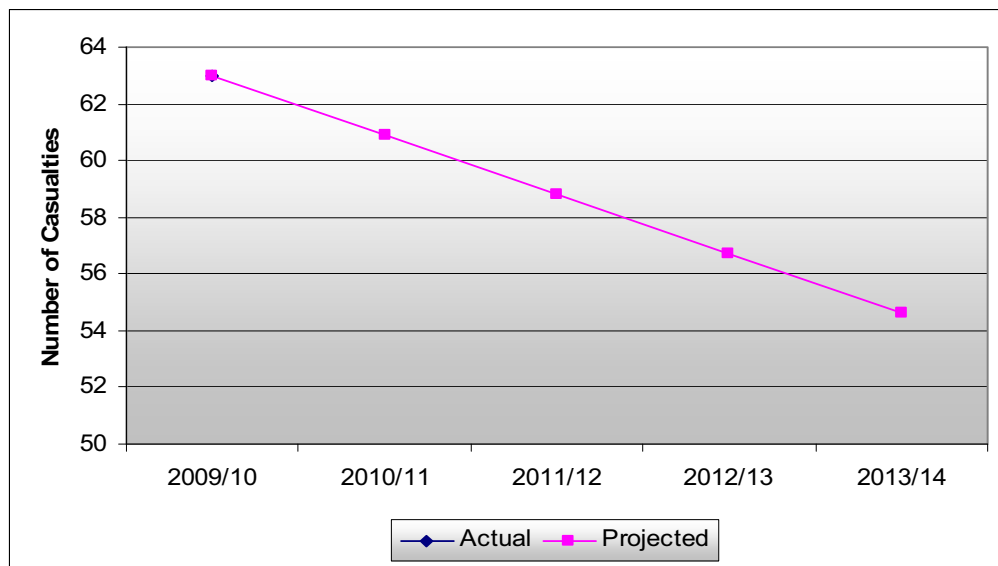


*Source: London Road Safety Unit, TfL, 2009*

*Figure 4.7: Target 7 - total casualties*
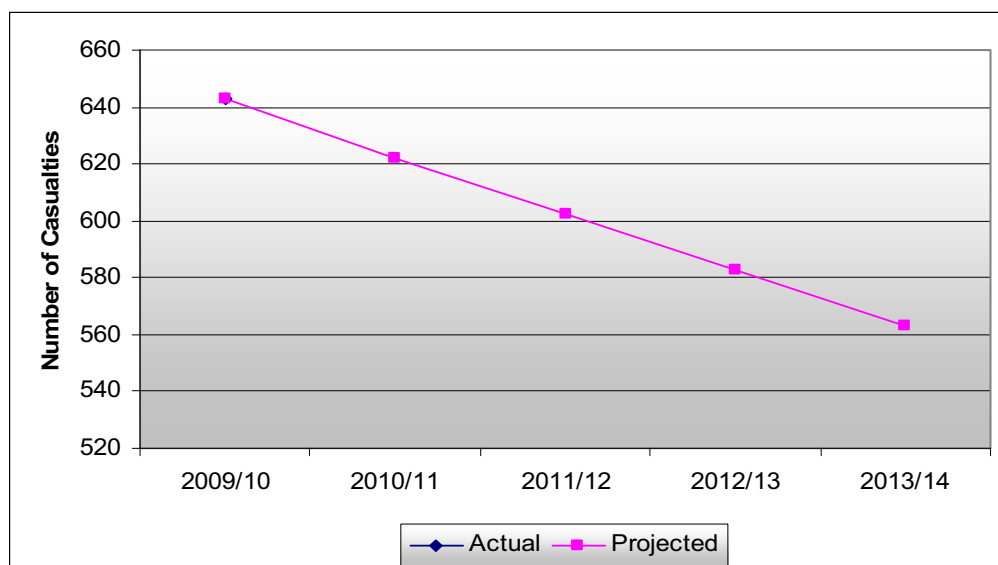


*Source: London Road Safety Unit, TfL, 2009*

4.2.23 Reducing the number of pedestrian and cyclist casualties on our roads is a key aspect of our strategy to improve safety in Barking and Dagenham, particularly given the anticipated increase over the next decade in the number of journeys made on foot or by cycle. 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 pedestrians killed or seriously injured (pedestrian KSI) from 98 (the average value for 2006–2008) to 85 by 2013/14** (a 13.5% reduction), and a target to **reduce the number of cyclists killed or seriously injured (cyclist KSI) from 34 (the 2006–2008 baseline average) to 30 by 2013/14** (a 12% reduction). Both targets are predicated on achieving a 33% reduction in pedestrian and cyclist KSIs by 2020 (from a 2006-2008 baseline). The targets are considered ambitious, but achievable, given our current programme to improve conditions for these modes.

*Figure 4.8: Target 8 - number of pedestrians killed or seriously injured (ped KSI)*
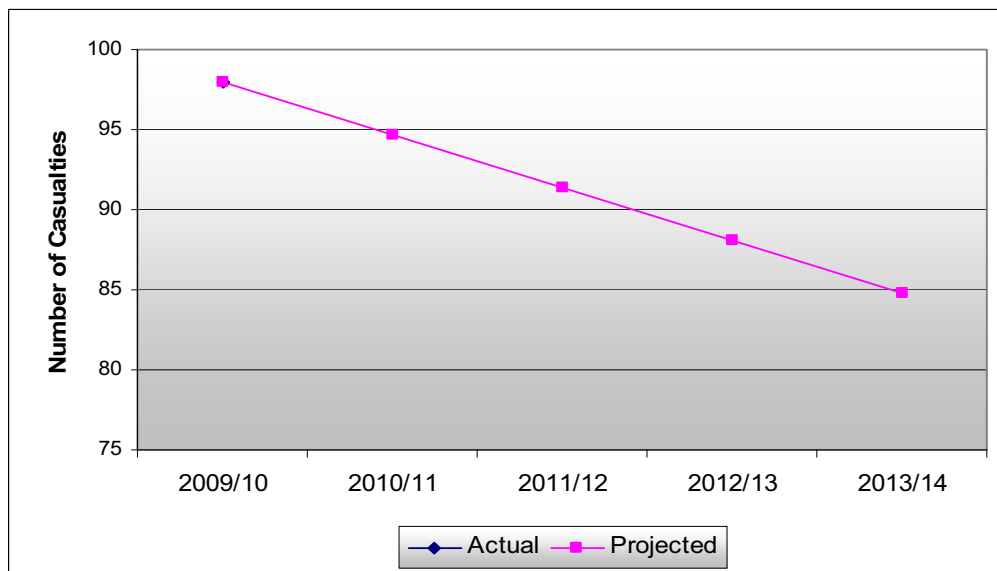


*Source: London Road Safety Unit, TfL, 2009*

*Figure 4.9: Target 9 - number of cyclists killed or seriously injured (cyclist KSI)*
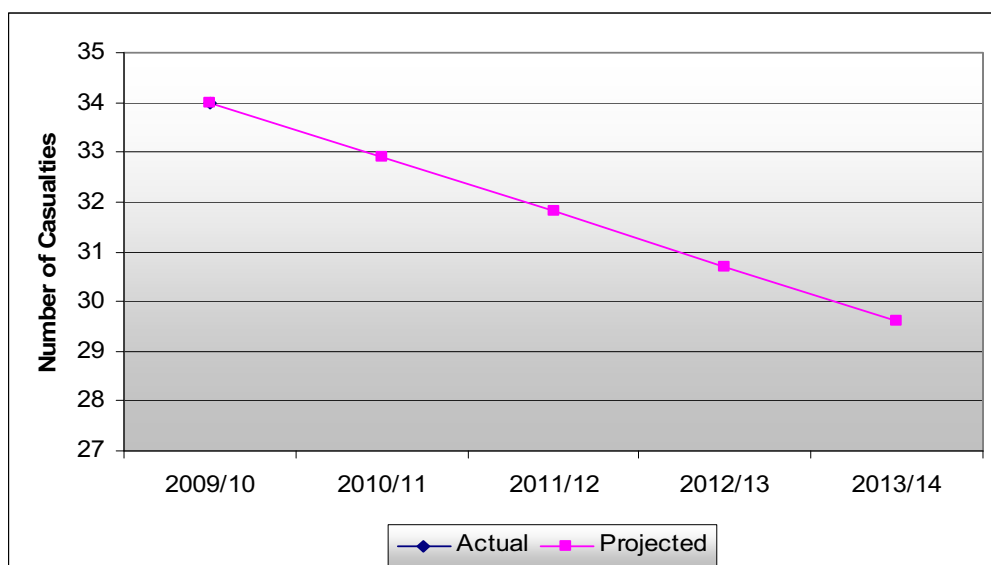
*Source: London Road Safety Unit, TfL, 2009*

4.2.24 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.

4.2.25 The main factor that could influence whether we achieve our casualty reduction targets is the accuracy of the data. In particular, with small numbers, results are susceptible to large fluctuations and future reviews of this target will need to take account of the trend for the rolling average. A further factor that might affect our ability to meet our targets is the increasing number of claims for insurance purposes that is likely to increase the casualty figures.

**Enhancing the Environment and Quality of Life**

4.2.26 Transport is a major source of $CO_2$ emissions, accounting for some 22% (9.7 million tonnes) of Greater London's and **18% (839 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.

4.2.27 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.

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[5] Travel in London, TfL, 2010

4.2.28 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 target trajectory for Barking and Dagenham is illustrated in figure 4.10, below.

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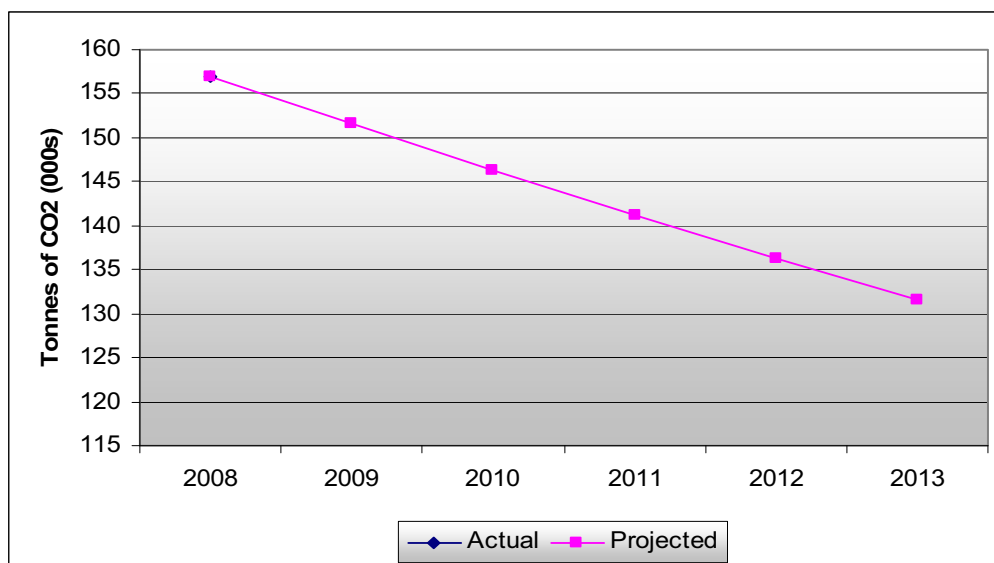


*Source: London Energy and Greenhouse Gas Inventory (LEGGI), GLA, 2009*

4.2.29 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.

4.2.30 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 2008 baseline levels** (see figure 4.11).

*Figure 4.11: Target 11 - average mean PM$_{10}$ and NO$_2$ concentrations in Barking town centre*
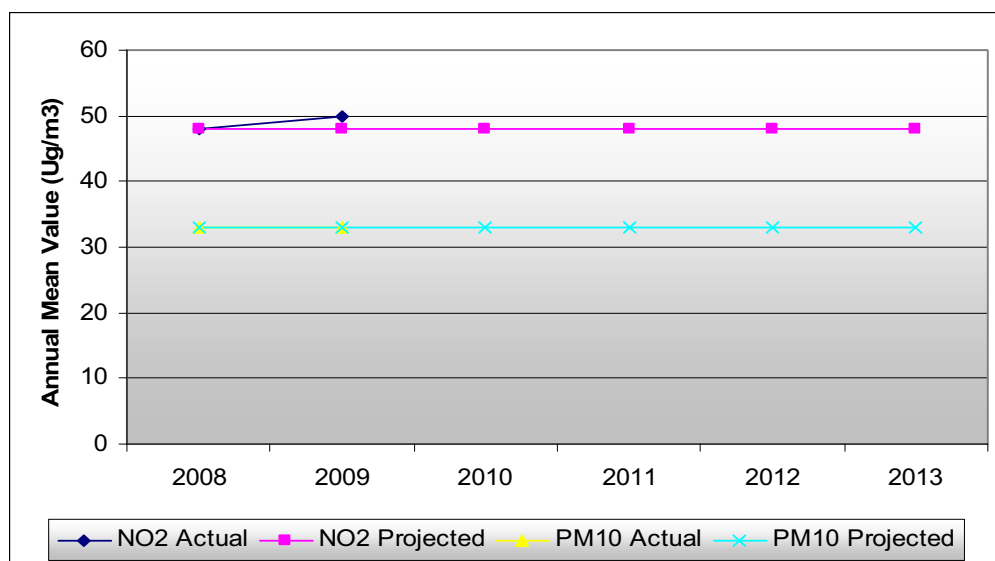


*Source: London Air Quality Network, ERG, 2010*

4.2.31 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 (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 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**

4.2.32 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**.

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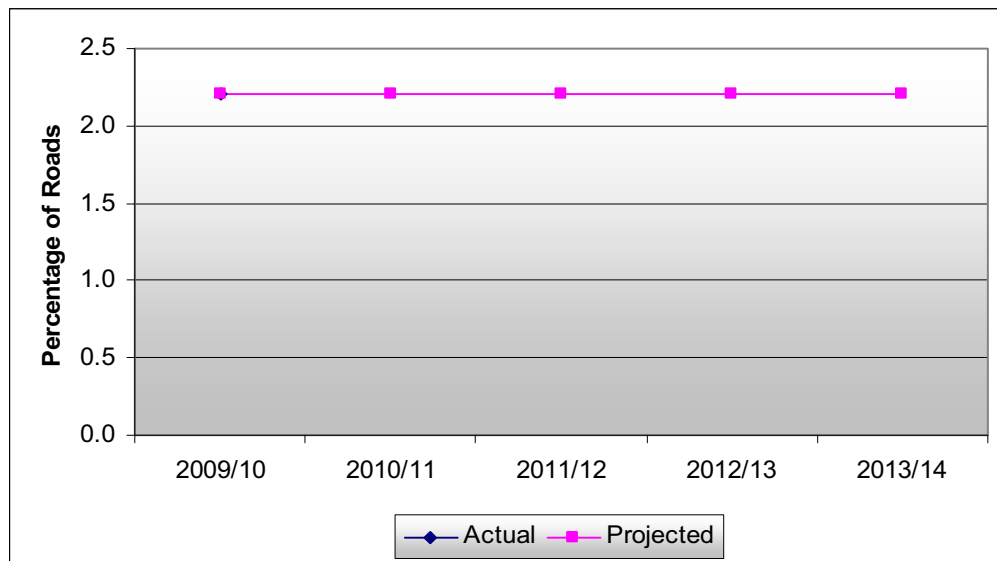


*Source: UKPMS Data, TfL, 2009*

4.2.33 The overall condition of the road network in Barking and Dagenham has improved significantly in recent years, with **the percentage of principal roads in the borough in need of repair having declined from 11.9% in 2003/04 to 2.2% in 2008/09 – a 47.1% improvement overall**.[6] 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 2008/09 levels by 2013/14**. No longer-term target has yet been set, but will be considered in light of indicative future funding levels.

4.2.34 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.

4.2.35 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.

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[6] UKPMS Data, TfL, 2009

4.2.36 Due to the lack of available resources, data on the condition of other assets, such as non-principal roads and footways, is no longer collected by the borough. As such, **we are currently unable to set and monitor any local maintenance targets**.

**MTS Outputs**

4.2.37 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 Report 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; 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 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 new 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.

# 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. | |
| 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). | |
| 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. | |
| **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). | |
| 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. | |
| There should be clear evidence that the LIP outcome targets are aligned with objectives of other corporate/local strategies. | |

| 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. | |
| 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. | |
| 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. | |
| **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. | |
| The Delivery Plan should show a reasonable level and range of funding sources. | |
| 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. | |
| 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. | |
| There should be a clear demonstration of how the packages/interventions proposed will contribute to the MTS goals. | |
| The Delivery Plan should include a short section on risk assessment and mitigation. | |
| **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?*<br>*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. | |
| Evidence should be presented that the targets selected are realistic, but stretching. | |
| 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. | |
| Evidence should be presented that a risk assessment has been carried out for each mandatory target. | |
| Evidence should be presented demonstrating how boroughs propose to monitor progress against targets. | |
| **Consultation** | |
| *Have all the statutory consultees been consulted?*<br>*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. | |
| 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. | |

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# Annex B: LIP Delivery Plan Summary

## B.1 Introduction

B.1.1 A more detailed schedule of the schemes that the Council is proposing under the LIP Maintenance, Corridor/Neighbourhood and Smarter Travel 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 Delivery Plan Summary*

| 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** | **£360,000** | **£360,000** |
| | **TfL Recommended Submission (allows for 25% reserve):** | | **£446,000** | **£450,000** | **£450,000** |
| 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):<br><br>2011/12:<br>• Longbridge Road (Cecil Avenue to Upney Lane)<br><br>2012/13:<br>• Heathway (Hedgemans Road to Arnold Road)<br>• A1306 (junction with Ballards Road)<br>• Abbey Road (Northern Relief Road to Retail Park)<br>• Rainham Road South/Ballards Road junction<br><br>2013/14:<br>• Lodge Avenue (A13 to Porters Avenue)<br>• Ripple Road (Lancaster Avenue to Tudor Road)<br>• Longbridge Road (outside University of East London) | Abbey, Longbridge<br><br>River, Village, Abbey, Gascoigne<br><br>Eastbury, Mayesbrook, Becontree | £446,000 | £450,000 | £450,000 |
| | | **TOTAL:** | **£446,000** | **£450,000** | **£450,000** |

| Scheme Name/ Location | Scheme Summary | Ward(s) Affected | Indicative Costs – 2011/12 | Indicative Costs – 2012/13 | Indicative Costs - 2013/14 |
|---|---|---|---|---|---|
| **Corridors/Neighbourhoods Programme Indicative Allocation:** | | | **£1,604,000** | **£1,607,000** | **£1,607,000** |
| 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 | £500,000 | - | - |
| 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 signing, improved bus stops and waiting/loading restrictions and the realignment of street furniture. | Mayesbrook, Becontree, Eastbury | £400,000 | - | - |
| 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 | £179,000 | £507,000 | £507,000 |
| Cycling on Greenways and Local Cycle Links | 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, | Borough Wide | £150,000 | £100,000 | £100,000 |

| Scheme Name/ Location | Scheme Summary | Ward(s) Affected | Indicative Costs – 2011/12 | Indicative Costs – 2012/13 | Indicative Costs - 2013/14 |
|---|---|---|---|---|---|
| (Various Locations) | 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.<br>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. | | | | |
| 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 remedial works to pavements. | Becontree, Mayesbrook, Parsloes | £125,000 | £225,000 | £300,000 |
| 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 | Borough Wide | £100,000 | £100,000 | £100,000 |

| Scheme Name/ Location | Scheme Summary | Ward(s) Affected | Indicative Costs – 2011/12 | Indicative Costs – 2012/13 | Indicative Costs - 2013/14 |
|---|---|---|---|---|---|
| | restrictions in Wedderburn Road. Priorities for future years tbc. | | | | |
| Station Access Improvements (Dagenham East, Becontree and Chadwell Heath,) | Station access improvements schemes.<br>2010/11 - studies to identify cost of step free access at Dagenham East and Becontree stations.<br>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 | £75,000 | £300,000 | £300,000 |
| Barking Town Centre Low Carbon Zone | Environmental improvement scheme linked to Barking's designation as a Low Carbon Zone. Measures to include provision of air quality monitoring station, 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 | £75,000 | £75,000 | - |
| Neighbourhood Area Improvements (Valance, Parsloes, Albion | 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 | Valance, Parsloes, Albion, Chadwell Heath, | - | £300,000 | £300,000 |

| Scheme Name/ Location | Scheme Summary | Ward(s) Affected | Indicative Costs – 2011/12 | Indicative Costs – 2012/13 | Indicative Costs - 2013/14 |
|---|---|---|---|---|---|
| and Chadwell Heath areas) | 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. | Whalebone, Heath, Mayesbrook, Eastbrook | | | |
| | | **TOTAL:** | **£1,604,000** | **£1,607,000** | **£1,607,000** |
| | | | | | |
| **Smarter Travel Programme Indicative Allocation:** | | | **£212,000** | **£213,000** | **£213,000** |
| 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 | £62,000 | £63,000 | £63,000 |
| 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 | £60,000 |
| 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 | £60,000 |
| Travel Awareness – Promotion and | 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 | Borough Wide | £15,000 | £15,000 | £15,000 |

| Scheme Name/ Location | Scheme Summary | Ward(s) Affected | Indicative Costs – 2011/12 | Indicative Costs – 2012/13 | Indicative Costs - 2013/14 |
|---|---|---|---|---|---|
| Events | practices. | | | | |
| 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 | £15,000 |
| | **TOTAL:** | | **£212,000** | **£213,000** | **£213,000** |
| | | | | | |
| | **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 improving local bus accessibility. | Borough Wide | £30,000 | £30,000 | £30,000 |
| | **TOTAL:** | | **£100,000** | **£100,000** | **£100,000** |
| | **GRAND TOTAL:** | | **£2,362,000** | **£2,370,000** | **£2,370,000** |

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# Annex C: LIP Targets Summary

## C.1 Introduction

C.1.1 Further information on the mandatory and local targets included in the LIP is provided in table C1 (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 C1: 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 | 37 | 2013/14 | 37.5 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | LTDS |
| | | | | | | | | 37.12 | 37.25 | 37.37 | 37.5 | |
| Mode share of residents | % of trips by cycling | Financial | % | 2009/10 | 1.8 | 2013/14 | 2.65 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | Manual and Automatic Traffic Counts (Borough) |
| | | | | | | | | 2.01 | 2.22 | 2.43 | 2.65 | |
| Bus service reliability | Excess wait time in mins | Financial | Mins | 2009/10 | 1.3 | 2013/14 | 1.3 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | iBus |
| | | | | | | | | 1.3 | 1.3 | 1.3 | 1.3 | |
| Asset condition - principal roads | % length in need of repair | Financial | % | 2009/10 | 2.2 | 2013/14 | 2.2 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | Detailed Visual Inspection (DVI) data supplied for each borough to TfL by LB Hammersmith and Fulham |
| | | | | | | | | 2.2 | 2.2 | 2.2 | 2.2 | |
| Road traffic casualties | Total number of people killed or seriously injured | Financial | Number | 2009/10 | 63 | 2013/14 | 55 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | London Road Safety Unit |
| | | | | | | | | 61 | 59 | 57 | 55 | |
| Road traffic casualties | Total casualties | Financial | Number | 2009/10 | 643 | 2013/14 | 563 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | London Road Safety Unit |
| | | | | | | | | 622 | 602 | 583 | 563 | |
| 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 | 141 | 136 | 131 | |

**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 | % | 2008/09 | 75 | 2013/14 | 77.5 | | 2010/11 | 2011/12 | 2012/13 | 2013/14 | Travel Plan Monitoring (Borough) |
| | | | | | | | | | 76 | 76.5 | 77 | 77.5 | |
| Bus service reliability | Average bus journey times | Financial | Mins | 2009/10 | | 2013/14 | | | 2010/11 | 2011/12 | 2012/13 | 2013/14 | iBus |
| | | | | | | | | | | | | | |
| Road traffic casualties | Total number of pedestrian KSIs | Financial | Number | 2009/10 | 98 | 2013/14 | 85 | | 2010 | 2011 | 2012 | 2013 | London Road Safety Unit |
| | | | | | | | | | 95 | 91 | 88 | 85 | |
| Road traffic casualties | Total number of cyclist KSIs | Financial | Number | 2009/10 | 34 | 2013/14 | 30 | | 2010 | 2011 | 2012 | 2013 | London Road Safety Unit |
| | | | | | | | | | 33 | 32 | 31 | 30 | |
| PM10 concentrations | PM10 concentrations | Calendar | Mean Value | 2008 | 33 | 2013 | 33 | | 2010 | 2011 | 2012 | 2013 | London Air Quality Network (ERG) |
| | | | | | | | | | 33 | 33 | 33 | 33 | |
| NO2 concentrations | NO2 concentrations | Calendar | Mean Value | 2008 | 48 | 2013 | 48 | | 2010 | 2011 | 2012 | 2013 | London Air Quality Network (ERG) |
| | | | | | | | | | 48 | 48 | 48 | 48 | |

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# Glossary

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**London Borough of Barking and Dagenham
Local Development Framework**

# Barking and Dagenham SPD

# Biodiversity
**How biodiversity can be protected and
enhanced in the development process**

**Draft Supplementary Planning Document**

**August 2010**

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**Summary**

The Biodiversity Supplementary Planning Document is one of the documents that make up the London Borough of Barking and Dagenham's Local Development Framework. Its purpose is to provide guidance to developers, householders and planners on how biodiversity should be protected and enhanced in the borough in accordance with policies in the Core Strategy and the Borough Wide Development Policies Development Plan Documents and to help make sure laws are not broken. It provides advice on:

- The legislation protecting plants, animals, birds and their habitats
- The relevant Local Development Framework policies
- The biodiversity information required when making a planning application.
- How to integrate biodiversity into buildings and their surroundings so as to improve existing habitats and create new habitats.

Development can have negative impacts on biodiversity, both direct, through the destruction of habitat, and indirect. These impacts can be significant and lead to the decline of biodiversity in the borough. Development can also have positive impacts for biodiversity especially for sites where there is little wildlife by integrating new habitats into buildings and adjacent spaces. The Biodiversity SPD will help ensure development within the borough is sustainable and serves to protect and increase biodiversity for local people to enjoy.

# 1. Introduction

1.1 Biodiversity is an important consideration in the planning process and must be integrated from an early stage into the design of any development.

The purpose of the Biodiversity SPD is to provide guidance to developers, householders and planners on protecting, creating and improving biodiversity during the development process.

Advice is provided on:

- The legislation protecting plants, animals, birds and their habitats

- The relevant Local Development Framework policies

- The biodiversity information required when making a planning application.

- How to integrate biodiversity into buildings and their surroundings so as to improve existing habitats and create new habitats.

1.2 Permitted development and demolition may not require planning permission but householders and developers still need to ensure they do not harm protected and priority species, such as bats and birds. Advice is given on how developers and householders can comply with the law.

1.3 The SPD specifically supplements policies of the Core Strategy and Borough Wide Development Policies:

- CM1: General principles for development
- CM3: Green Belt and Public Open Spaces
- CR1: Climate Change and Environmental Management
- CR2: Preserving and Enhancing the Natural Environment
- BR3: Greening the Urban Environment
- BP11: Urban Design

It also helps implement the following Core Strategy Strategic Objectives

- SO10:   Protecting and Enhancing Biodiversity

1.4 The SPD does not have the same status as the development plan but, once adopted, it will be an important material consideration in the determination of planning applications.

1.5 The provisions of this SPD will be implemented primarily through the development management process.

1.6    This document is intended to complement rather than duplicate other planning documents. It should be read in conjunction with the Barking and Dagenham Local Strategic Partnership's Community Plan, and the policies and proposals in the Council's Local Development Framework (LDF).

1.7    Details of all the planning documents that are currently in force within the London Borough of Barking and Dagenham, and a timetable for the production of new documents, are set out in the Councils Local Development Scheme (LDS).

## 2.    Status of the Biodiversity SPD

2.1    This guidance has been put together in accordance with the framework provided in the Government's Planning Policy Statement 12: Local Spatial Planning (2008). The Statutory Development Plan is the starting point when determining planning application for the development or use of land. The Development Plan consists of the London Plan (consolidated with Alterations since 2008) the London Borough of Barking and Dagenham's Development Plan Documents (DPDs) and the saved Unitary Development Plan policies.

2.2    This SPD provides further detail on the implementation of DPD policy that applicants must follow to ensure they meet the policy requirements.

## 3.    Consultation

3.1    The consultation on this Draft SPD is inline with Barking and Dagenham's Statement of Community Involvement and runs from **XX** 2010 to **XX** 2010.

Copies are available on the Barking and Dagenham website at
http://barking-dagenham.limehouse.co.uk/portal/

Alternatively, you can request a copy by emailing
planningpolicy@lbbd.go.uk or writing to:

Linda Beard
Planning and Policy
London Borough of Barking and Dagenham
3rd Floor, Maritime House
1 Linton Road
Essex
IG11 8HG

Responses can be made online at
http://barking-dagenham.limehouse.co.uk/portal/, sent by email to
planningpolicy@lbbd.go.uk or by post to the above address.

## 4. Planning policy framework

4.1 This chapter provides the planning policy context to this SPD. It highlights the legislation which establishes the responsibilities placed upon local authorities to protect biodiversity and it explains a range of national, regional and local policy documents where the commitments to protect biodiversity have been established. Legislation which specifically protects species and habitats is discussed in Chapter 6.

4.2 Sustainability is a key issue in the borough and this is reflected in the Barking and Dagenham Local Strategic Partnership's Community Plan (2009), the Council's Local Development Framework and Regeneration Strategy (2008 – 2013). The protection of the natural environment and wildlife and the need to increase access to nature for local people to enjoy are essential components of the council's commitment to sustainability.

4.3 Biodiversity encompasses all plants, animals, fungi and micro-organisms, the genes they contain, and the different habitats of which they are part. Biodiversity provides foods, medicines, materials, ecological services and contributes to cultural values and to leisure.

In 1992 the UK Government signed the International Convention on Biological Diversity (http://www.biodiv.org) making a commitment to "conserve and sustainably use biological diversity for the benefit of present and future generations."

Since 1992 the number of species in the UK and worldwide has continued to decline. Some species have also suffered reductions in their populations. This is mainly due to the loss of habitat to development and the impact of climate change. International and national initiatives are promoting measures to try to halt and then reverse these declines.

4.4 Development can have negative impacts on biodiversity, both direct, through destruction of habitat, for example through construction, and indirect, for example through increased disturbance or excessive lighting. These impacts can be significant and lead to the decline of biodiversity in the borough.

4.5 Development can also have positive impacts for biodiversity, especially for sites where there is little wildlife. New developments can integrate new habitats into buildings and adjacent spaces that contribute to improving the status of UK Biodiversity Action Plan habitats and species.

4.6 The Natural Environment and Rural Communities (NERC) Act 2006 (Section 40) states that:

> "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity."

Local authorities are expected to take measures to protect and enhance biodiversity within their area by ensuring features of nature conservation value (habitats and species) are retained, enhanced or created during and following development and are not harmed. This can be achieved by:

1. Including policies that protect and enhance biodiversity in the Local Development Framework
2. Requiring developers to provide sufficient information on the biodiversity of development sites and take measure to protect and enhance biodiversity.
3. Ensuring legal requirements are met by developers in regard to protected species as defined under the Wildlife and Countryside Act (1981) as amended.

4.7 National policy in Planning Policy Statement (PPS) 1: Delivering Sustainable Development and PPS 9: Biodiversity and Geological Conservation promote sustainable development and the integration of biodiversity into new development.

4.8 PPS 9 sets out planning policies for the protection of biodiversity and geological conservation through the planning system. These policies must be taken into account by local planning authorities in the preparation of local development documents and may be material to decisions on planning applications. PPS9 states that:

- Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests.

- The aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests. If significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused.

4.9     Lakes, ponds, rivers and estuaries are essential natural resources that provide important habitats for wildlife. A large proportion of these water bodies in the borough are damaged by pollution (current and historic) from industry and urban runoff and by modification of the original waterways (for example, through placing streams and rivers in culverts).

4.10    The EC Water Framework Directive (2000) establishes a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. Its purpose is to "ensure all aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands meet 'good status' by 2015".

4.11    The Directive requires Member States to establish river basin districts and for each of these a river basin management plan. The Thames River Basin District management plan has been produced by the Environment Agency and covers Barking and Dagenham.  Key actions identified by the Environment Agency for improving waterways and water bodies in the borough include the following:

- The Environment Agency will investigate current levels of abstraction in the Upper Roding.
- The Environment Agency will work with partners to re-meander the Mayes Brook through Mayesbrook Park and improve water quality from urban diffuse pollution.
- The Environment Agency will work with partners to restore the Wantz Stream and the Beam through the Dagenham Washlands Flood Storage Area.
- The Environment Agency will investigate methods for improving fish passages through the tidal sluices.

4.12    The Thames River Basin District management plan (Annex J) stresses the importance of ensuring sustainable water management using measures such as planning conditions and section 106 agreements. Sustainable water management measures may include green infrastructure, the use of sustainable urban drainage systems (SUDS) and good practice in site clearance prior to development. Public bodies are also expected to identify opportunities for improvements and restoration work to maximise any contribution to meeting the Water Framework Directive objectives.

Water for life and livelihoods River Basin Management Plan Thames River Basin District can be found on the Environment Agency's web site at: www.environment-agency.gov.uk/wfd

4.13  The London Plan, (consolidated with Alterations since 2004) is the current planning strategy for London and has specific policies regarding biodiversity. Note that the consultation draft replacement London Plan (published October 2009) contains similar policies regarding the protection and enhancement of biodiversity.

The current London Plan requires that development proposals should respect and enhance the natural environment and incorporate greening and planting initiatives. The following policies are relevant to protecting and enhancing biodiversity:

Policy 3D.14 Biodiversity and nature conservation
The planning of new development and regeneration should have regard to nature conservation and biodiversity, and opportunities should be taken to achieve positive gains for conservation through the form and design of development.

Policy 4C.3 The natural value of the Blue Ribbon Network
The Mayor will and boroughs should protect and enhance the biodiversity of the Blue Ribbon Network.

Policy 4C.22 Rivers, brooks and streams
The Mayor will, and boroughs should, in discharging their development control and other duties, ensure that rivers, brooks and streams of all sizes are protected, improved and respected as part of the Blue Ribbon Network and as valuable entities in themselves.

Policy 4A.11 Living Roofs and Walls
The Mayor will, and boroughs should, expect major developments to incorporate living roofs and walls where feasible and reflect this principle in DPD policies.

East London Green Grid

4.14  A green grid is defined as a network of open spaces, wildlife corridors and the links between them, providing benefits for people and wildlife to support sustainable communities.

Policy 3D.8 Realising the value of open space, in the London Plan (consolidated with Alterations since 2004), states:

Policies in DPDs should treat the open space network as an integrated system that provides a "green infrastructure" containing many uses and performing a wide range of functions, such as the East London Green Grid.

All developments will be expected to incorporate appropriate

elements of open space that make a positive contribution to and is integrated with the wider network.

Policy CM3 of the Core Strategy supports the implementation of the East London Green Grid. The East London Green Grid Framework London Plan (Consolidated with Alterations since 2004) Supplementary Planning Guidance (http://legacy.london.gov.uk/mayor/strategies/sds/spg-east-lon-green-grid.jsp) provides guidance on the implementation of policies in the London Plan, sets out the spatial framework, identifies the deficiencies in the provision of public open space and in access to nature and identifies strategic open space opportunities.

Detailed information on Green Grid projects within Barking and Dagenham can be found in the following documents: Area Framework 2 Epping Forest and River Roding; Area Framework 3 Thames Chase, Beam and Ingrebourne; and Area Framework 4 London Riverside. These documents can be downloaded at: www.designforlondon.gov.uk

London Borough of Barking and Dagenham LDF Policy

4.15 LDF policies within the Core Strategy and Borough Wide Development Policies DPDs that are relevant to biodiversity are listed below in Table 1.

In summary developers are expected to:

- Retain existing biodiversity on and adjacent to development sites and avoid harm
- Take measures to enhance existing biodiversity
- Create new habitats and opportunities for species

For proposed developments where harm to existing biodiversity is an unavoidable consequence of the development, the council will usually refuse planning permission.

4.16 Developers are expected to consider how the development proposal can help meet habitat protection, enhancement and creation targets set out in the draft London Plan (October 2009) or its replacement and the Local Biodiversity Action Plan (see pages 14 and 15 for further details).

The complete policies can be found in the Local Development Framework section on the council's web site **www.barking-dagenham.gov.uk**

**Table 4.1: Local Development Framework Policies**

| Core Strategy DPD | |
|---|---|
| CM1: General principles for development | Natural and built assets including natural resources, air and water quality, biodiversity and habitats, the historic environment, local distinctiveness, and the borough's network of open spaces should be protected and enhanced. |
| CM3: Green Belt and Public Open Spaces | The Council will ensure that important areas of public open space are identified and protected from development, that public open space is created and improved in areas of deficiency, and support the implementation of the East London Green Grid, the Blue Ribbon Network and the Barking and Dagenham Landscape Framework Plan. |
| CR1: Climate Change and Environmental Management | The Council will plan in harmony with landscape and biodiversity. |
| CR2: Preserving and enhancing the natural environment | The Council will encourage development that enhances existing sites and habitats of nature conservation value (including strategic wildlife and river corridors) or which provide new ones, in particular where this will help meet the objectives of the Local Biodiversity Action Plan for Barking and Dagenham. |
| CC4: Achieving community benefits through developer contributions | Developer contributions could be used to provide: Environmental sustainability measures Environmental and biodiversity enhancements (including those identified in the Landscape Framework Plan) |
| **Borough Wide Development Policies DPD** | |
| BR3: Greening the urban environment | The Council will expect, where appropriate, all development proposals to demonstrate that the sequential approach set out below to preserving and enhancing the natural environment has been followed:<br><br>Retain, enhance or create features of nature conservation value and avoid harm, Mitigate for impacts to features of nature conservation value; Where there is no viable alternative, compensate for the loss of features of nature conservation value.<br><br>Where there are no existing features of nature conservation on a site, development should seek to create nature conservation enhancements to help 'green the urban environment'. |
| BP11: Urban Design | To naturalise and green the urban environment through an interconnected network of parks, open spaces, tree-lined streets, wildlife corridors, woodlands, pedestrian and cycle paths. |

## 5.    Existing biodiversity in Barking and Dagenham

5.1    The London Borough of Barking and Dagenham features a wide range of habitats that have been influenced by the underlying landscape and by human activities. Industry and housing in the 20<sup>th</sup> century shaped large parts of the borough. The Ripple Nature Reserve is a good example of how biodiversity can recover and thrive on a brown field site. In the east of the borough, Eastbrookend Country Park has been created on a landfill and quarry site. The mosaic of water, scrub, woodland and grassland provides ideal conditions for wildlife. Along the western boundary of the borough lies the River Roding. Redevelopment of disused industrial land alongside the river should provide the opportunity to significantly improve the river's biodiversity.

The boroughs assets discussed in this chapter are:

- Sites of Importance for Nature Conservation
- Local Nature Reserves
- Priority species and habitats
- London Regional Landscape Framework
- Living Landscapes

Protected species and habitats are discussed in Section 6.

### Sites of Importance for Nature Conservation

5.2    A site is listed as a Site of Importance for Nature Conservation (SINC) for the habitats or species that it supports. Sites are classified according to their regional and borough importance as Sites of Metropolitan Importance; Sites of Borough Importance; and Sites of Local Importance. Sites may also be declared as Local Nature Reserves.

A complete list of the SINCs within the borough and their locations is provided below. Details on each site and the reasons for their listing can be found on the council's web site at www.barking-dagenham.gov.uk/8-leisure-envir/park-country/pdf/sinc-bardag.pdf  and on the London Wildweb web site at wildweb.london.gov.uk

All SINCs will be identified in the LDF Proposals Map once it is adopted.

5.3    **Sites of Metropolitan Importance:** These sites contain habitats or support species that are of particular significance in the London region. They may contain rare species, rare assemblages of species, important populations of species or be significant within an urban environment. There are three Sites of Metropolitan Importance in the borough:

- M031      River Thames and Tidal Tributaries

- M089    The Ripple Nature Reserve (Local Nature Reserve)
- M090    The Chase Nature Reserve (Local Nature Reserve) and Eastbrookend Country Park (Local Nature Reserve)

5.4 **Sites of Borough Importance Grade I and Grade II:** These sites contain habitats or support species that are important in the borough. Damage to any of these sites would be a significant loss to the borough. There are fifteen Sites of Borough Importance in Barking and Dagenham:

- River Roding in Barking
- Furze House Farm
- Dagenham Breach and the lower Beam River
- Beam Valley South and the Wantz Stream
- Mid-Beam Valley and Dagenham East Lake
- Goresbrook and the Ship & Shovel Sewer
- Marks Hedge and Hainault Road Allotments Wood
- Barking Park and Loxford Water
- Mayesbrook and associated watercourses
- Mayesbrook Park Lakes
- Parsloes Park (includes The Squatts Local Nature Reserve)
- White's Farm
- Wantz Lake and Crowlands Golf Course
- Scratton's Farm Ecopark (Local Nature Reserve)
- Romford Line railsides

5.5 **Sites of Local Importance**: These sites provide access to nature for local residents and schools. They are particularly important in areas that are deficient in wildlife sites accessible to the public. There are eight Sites of Local Importance in the borough:

- Barking Abbey Ruins and St Margaret's Churchyard
- Gascoigne Road Pumping Station Rough
- St Chad's Park
- Valence House Gardens
- Reede Road Allotments, Pondfield Park and adjacent railside

- St Peter's and St Paul's Churchyard, Dagenham (Local Nature Reserve)

- Wellgate Community Farm

5.6 **Local Nature Reserves (LNRs)**:  Some of the Sites of Importance for Nature Conservation are also classified as Local Nature Reserves. These are declared for their importance to wildlife and people. There are eight Local Nature Reserves in the borough:

- Beam Valley TQ 508 844

- Dagenham Village Churchyard TQ 500 845

- Eastbrookend Country Park TQ 510 860

- Mayesbrook Park, South TQ 463 844

- Parsloes Park Squatts TQ 478 851

- Ripple Nature Reserve TQ 468 824

- Scrattons Ecopark and extension TQ 474 832

- The Chase – Dagenham TQ 515 857

Detailed information about each LNR can be found on Natural England's web site: http://www.lnr.naturalengland.org.uk/Special/lnr/lnr_search.asp

**Priority Species and Habitats**

5.7 This section explains what priority species and habitats are and how they have been identified at the national and regional level. Certain species are also protected from harm and / or disturbance by law. Appendix 2 provides a list of protected and priority species that have been recorded in the borough. Information about legally protected species can be found in Chapter 6 and Appendix 5. Appendix 5 provides information on the different levels of protection for different species.

5.8 The UK Biodiversity Action Plan (UK BAP) has identified species and habitats that require specific actions for their protection and to reverse their decline. A list of these habitats and species can be found at www.ukbap.org.uk

Priority species and habitats are those identified by the UK Biodiversity Partnership to be of conservation concern. The criteria for assessing species are:

- Threatened internationally.
- International responsibility and moderate decline in the UK in the last 25 years.
- Marked decline in the UK in the last 25 years.
- Other important factors, where quantitative data on decline were lacking but there is other evidence of extreme threat.

Terrestrial and freshwater habitats of conservation concern were assessed using the following criteria:

- Habitats the UK has international obligations for.
- Natural and semi-natural habitats at risk, such as those with a high rate of decline or which are rare.
- Habitats important for key species.
- Habitats which are 'functionally critical' i.e. those essential for organisms inhabiting wider ecosystems, may be used in some cases as for support, but is unlikely to be a qualifying criterion on its own.

Marine habitats were assessed using the adapted Review of Marine Nature Conservation criteria.

The 1,150 species and 65 habitats that meet the BAP criteria at the UK level can be found on the Natural England web site:

www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/prioritylist.aspx

5.9      At the regional level the London Biodiversity Partnership has selected those UK BAP species and habitats that occur in the London region and created a London Biodiversity Action Plan. Details can be found at www.lbp.org.uk

The London Biodiversity Partnership and Greater London Authority have identified those species and habitats that should be prioritised for the London region. **The priority habitats for London are**:

- Acid Grassland
- Chalk Grassland
- Heathland
- Reedbeds
- Rivers and Streams
- Standing Waters
- Tidal Thames
- Woodland
- Meadows and Pastures
- Built structures
- Parks and Urban Greenspaces  (including Churchyards and Cemeteries)

- Private Gardens
- Wastelands
- Coastal and Floodplain Grazing Marsh
- Orchards
- Fen, Marsh and Swamp

Information on some London BAP Priority Species can be found on the London Biodiversity Partnership's website:

www.lbp.org.uk/londonpriority.html

and the complete species lists can be accessed here:

www.lbp.org.uk/downloads/PrioritySppInfo/PriorityPlants01.08.xls
www.lbp.org.uk/downloads/PrioritySppInfo/PriorityFungi.xls
www.lbp.org.uk/downloads/PrioritySppInfo/PriorityInverts01.08.xls
www.lbp.org.uk/downloads/PrioritySppInfo/PriorityVerts01.08.xls

The London Plan has established targets for the protection, improvement and expansion of priority habitats to be achieved by 2020. These targets are included in the consultation draft replacement London Plan (October 2009).

The targets for priority habitats in London for are shown in Appendix 4.

5.10   At the local level, the London Borough of Barking and Dagenham is responsible for the Local Biodiversity Action Plan which reflects the national and regional Biodiversity Action Plans and incorporates local priorities.

The Local Biodiversity Action Plan 2010 - 2015 will select habitats and species that will be prioritised for action within Barking and Dagenham, based on the priorities provided in the London Biodiversity Action Plan.

Proposals to enhance and create habitat in Barking and Dagenham should consult the Local Biodiversity Action Plan, the London Biodiversity Action Plan and the London Habitat Suitability Maps (available on the Greenspace Information for Greater London website: www.gigl.org.uk/Resources/Habitats/tabid/107/Default.aspx) to identify priority habitats and potential locations for different habitat types in the borough.

**London Regional Landscape Framework**

5.11 The London Regional Landscape Framework (May 2009) has been developed by Natural England and sets out the main landscape character types for London. There are four landscape character types within Barking and Dagenham:

- Essex Plateau – Mosaics of ancient woodland, wood pasture and acid grassland within the former royal hunting 'forests' at Epping Forest and Havering.

- North Thames Terraces – Flat, open grassland, stepping up from the Thames, with narrow sinuous strips of woodland marking the alignment of tributary creeks. Examples include Mayesbrook Park, Romford Line railsides and The Chase.

- Lower Thames Floodplain – A vast, flat riverside zone of grazed saltmarshes grading to reedswamp, mudflats and the wide tidal Thames - the most striking and immediately visible natural element in London. Examples include the Goresbrook, the Ripple Nature Reserve and Barking Creek.

- Roding River Valley – The narrow, sinuous course of the upper Roding where the riverbanks are lined with willows.

The design of large scale habitat creation should consider if it is appropriate to incorporate elements of the landscape character type for the site concerned.

More information about the London Regional Landscape Framework can be found on Natural England's web site: www.naturalengland.org.uk/regions/london/ourwork/londonnaturalsignatures.aspx

**Living Landscapes**

5.12 Living Landscapes are areas identified by the Wildlife Trusts as areas to protect for wildlife, enlarge, improve and to join up. Within Barking and Dagenham the Essex Wildlife Trust has identified the Beam Valley as a Living Landscape. The London Borough of Barking and Dagenham is working with the London Borough of Havering and the Environment Agency to improve the Beam Valley for wildlife. More information is available from The Wildlife Trusts web site: http://www.wildlifetrusts.org/?section=environment:livinglandscapes

## 6. Protecting biodiversity in the development process

6.1 This chapter looks at how biodiversity is best protected through the development management process. There are three key elements to this:

    I. Providing accurate information with the planning application on the existence of habitats or biodiversity features and the presence of plants, invertebrates, amphibians, reptiles, birds or mammals (including bats) on the proposed development site

    II. Where it is known a protected or priority species or habitat is present ensuring assessments are undertaken which show the impact of the proposed development on them.

    III. Where such assessments demonstrate that species or habitats will be affected ensuring the development proposal is designed so as to avoid adverse effects where possible and mitigate unavoidable impacts.

6.1 Biodiversity needs to be considered at all stages during the development process. Understanding the habitats and species that are present on a development site will help you to:

- Comply with legislation protecting wildlife and habitats.
- Meet the requirements of Borough Wide Development Policy BR3 Greening the urban environment.

Once a development site has been identified the following steps should take place <u>before</u> demolition or site clearance and <u>before</u> the layout of the new development has been designed:

- **Are there any trees on or adjacent to the development site?**

Your topographical survey should show the location of all existing trees and a tree survey and a tree constraints plan should be produced. The design of the development should maximise the number of trees that will be retained. It should also identify suitable locations for tree planting, including significant trees, if space permits. More information is available in the Trees and Development Supplementary Planning Document.

- **Are there any plants, invertebrates, amphibians, reptiles, birds or mammals (including bats) using the development site?**

Most development sites and buildings will be made use of by wildlife and you may need a survey by a qualified ecologist. This survey will identify the different species present and the potential of the site to support species that may have been missed by the survey.

Some species are protected by law from harm (protected species) and some species are priority species as they need extra help to prevent their decline in the UK (priority species). Some species are both

protected and priority species. Your ecological survey will need to identify the presence or potential presence of these species on the development site. Further information is provided later in this chapter.

Surveys of species and habitats often need to take place at particular times of year and need to be planned in advance. **Appendix 1** provides a table showing the appropriate times of year to undertake surveys for different species.

- **Are there any habitats or biodiversity features or geological features on or next to the site? Is the site adjacent to a Site of Importance for Nature Conservation (SINC)?**

Most development sites have some habitat, for example grassland, hedges, scrub or water, so you may need a survey by a qualified ecologist. An ecological survey will identify these habitats and assess the impact of development. It will also assess the impact of the development on any adjacent SINC. The layout and design of your development should avoid harm to wildlife and habitats. If this is not possible, harm must be minimised and the harm must be compensated for either on the development site or within the area.  Further information is provided later in this chapter.

**Accurate information and planning applications**

6.2     This chapter explains in detail when ecological surveys are required so that accurate information is submitted with the planning application. It explains how developers are required to show that the protection of biodiversity has been included in the development proposal.  All developments, regardless of their location, are also expected to consider how biodiversity can be enhanced or improved on the development site (further information on this aspect is provided in Chapter 7).

Applicants should ensure that any ecological surveys are incorporated into the early stages of the project. Accurate ecological information provided with the planning application will help prevent delays during the planning process.

Failure to submit accurate, up to date environmental information with a planning application can result in refusal to validate the planning application or refusal when considered against policy.

Pre-application discussions with planning staff will help applicants assess if surveys of wildlife and habitats are needed to support the planning application. Information about **the pre-application process** can be found on the council's web site: www.barking-dagenham.gov.uk

6.3    Figure 1, below, provides a simplified guide to the steps developers need to take to ensure they meet with the requirements to protect and enhance biodiversity on and adjacent to development sites.

**Figure 6.1: Checklist for planning applications**

**Pre-application stage**

1.  Identification of site for proposed development

↓

2.  Assess the biodiversity value of the site and its surroundings:

- Does the site or adjacent land have a nature conservation designation?
- Are legally protected species present?
- Are Biodiversity Action Plan (priority) species or habitats present?

↓

3.  If the development will have a negative impact on species and / or habitats present on the site, can an alternative site be found?

If an alternative site cannot be found, can the development be redesigned to avoid harm to species and habitats?

If harm cannot be avoided, you must set out how harm will be minimised and compensated for.

↓

4.  If trees are present on or adjacent to the site you will need to provide:

- A topographical survey
- A tree survey (including information on any trees protected by Tree Preservation Orders)
- A tree constraint plan

Consult the Trees and Development SPD fur further information.

**Application stage**

5. The Local Planning Authority will consider if the information submitted by the developer is adequate and accurate. Additional information and / or surveys may be required.

↓

6. If European protected species, such as bats or great crested newts, are present the Local Planning Authority must apply the three tests set out in the Habitats Regulations:

- No satisfactory alternative to the development
- Impacts are not detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range
- The development is in the interests of public health or safety, or other imperative reasons for overriding public interest, including those of social, economic and environmental benefit.

A licence from Natural England may also be required.

↓

7. An Aboricultural Implications Assessment and an Aboricultural Method Statement may be required for trees present on and adjacent to the site. Consult the Trees and Development SPD for further information.

↓

8. The planning application will be determined in accordance with national legislation and this Biodiversity SPD.

↓

9. If planning permission is granted conditions may be attached requiring further mitigation, enhancements for biodiversity, tree planting and / or compensation for unavoidable loss.

**Post application stage**

| 10. Where a licence from Natural England is required ensure this has been obtained before work commences. |
| --- |

$\downarrow$

| 11. Ensure that landscaping and biodiversity conditions are met. If an Ecological Management Plan is required ensure this is provided and any monitoring requirements are met. |
| --- |

**Demolition**

6.4     Proposals that involve demolition of buildings should refer to Table 6.1 to determine if any species surveys are required. In general the majority of buildings will require:

1)  A bat survey
2)  A survey for nesting birds

before demolition can be permitted.

Please note that the council's Building Control team must be notified in writing of any proposed demolition of a building or part of a building at least 6 weeks before work commences.

Further information is available on the council's web site www.barking-dagenham.gov.uk or from the Building Control Team (contact details are provided in the **Contacts** section).

**Survey and Assessment requirements for Protected and Priority species**

6.5　The London Borough of Barking and Dagenham has a duty to consider the conservation of biodiversity when determining a planning application; this includes having regard to the safeguarding of species that are legally protected under the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 and the Badgers Act 1992.

Where a proposed development is likely to affect Protected and / or Priority species, the applicant must submit a Protected and / or Priority Species Survey and Assessment.

**Any development proposals shown in Table 6.1** must submit a Protected and Priority Species Survey and Assessment with the planning application.  Exceptions to when a survey and assessment may not be required are explained in the table.

**Appendix 2** provides a list of those protected species and priority species likely to be found in the London Borough of Barking and Dagenham. An explanation of what is meant by protected and priority species is provided below.

**Protected Species**

6.6　Protected Species are those plants and animals protected by law. The degree of protection depends on the relevant legislation, as explained below. Detailed information on protected species can be found in Appendix 5.

**Priority Species**

6.9　Priority species and habitats are those identified by the UK Biodiversity Partnership to be of conservation concern. They are selected for priority action in biodiversity action planning, at the national, regional and /or local level. Local planning authorities are required to ensure these species are protected from the adverse effects of development. Planning permission will not be granted for development that would result in harm to these species or their habitats unless the need for, and the benefits of, the development clearly outweigh that harm.

Appendix 2 provides a list of species that have priority status and are likely to be found in Barking and Dagenham. The complete lists for priority species in London are provided by the London Biodiversity Partnership and can be accessed here:
www.lbp.org.uk/downloads/PrioritySppInfo/PriorityPlants01.08.xls
www.lbp.org.uk/downloads/PrioritySppInfo/PriorityFungi.xls
www.lbp.org.uk/downloads/PrioritySppInfo/PriorityInverts01.08.xls
www.lbp.org.uk/downloads/PrioritySppInfo/PriorityVerts01.08.xls

**Survey requirements for Protected and Priority Species**

6.10   To ensure that the survey is accurate the following guidelines should be followed:

   I.   The survey should be undertaken and prepared by competent persons with suitable qualifications and experience (such as a member of the Institute of Ecology and Environmental Management) using nationally recognised survey guidelines/methods where available.

   II.   Surveys must be undertaken at the appropriate time of day and month of year for the species being surveyed and may be required to take place over an extended period of time. **Appendix 1** provides guidance on the optimal survey times for protected and priority species.

      Further information on appropriate survey methods can be found on the Institute of Ecology and Environmental Management web site at www.ieem.net

   III.   The survey should be informed by the results of a search for ecological data from Greenspace Information for Greater London (GiGL), the biological records centre for London, and other environmental organisations, as appropriate. These may include:

- London Bat Group
- Essex Bat Group
- Biological Records In Essex (BRIE) or the relevant Essex County Recorder.
- London Natural History Society (LNHS)

   IV.   The survey must be to an appropriate level of scope and detail and must:

- Record which species are present and identify their numbers (may be approximate);
- Map their distribution and use of the area, site, structure or feature (e.g. for feeding, shelter, breeding).

   5.   A copy of any ecological data submitted as part of a planning application will be given by the planning authority to Greenspace Information for Greater London (GiGL), London's open space and biodiversity records centre. See **Section 4.19** for more information.

**Assessment requirements for Protected and Priority Species**

6.11    The assessment must identify and describe potential development impacts likely to harm protected and / or priority species, and/or their habitats, identified by the survey (these should include both direct and indirect effects both during construction and after development).

Where harm is likely, evidence must be submitted to show how:

- Alternatives designs or locations have been considered;
- Adverse effects will be avoided wherever possible;
- Unavoidable impacts will be mitigated or reduced;
- Impacts that cannot be avoided or mitigated will be compensated.

6.12    The information provided in response to the above requirements are consistent with those required for an application to Natural England for a European Protected Species License.  Further detailed information can be found on Natural England's web site at www.naturalengland.org.uk/ourwork/regulation/wildlife/default.aspx

A protected species survey and assessment may form part of a wider Ecological Assessment and/or part of an Environmental Impact Assessment.

**Table 6.1: Protected and Priority Species:**
**Criteria and indicative thresholds for when a survey and assessment will be required**

| Proposals for Development That Will Trigger a Protected and / or Priority Species Survey | Species Likely To Be Affected And For Which A Survey Will Be Required | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bats | Barn owl | Breeding Birds | Wintering Birds | Gt. crested newt | Water Vole | Badger | Reptiles | Amphibians | Plants | Invertebrates | Harvest mouse | Stag beetle | Brown hare | Other BAP species |
| Proposed development which includes the modification conversion, demolition or removal of buildings and structures (especially roof voids) involving the following: | | | | | | | | | | | | | | | |
| • All agricultural buildings (e.g. farmhouses and barns), whatever their condition, particularly of traditional brick or stone construction and/or with exposed wooden beams greater than 20cm thick. The only exception is modern agricultural buildings of prefabricated construction with steel/sheet materials. | ✓ | ✓ | ✓ | | | | | | | | | | | | |
| • Roofs of any type, or demolition of a built structure, regardless of location, except for those either | ✓ | | ✓ | | | | | | | | | | | | |

| Proposals for Development That Will Trigger a Protected and / or Priority Species Survey | Species Likely To Be Affected And For Which A Survey Will Be Required | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bats | Barn owl | Breeding Birds | Wintering Birds | Gt. crested newt | Water Vole | Badger | Reptiles | Amphibians | Plants | Invertebrates | Harvest mouse | Stag beetle | Brown hare | Other BAP species |
| of prefabricated construction with steel/sheet materials (such as modern warehouses) or flat roof structures with no roof voids, soffit or barge boards. | | | | | | | | | | | | | | | |
| • All unused industrial chimneys, which are unlined and of brick or stone construction; | ✓ | | | | | | | | | | | | | | |
| • All tunnels, culverts, mines, kilns, ice-houses, adits, military fortifications, air raid shelters, cellars and similar underground ducts and structures; | ✓ | | | | | | | | | | | | | | |
| • All bridge structures, aqueducts and viaducts (especially over water and wet ground). | ✓ | | | | | | | | | | | | | | |
| Proposals involving lighting of churches and listed buildings or flood lighting of green space within 50m of woodland, water, field hedgerows or lines of trees. | ✓ | | ✓ | | | | | | | | | | | | |

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| Proposals for Development That Will Trigger a Protected and / or Priority Species Survey | Species Likely To Be Affected And For Which A Survey Will Be Required | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bats | Barn owl | Breeding Birds | Wintering Birds | Gt. crested newt | Water Vole | Badger | Reptiles | Amphibians | Plants | Invertebrates | Harvest mouse | Stag beetle | Brown hare | Other BAP species |
| Proposals affecting woodland, or field hedgerows and/or lines of trees with connectivity to woodland or water bodies. | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | | | | | |
| Proposals affecting established grassland (i.e. not ploughed or seeded for 5 or more years) or 'roughland' (i.e. grassland partially covered with scrub or trees), *excluding* residential gardens and grassland managed intensively for sports or amenity use and *including* roadside verges | | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | | ✓ | |
| Proposed tree work (felling or lopping) and/or development affecting:<br>• old and veteran trees that are older than 100 years; | ✓ | ✓ | ✓ | | | | | | | | | | | | |
| • trees with obvious holes, cracks or cavities, | ✓ | ✓ | ✓ | | | | | | | | | | | | |
| • trees with substantial ivy cover; | ✓ | | ✓ | | | | | | | | | | | | |
| • trees with a girth greater than 50cm at chest height; | ✓ | ✓ | ✓ | | | | | | | | | | | | |

| Proposals for Development That Will Trigger a Protected and / or Priority Species Survey | Species Likely To Be Affected And For Which A Survey Will Be Required | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bats | Barn owl | Breeding Birds | Wintering Birds | Gt. crested newt | Water Vole | Badger | Reptiles | Amphibians | Plants | Invertebrates | Harvest mouse | Stag beetle | Brown hare | Other BAP species |
| Proposals affecting gravel pits or quarries and natural cliff faces and rock outcrops with crevices or caves | ✓ | | ✓ | | | | | ✓ | | | | | | | ✓ |
| Proposals within 250m* of a pond (excluding small garden ponds). Does not apply to householder applications.<br><br>Where known records for great crested newt occur this should be 500m. | | | ✓ | | ✓ | | | | | | | | | | ✓ |
| Proposals affecting or within 200m* of rivers, streams, canals, lakes or other aquatic habitats such as fenland, marshland or reedbed. Does not apply to householder applications. | ✓ | | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | | ✓ | | | |
| Proposals affecting 'derelict' land (brownfield sites), allotments and railway land. | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | | | |
| Proposals affecting bare ground and/or sparsely vegetated sites, wherever they are located | | | ✓ | ✓ | | | | | | | | | | | |

| Proposals for Development That Will Trigger a Protected and / or Priority Species Survey | Species Likely To Be Affected And For Which A Survey Will Be Required | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bats | Barn owl | Breeding Birds | Wintering Birds | Gt. crested newt | Water Vole | Badger | Reptiles | Amphibians | Plants | Invertebrates | Harvest mouse | Stag beetle | Brown hare | Other BAP species |
| Proposed development affecting any buildings, structures, feature or locations where protected and / or priority species are known to be present .** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

* Distances may be amended to suit local circumstance on the advice of the Local Planning Authority or the local Natural England team or the Barking and Dagenham Wildlife Partnership.

 * *Confirmed as present by either a data search (for instance via GIGL / local environmental records centre) or as notified to the developer by the local planning authority and/or by Natural England, the Environment Agency or other nature conservation organisation.


**Exceptions for when a full species survey and assessment may not be required**

6.13   A full Protected or Priority Species Survey and Assessment may not be required when:

1. Following consultation by the applicant at the pre-application stage where the LPA has stated in writing that no protected or priority species surveys and assessments are required.

2. It is clear that no protected or priority species are present despite the guidance in the above table indicating that they are likely and the applicant is able to provide evidence with the planning application to demonstrate that such species are absent (e.g. this might be in the form of a letter or brief report from a suitably qualified and experienced person, or a relevant local nature conservation organisation).

3. It is clear that the development proposal will not affect any protected or priority species present, then only limited information needs to be submitted.  This information should, however:

(a)  demonstrate that there will be no significant effect on any protected or priority species present and

(b) include a statement acknowledging that the applicant is aware that it is a criminal offence to disturb or harm protected species should they subsequently be found or disturbed.

In some situations, it may be appropriate for an applicant to provide a Protected and Priority Species Survey and Assessment for only one or a few of the species shown in Table 6.1 above e.g. those that are likely to be affected by a particular activity.  Applicants should make clear which species are included in the assessment and which are not and why the exceptions apply.

**Survey and Assessment requirements for Sites of Importance for Nature Conservation, priority habitats and geological conservation**

6.14   Where a proposed development is likely to affect a

- A Site of Importance for Nature Conservation (SINC) or
- Priority habitats or biodiversity features listed in **Table 6.2** or
- Geological features listed in **Table 6.3**

the applicant must submit **an Ecological or Geological Survey** (as appropriate) with the application.  Exceptions to when a survey and assessment may not be required are also explained in these tables.

**Chapter 5** provides detailed information on the Sites of Importance for Nature Conservation and priority habitats in Barking and Dagenham.

An ecological/geological survey and assessment may form part of a wider Environmental Impact Assessment.

**Survey requirements for Sites of Importance for Nature Conservation, priority habitats and geological conservation**

6.15   To ensure that the survey is accurate the following guidelines should be followed:

1. The **Survey** should be undertaken and prepared by competent persons with suitable qualifications and experience (such as a member of the Institute of Ecology and Environmental Management) and must be carried out at an appropriate time and month of year, in suitable weather conditions and using nationally recognised survey guidelines/methods where available.

    Further information on appropriate survey methods can be found on the Institute of Ecology and Environmental Management web site at www.ieem.net

2. The survey should be informed by the results of a search for ecological or geological data from Greenspace Information for Greater London (GiGL), the biological records centre for London, and other environmental organisations, as appropriate. These may include:

    - London Wildlife Trust
    - London Bat Group
    - Essex Bat Group
    - Biological Records In Essex (BRIE) or the relevant Essex County Recorder.
    - London Natural History Society (LNHS)
    - Local RIGS Groups

Information on internationally and nationally designated sites can be found at: www.natureonthemap.org.uk

Information on locally listed Sites of Importance for Nature Conservation sites can be found on the council's web site at: www.barking-dagenham.gov.uk

3. The survey must be to an appropriate level of scope and detail and must:

- Record which habitats and features are present on, and where appropriate, around the site.
- Identify the extent/area/length/population size present.
- Map their distribution on site and/or in the surrounding area shown on an appropriate scale plan.

4. A copy of any ecological data submitted as part of a planning application will be given by the planning authority to Greenspace Information for Greater London (GiGL), London's open space and biodiversity records centre. See **Section 6.19** for more information.

**Assessment requirements for Sites of Importance for Nature Conservation, priority habitats and geological conservation**

6.16 The assessment should identify and describe potential development impacts likely to harm any Sites of importance for Nature Conservation, priority habitats, other listed biodiversity features or geological features

This should include both direct and indirect effects both during construction and after development. Where harm is likely, evidence must be submitted to show:

- How alternatives designs or locations have been considered.

- How adverse effects will be avoided wherever possible.

- How unavoidable impacts will be mitigated or reduced.

- How impacts that cannot be avoided or mitigated will be compensated.

The assessment should give an indication of likely change in the extent of the habitat on the site after development e.g. whether there will be a net loss or gain. If a net loss of priority habitat is anticipated, then it must be recreated elsewhere in the borough.

**Table 6.2: Local Requirement for SINCs and Priority Habitats:**
**Criteria for when a habitat survey and assessment is required**

| |
|---|
| **1. Designated sites** (as shown on the LDF Proposals Map and listed in Chapter 2) Regionally and locally listed sites:<br>        Site of Importance for Nature Conservation (SINC)<br>        Local Nature Reserve (LNR) |
| **2. Priority habitats** (Habitats of Principal Importance for Biodiversity relevant to Barking and Dagenham under S.41 of the NERC Act 2006)<br>&bull; Arable Field Margins<br>&bull; Coastal saltmarsh<br>&bull; Hedgerows<br>&bull; Intertidal mud flats<br>&bull; Lowland dry acid grassland<br>&bull; Lowland meadows<br>&bull; Lowland mixed deciduous woodland<br>&bull; Open Mosaic Habitats on Previously Developed Land<br>&bull; Reedbeds<br>&bull; Rivers and streams<br>&bull; Standing open water and canals (lakes, reservoirs, ponds, aquifer fed fluctuating water bodies)<br>&bull; Traditional Orchards<br>&bull; Wet woodland |
| **3. Other biodiversity features** (as identified by the Barking and Dagenham Wildlife Partnership - see paragraph 84 ODPM Circular 06/2005).<br>The features listed below may provide habitat for priority species and may require survey.<br><br>&bull; Secondary Woodland and Mature/Veteran Trees<br>&bull; Disused tunnels (*e.g.* roosts for bats)<br>&bull; Tree lines providing sheltered feeding habitat for bats<br>&bull; Previously developed land with biodiversity interest<br>&bull; Urban green space (parks, allotments, cemeteries, churchyards flower-rich road verges and railway embankments)<br>&bull; Sites identified as Wildlife Corridors |

Table adapted from Validation of Planning Applications (Association of Local Government Ecologists, 2007)

**Exceptions for when a full biodiversity site survey and assessment may not be required**

6.17 Regional and Local Sites and Priority Habitats and Species: A survey and assessment will not be required where the applicant is able to provide copies of pre-application correspondence with the council's ecologist or ecological advisor and/or other competent parties (e.g. Natural England, London or Essex Wildlife Trust), showing that they are satisfied that the proposed development will not affect any regional or local sites listed for their local nature conservation importance or any other priority habitats or listed features.

**Table 6.3: Local Requirement for Designated Geodiversity Sites and Features:  Criteria for when a survey and assessment is required**

| |
|---|
| **1.  Designated Sites (as shown on the LDF Proposals Map)**<br>**Regionally and locally listed sites:**<br>In August 2010 there were no designated geodiversity sites in Barking and Dagenham. Up to date information can be obtained from the London Borough of Barking and Dagenham. |
| **2, Geological conservation features** (Based on the Earth Science Conservation Classification)<br><br>**Exposure or Extensive Sites**<br>• Active quarries and pits<br>• Disused quarries and pits<br>• River and stream sections<br>• Extensive buried interest<br>• Road, rail and canal cuttings<br><br>**Integrity Site**<br>• Static (fossil) geomorphological<br>• Active process geomorphological<br><br>**Finite Site**<br>• Finite mineral, fossil or other geological<br>• Mine dumps<br>• Finite underground mines and tunnels<br>• Finite buried interest |

Table adapted from Validation of Planning Applications (Association of Local Government Ecologists, 2007)

**Exceptions When a Full Survey and Assessment May Not Be Required**

6.18     Regional and Local Sites:  A survey and report will not be required where the applicant is able to provide copies of pre-application correspondence with appropriate local geological experts (such as the Local RIGS Group) that they are satisfied that the proposed development will not affect any regional or local sites listed for their geological importance.

**Survey data**

6.19 A copy of any ecological and geological data submitted as part of a planning application will be given by the planning authority to Greenspace Information for Greater London (GiGL), London's open space and biodiversity records centre. The applicant should inform the person / organisation undertaking survey work in relation to a planning application that this data will be made available to the public as a result of its transfer to GiGL. The purpose of this data exchange is to increase the knowledge, protection and enhancement of biodiversity in the borough.

To meet this requirement a table of data should be provided with the following minimum information, as an appendix to any ecological or survey reports:

- Grid Reference
- Date
- Species
- Observer (the person who made the record)
- Location name
- Abundance (if recorded)

A standard data entry form in Excel format showing the required and all optional fields can be downloaded from the GiGL web site at: www.gigl.org.uk/Resources/Downloads/tabid/60/Default.aspx

Unless stated, all data will be managed and made available in accordance with GiGL's accessing data policy (which includes putting it on the National Biodiversity Network). Further information is available on GiGL's web site.

**Invasive species**

6.20 Animals and plants that have been introduced to an area where they do not normally occur may become invasive. Species local to the area may be unable to compete and as a result the introduced species may rapidly take over.

Where a site is to be redeveloped the presence of any invasive species should be identified at an early stage and measures put in place to prevent the spread of this species during and after construction. Please note that it is an offence under section 14(2) of the Wildlife and Countryside act 1981 to "plant or otherwise cause to grow in the wild" any plant listed in Schedule nine, Part II to the Act.

The Environment Agency provides advice on the measures that can be taken to control invasive species. Where it is intended to use herbicides or pesticides close to water, an application must be made to the Environment Agency.

The plant species of main concern that are likely to be found on development sites in Barking and Dagenham are:

- Japanese knotweed
- Himalayan balsam
- Giant Hogweed

6.21 Japanese knotweed: Legislation places a duty of care on landowners to actively control and eradicate Japanese Knotweed. All parts of the plant and any soil contaminated with it are classified as controlled waste and are required legally to be removed and disposed of by a licensed waste control operator. The Environment agency provides further information on the management of Japanese Knotweed.

6.22 Developers should also ensure the following species are not introduced to any water bodies, including garden ponds on or adjacent to the development site:

Curly waterweed (Elodea crispa)
Pennywort
New Zealand pigmyweed
Water-primrose
Parrot's feather
Water fern

These species are commonly for sale in garden centres and gardeners should avoid purchasing them. Plants, animals and water from garden ponds should not be transferred to other ponds or water bodies. This will help prevent the further spread of these species between gardens and reduce further colonisation of natural habitats by invasive non-native plants.

## 7. Enhancing biodiversity and habitat creation

7.1 All development proposals are required by Borough Wide Development Policy BR3 Greening the urban environment to enhance and create features of nature conservation wherever possible. Planning applications should include information on measures that will enhance, restore and / or create new habitats and improve the built environment for wildlife. This is in addition to any measures for protecting existing wildlife and habitats.

The applicant should include measures to ensure there is a <u>net gain</u> for biodiversity following completion of the development. The assessment of species and habitats described in Chapter 4 may include recommendations that can contribute to this net gain.

A net gain for biodiversity will usually result from protecting existing biodiversity AND

- Increasing the area of existing habitat(s) and /or
- Creating new habitat(s) and /or
- Implementing specific measures that will benefit particular species.

Simply increasing the number of plant species on the development site will not usually be considered sufficient to count as a net gain.

Where it is not feasible for biodiversity improvements to be provided on the development site, a Section 106 agreement may be required for the enhancement and / or management of biodiversity of a SINC or a park within the local area.

If the development site is also within an area deficient in access to nature, the Section 106 agreement may require a contribution to the creation and / or enhancement of biodiversity within the local area. This may be achieved through the provision of, for example, wildlife corridors or biodiversity improvements to local amenity spaces or through biodiversity improvements to priority sites identified in Improving Londoners' Access to Nature (February 2008), as listed below:

St Chad's Park
Wantz Lake & Crowlands Open Space
Parsloes Park south
Valence House Gardens
Central Park (Dagenham)
Barking Abbey Ruins & St Margaret's Churchyard
Woodrush Way lake
Barking Creek west of River road

Appendix 6 provides a map showing areas deficient in access to nature within Barking and Dagenham.

**Enhancement and creation of biodiversity features / habitats**

7.2     In addition, all development proposals, (excluding householder applications) are expected to include measures that will enhance, restore or create features or habitats used by protected and / or priority species. The assessment should also give an indication of how species numbers are likely to change, if at all, after development e.g. whether there will be a net loss or gain.

The applicant should include measures to ensure there is a net gain for biodiversity following completion of the development, including enhancements that provide people with an opportunity to enjoy and appreciate wildlife and the natural environment by, for example, the provision of nest-boxes or landscaping with plants that attract birds and butterflies.

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**Ecological Management Plans**

7.3     Developers may be required to provide an Ecological Management Plan (EMP) for the development site. This will usually apply to strategic developments or where a development site is close to a SINC.

An EMP should include:

1. Details of surveys undertaken and the results of these surveys.
2. Measures to protect species and habitats during site preparation, construction and occupation.
3. Measures to increase the ecological value of the site once the development is complete, to ensure a net gain for biodiversity.
4. Measures to ensure the biodiversity value of the site is maintained for the long term (5 years +) after development is complete. This should include a monitoring program.

The developer and / or site manager must ensure the EMP is handed over and explained to any maintenance company or staff responsible for maintaining landscaping and / or gardens and buildings.

A simplified version should also be provided for householders and other occupiers, explaining how biodiversity is being protected and encouraged on the site.

**Guidelines for enhancing biodiversity**

7.4     Biodiversity can be enhanced by:

- Better management of habitats that already exist

- Creating linkages between habitats on and next to the site so that wildlife can move between habitats.
- Creating new habitats such as woodland, hedges, ponds and wildflower meadows that will benefit wildlife.
- Ensuring that landscape schemes, including ornamental landscaping, benefit wildlife.
- Integrating nesting and roosting opportunities for bats and birds into built structures.

Further guidance on providing naturalised habitats for biodiversity in landscape schemes can be found in the following documents:

- A Natural Estate - guidance on providing green space enhancements within existing and new housing estates to encourage biodiversity (Neighbourhood Greens, 2007) www.neighbourhoodsgreen.org.uk/ng/resources/publications/A%20natural%20estate.pdf

- Design for Biodiversity: http://www.d4b.org.uk/

- Biodiversity By Design: A Guide for Sustainable Communities www.tcpa.org.uk/data/files/bd_biodiversity.pdf

- Biodiversity and the Built Environment: A report by the UK-GBC Task Group www.ukgbc.org


7.5    New development provides significant opportunities for habitat creation within landscaping schemes and designing buildings to increase their value for wildlife. The following guidelines provide an indication of how developers can ensure the proposed development provides benefits for wildlife:

**Habitat creation**

- The London Biodiversity Action Plan has identified priority habitats for London. Targets for the improvement and expansion of these habitats are included in the current London Plan and in the draft replacement London Plan. Developers should consider how their landscape proposals can contribute to meeting these targets. See Section 2.9 for more details.

- London Habitat Suitability Maps, developed by Greenspace Information for Greater London (GiGL) for the London Biodiversity Partnership, identify optimum and suitable sites for creating and restoring priority habitats. Indicative maps are available on GiGL's website at: www.gigl.org.uk/Resources/Habitats/tabid/107/Default.aspx

Detailed information will be supplied by GiGL as part of the data search services they provide. These maps can be used to help identify the most suitable type of habitat for a particular site.

- In cases where the site is not covered by the London Habitat Suitability Maps large-scale habitat creation should reflect the landscape character of the area, as identified in Natural England's *London's Natural Signatures* project:. Visit the Natural England web site for detailed information.

  There are four landscape character types within Barking and Dagenham. Further information can be found in Section 2.10 and by following the relevant link below:

- Essex Plateau – www.naturalengland.org.uk/Images/12_1546-001%20LFR%202009-09-16_tcm6-14419.pdf

- North Thames Terraces – www.naturalengland.org.uk/Images/14_1546-001%20LFR%202009-09-16_tcm6-14421.pdf

- Lower Thames Floodplain – www.naturalengland.org.uk/Images/19_1546-001%20LFR%202009-09-16_tcm6-14426.pdf

- Roding River Valley – www.naturalengland.org.uk/Images/13_1546-001%20LFR%202009-09-16_tcm6-14420.pdf

**Landscaping**

- Incorporate existing natural features such as trees, hedges, scrub, tall grass and ponds, into the landscape scheme for the site.

- Include a green buffer, at least 8m in depth and planted for biodiversity, between the development site and any adjacent open spaces, parks, allotments, wildlife corridors, green or blue infrastructure (for tidal waterways the buffer should be at least 16m) and SINCs.

- For development sites within 250m of a SINC, wildlife corridor or green / blue infrastructure, only use native plant species of local provenance in landscape schemes. Appendix 3 provides maps showing the location of SINCs in the borough and the 250m zone around each one. Flora Local provides information on the selection and sourcing of native plants: www.floralocale.org

- For development sites that are not within 250m of a SINC, wildlife corridor or green / blue infrastructure, at least 50 per cent of plants used for landscaping should be native and of local provenance. However, all non- native plants, grasses, shrubs and trees used in landscape schemes should be valuable for wildlife. This can be achieved for example by selecting species that provide one or more of the following:

    - Nectar for invertebrates
    - Fruits and / or seeds for birds
    - Nesting cover for birds

    Natural England provide a database with a wide selection of plants that are beneficial for native wildlife:
    www.plantpress.com/wildlife/home.php

- Incorporate naturalistic Sustainable Drainage Systems (SuDS) where appropriate. These can provide additional wildlife habitat whilst also contributing to the flood management scheme for the development.
    For further information see: www.ciria.org.uk/suds/ and
    http://sudsnet.abertay.ac.uk/

- Create wildlife friendly boundaries to the site and between private gardens by planting hedges. Where hedges are not possible use wildlife friendly fencing - this has a 150mm gap between the fence and the ground (except in areas where exclusion of predators from sensitive habitats is required) and does not have any spikes along the top or bottom of the fence

- Create natural habitats such as woodland, hedges, ponds, wildflower meadows, areas of long grass and log piles.

- Leave rough grassland areas with appropriate mowing regimes as wildlife corridors.

- Look for opportunities to link habitats and wildlife corridors within the development site to habitats and wildlife corridors adjacent or near to the site.

- On residential developments, create a Show Home wildlife garden to promote wildlife gardening to prospective home owners.

- Avoid the use of peat for any purpose, including soil improvement and soil preparation for tree or shrub planting.

- Avoid the use of herbicides and pesticides and put in place a management regime that does not use chemicals.

- Avoid the use of plants that require intensive ongoing maintenance to limit their invasiveness.

- Include management to prevent the spread of invasive species that are a problem across London (see Section 4.20 for further information).

**Adapting buildings for bats and birds**

- New buildings are designed to reduce $CO_2$ emissions during occupation and as a result are impenetrable to birds and bats that rely on built structures for nesting and roost sites. This can directly contribute to the decline of certain species.

- Developers should initially consider how to incorporate nesting and roosting opportunities for birds and bats into the <u>structure</u> of the building or roof space. Where this is not feasible the attachment of nest boxes and bat roost boxes to the external walls of new buildings should be considered.

- Developers should refer to Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build (Publ. by RIBA, March 2010) for detailed information and to relevant sources such as the RSPB and the London's Swifts web site at www.londons-swifts.org.uk/Nestboxes&Attraction.htm

- Artificial lighting, including floodlighting, should avoid spill on to habitats, wildlife corridors (such as hedges and water ways), trees and buildings that may support bat roosts or nesting birds.

## 8. Green Roofs and living walls

### Green roofs

8.1 Green roofs can provide significant benefits for wildlife, as well as reducing water runoff and insulating buildings. By providing low-nutrient, well drained habitats, green roofs can benefit important species, such as rare invertebrates and various bird species, including Black Redstarts.

Further information about green and brown roofs can be found in:

1. The LDF's Green roofs Planning Advice Note 1
2. The Environment Agency's Green Roof Toolkit: www.environment-agency.gov.uk/business/sectors/91967.aspx
3. The Living Roofs web site: www.livingroofs.org

8.2 In general where a green roof is required as a condition for granting planning permission it should be designed to primarily benefit biodiversity. Developers are expected to provide:

- The ecological rationale for the selection of the plant species.

- A landscape plan and cross-section of the roof to show how the green roof has been designed.

- A long term maintenance plan to ensure the success of the green roof.

8.3 There are two main types of green roofs:

- **Intensive roofs** where public access is allowed (to residents for example) and the green roof is in effect a roof garden. On an intensive roof the developer should aim to cover **at least 70 per cent** of the roof area in soil, vegetation and water features. This will reduce water run-off from the roof and ensure the roof's effectiveness in the drainage strategy for the development.

  Developers should make use of the guidelines in S**ection 5.4 Guidelines for enhancing biodiversity** to ensure that the landscaping and the plants selected benefit wildlife.

- **Extensive roofs** are roofs where access is restricted to maintenance staff and are less costly to create than intensive roofs. These roofs can be green or brown roofs. A brown roof is one where plants are allowed to colonise naturally rather than being planted.

**Extensive green roofs**

8.4   In general extensive green roofs can be installed on a variety of roofs, both flat and sloping. For slopes greater than 9.5 degrees or 17 per cent (2:12 slope) additional structures to prevent slippage of materials will be needed. For slopes greater than 30 degrees or 58 per cent (7:12 slope) specialised media and retention devices will be required. The impact of increased slope on the distribution of water within the planting media should be taken into account in the species used on different sections of the roof.

There are specific design requirements for extensive roofs to ensure that benefits for wildlife are maximised:

**Expertise**

It is advisable for an ecologist to be present during the installation of an extensive roof as roofing contractors often do not have the required expertise to install the biodiverse elements of the green roof.

**Substrate**

The depth of the substrate should be between 75mm and 150mm. A single substrate can be used but a variety of substrates will provide greater benefits for biodiversity. Existing substrates on the development site that are uncontaminated and that will otherwise be lost as a result of development can be used on the biodiverse roof.

The substrate should not be flat across the entire roof but should vary in height with mounds provided for burrowing insects.

There should be
- Areas of sand for burrowing invertebrates.
- Areas of bare shingle.
- A series of individual logs and log piles.

**Plants**

The species list for the green roof needs to be precise. The species selected should follow the guidelines in Section 5.4 Guidelines for enhancing biodiversity, in particular with regard to the use of native species.

Species should be prioritised on the basis of:

i)     Native species that already occur on or within 250m of the development site.

ii)    Species identified in the Environment Agency Green Roofs Toolkit as being of biodiversity value. The wildflower species should be made up of:
- at least 10 species of high ecological value
- at least 10 species of medium ecological value
- at least 10 species of standard ecological value

This list can be found at: http://www.environment-agency.gov.uk/static/documents/Business/vegetation_2101196.pdf

**Living walls**

8.5    Living walls protect buildings from weathering and temperature fluctuations and can also benefit wildlife. Research carried out by Oxford University and commissioned by English Heritage found that ivy (Hedera helix) protects underlying walls by reducing temperature extremes.

A living wall can be created by:

- Growing self-clinging climbing plants, such as ivy, up walls.
- Providing a wooden or metal trellis attached to the wall for plants to climb up.
- Growing plants in a specially designed hydroponic system attached to the wall.

The first two options use soil at ground level to support the plants and need irrigation as part of the usual landscape management for the site. Buildings can reduce the amount of water available in the soil and this should be taken into account in the maintenance plan.

The third option is more complex and needs to be designed so that the plant pockets can be irrigated and the plants provided with plant food at suitable intervals.

The plants chosen for a living wall should be beneficial for biodiversity by offering one or more of the following:

1. Roosting and nesting sites for birds – generally the thicker the climber, the more opportunities for roosting and nesting will be provided.
2. Nectar sources for insects - plants that flower early or late in the season, such as Hedera helix (ivy) are particularly valuable.
3. Fruit for birds and insects.
4. Hibernation sites for insects such as butterflies and lacewings.

Further information on designing living walls can be found in Planting Green Roofs and Living Walls by Nigel Dunnett and Noël Kingsbury (Publ.2004, Timber Press).

## 9. Green infrastructure

9.1 Green infrastructure is the network of functional green space which supports natural and ecological processes and is integral to the health and quality of life of communities. It includes*:

- Parks and Gardens – urban parks, Country and Regional Parks, formal gardens

- Amenity Greenspace – informal recreation spaces, housing green spaces, domestic gardens, village greens, urban commons, other incidental space, green roofs

- Natural and semi-natural urban greenspaces - woodland and scrub, grassland (e.g. downland and meadow), heath or moor, wetlands, open and running water, wastelands and disturbed ground), bare rock habitats (e.g. cliffs and quarries)

- Green corridors – rivers and canals including their banks, road and rail corridors, cycling routes, pedestrian paths, and rights of way

- Other - allotments, community gardens, city farms, cemeteries and Churchyards,

* From Green Infrastructure Guidance (Natural England 2008)

9.2 Natural England's Natural Development project has been set up to demonstrate how both large and small scale development can incorporate green infrastructure. Natural Development is based on four key elements:

- Natural signature: Distinctive landscapes with more wildlife and ecological connections, shaped by people's needs.
- Natural resilience: The greening of towns and cities which contribute to climate change adaptation through flood management and urban cooling.
- Natural Health Service: Accessible natural green spaces close to where people live and work, providing opportunities for healthy living.
- Natural Connections: Children play in wildlife rich spaces and adults are involved in environmental activities, reinforcing a sense of place and ownership.

More information about the Natural Development project can be found on Natural England's web site:
www.naturalengland.org.uk/naturaldevelopment

9.3 New development can provide the opportunity to enhance and increase green infrastructure on a large and / or small scale. Green infrastructure may include elements of a Sustainable Urban Drainage

System such as swales, ponds and green roofs. Tree planting schemes (including street trees), cycle and pedestrian paths, and food growing projects for residents can all contribute to green infrastructure.

9.4    For strategic development sites a Green Infrastructure Strategy setting out the key principles for green infrastructure on the site will be required. This may be part of a Concept Statement or development brief that will influence the site planning and design and help ensure green infrastructure is incorporated from the early stages of the project. Concept statements can also be used as the basis for the Design and Access Statement.

More information is available from Natural England's web site at: http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/greeninfrastructure/default.aspx

9.5    The East London Green Grid sets out the regional strategy for green infrastructure in Barking and Dagenham. The East London Green Grid Framework London Plan (Consolidated with Alterations since 2004) Supplementary Planning Guidance can be found at: http://legacy.london.gov.uk/mayor/strategies/sds/spg-east-lon-green-grid.jsp

Detailed information can be found in the following documents: Area Framework 2 Epping Forest and River Roding; Area Framework 3 Thames Chase, Beam and Ingrebourne; and Area Framework 4 London Riverside. These documents can be downloaded at: www.designforlondon.gov.uk

**10.    Permitted development**

10.1    Changes that you can make to your house without needing a planning application are called Permitted Development. These include certain house extensions and garden buildings

Although planning permission is not required for permitted development, the possible presence of protected species must still be established. For example, the internal alterations required for a loft conversion or the chemical treatment of timber do not require planning permission but will have a serious impact on any bat roosts or birds nesting in the roof space.

Householders are advised that built structures and trees need to be checked by a suitably qualified person to ensure that bats, or bat roosts, and nesting birds are not present prior to any work that may affect these species. Advice is available from the council's planning department and ranger services as well as from organisations such as the RSPB and the Bat Conservation Trust.

10.2    Birds: Nesting birds, their eggs and fledglings are legally protected from disturbance under the Wildlife and Countryside Act 1981 (as amended). To comply with this Act work should be delayed until the nesting season is finished, if it is found nesting birds are present. Exceptions apply to pest species.

Bats: It is an offence to intentionally or recklessly damage, destroy or disturb access to any structure or place that a bat uses for shelter or protection. If it is likely the proposed activity will result in an offence being committed, a Natural England license is required (contact details are provided in the **Contacts** section).

The presence of bats or bat roosts is not always obvious and it is recommended that you consult a qualified bat surveyor. The Bat Conservation Trust and the Institute of Ecology and Environmental Management can provide lists of suitable consultants (contact details are provided in the **Contacts** section).

If bats or nesting birds are discovered once the works have started, the work must cease and Natural England should be contacted immediately for advice. This advice must be followed. In either case the planning department of the local authority must also be informed. Further advice is available from local conservation organisations and Natural England.

10.3    The Residential Extensions and Alterations' Supplementary Planning Document provides more information on permitted development and can be found on the council's web site: www.barking-dagenham.gov.uk The Planning Portal has step by step guides to permitted development

and this can be found at:
www.planningportal.gov.uk/england/public/tools/house

If you are unsure if your proposals are permitted development, please contact the council's Development Planning department for advice (contact details for the council's Contact Centre are provided in the **Contacts** section

**Glossary of terms**

| Term | Definition |
|---|---|
| Avoidance | Measures taken to avoid adverse impacts of change, such as locating a development away from areas of ecological interest. |
| Biodiversity (or Biological Diversity) | All plants, animals, fungi and micro-organisms, the genes they contain, and the different habitats of which they are part in a particular area or region. |
| Biodiversity Action Plan | A Biodiversity Action Plan sets out the targets and actions for the protection, improvement and expansion of priority habitats and species at the local, regional or national level. |
| Blue infrastructure | Blue infrastructure encompasses waterways and water bodies, including rivers, streams, ponds and lakes. Its functions include the transport of water, biodiversity and amenity. |
| Blue Ribbon Network | The network of London's waterways and water spaces and land alongside them. It includes the Thames, the canal network, the other tributaries, rivers and streams within London and London's open water spaces such as docks, reservoirs and lakes. It includes culverted (or covered over) parts of rivers, canals or streams. |
| Brownfield land | Land and premises that have previously been used or developed and are not currently in full use, although it may be partially occupied or utilised. It may also be vacant, derelict or contaminated. Brownfield land may support a large number of species and / or rare species and can contribute significantly to biodiversity. |
| Compensation | Measures to offset or make up for losses caused as a result of development or other change, including residual adverse effects which cannot or may not be entirely mitigated. |
| Designated Sites | Collective term for specific sites, capable of being identified on a map, recognised for their nature conservation value which is usually described in a written citation. |
| Developers brief | A document that outlines detailed planning requirements for the development of a site. It is subject to public consultation prior to publication. |
| Development Plan | The Statutory Document Plan comprises the Regional Spatial Strategy and the Development Plan Documents contained in the Local Development Framework. |

| Ecosystem | A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. |
|---|---|
| Enhancement | Measures to increase the quality, quantity, net value or importance of biodiversity or geological interest. |
| Geodiversity | The variety of rocks, fossils, minerals, landforms and soils along with the natural processes that shape the landscape. |
| Green infrastructure | The sub-regional network of protected sites, nature reserves, greenspaces and greenway linkages. The linkages include river corridors and flood plains, migration routes and features of the landscape which are important as wildlife corridors. Green infrastructure should provide for multi-functional uses i.e. wildlife, recreational and cultural experience, as well as delivering ecological services such as flood protection and microclimate control. It should also operate at all spatial scales from urban centres through to open countryside. |
| Green roof | The term to describe both intensive ornamental roof gardens and extensive roofs with more naturalistic plantings or self-established vegetation which can provide a habitat for biodiversity. |
| Greenspace | Generally used to refer to public open space which is normally vegetated rather than hard surfaced. Greenspace occurs in a number of forms including urban parks and gardens and country parks, and has value and potential for biodiversity and geological conservation. |
| Habitat | The place in which a particular plant or animal lives. Often used in the wider sense referring to major assemblages of plants and animals found together. The place or type of site where an organism or population naturally occurs. |
| Listed sites | Collective term for specific sites, capable of being identified on a map, recognised for their nature conservation value which is usually described in a written citation. |
| Major development | A major development is defined as:<br>• For dwellings: where 10 or more dwellings are to be constructed or if the number is not given, the area is more than 0.5 hectares.<br>• For all other uses: where the floor space will be 1000sq metres or more, or the site is 1 hectare or more. |

| | |
|---|---|
| Mitigation | Measures undertaken to limit or reduce adverse effects resulting from development or other change taking place including modifications, deletions or additions to the design of the development, adaptation of methods or timing or adjustments in the nature, scale or location of the project. |
| Nature conservation | The protection, preservation, management or enhancement and the improvement of understanding and appreciation of flora, fauna and geological and geomorphological features. |
| Priority  species | Priority species and habitats are those identified by the UK Biodiversity Partnership to be of conservation concern |
| Protected species | Certain plant and animal species are protected to various degrees by law, particularly the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. |
| Restoration | The re-establishment of a damaged or degraded system or habitat to a close approximation of its pre-degraded condition. |
| Strategic development | Developments referable to the Mayor in accordance with the Town and Country Planning (Mayor of London) Order 2008. Examples include: more than 150 houses, flats, or houses and flats; 15,000+sq m of commercial space; buildings 25+m high adjacent to the River Thames; or developments which would increase the height of a building in any location by more than 15m. |

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London Borough of Barking & Dagenham LDF Biodiversity Draft SPD          57

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**Biological Records In Essex**
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Web site: www.brienet.org.uk

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Commercial Directory Search (Find an Expert):
www.ieem.net/ieemdirectory.asp

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# Appendix 1: Ecological Survey Seasons

**Key:  Optimal Survey Time:** ■   **Extending into:** □

| | JAN | FEB | MAR | APR | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Badgers | | ■ | ■ | ■ | □ | □ | □ | □ | □ | ■ | ■ | □ |
| Bats (Hibernation Roosts) | ■ | ■ | ■ | | | | | | | | ■ | ■ |
| Bats (Summer Roosts) | | | | □ | ■ | ■ | ■ | ■ | ■/□ | | | |
| Bats (Foraging/ Commuting) | | | | □ | ■ | ■ | ■ | ■ | ■ | □ | | |
| Birds (Breeding) | | | ■ | ■ | ■ | ■ | ■ | ■ | | | | |
| BIRDS (Over Wintering) | ■ | □ | | | | | | | | | ■ | ■ |
| Dormice | ■ | | | | ■ | ■ | ■ | ■ | ■ | | ■ | |
| Great–Crested Newts | | ■ (AQUATIC) | ■ | ■ | ■ | ■ (TERRESTRIAL) | ■ | ■ | ■ | | | |
| Invertebrates | | | | ■ | ■ | ■ | ■ | ■ | ■ | | | |
| Natterjack Toads | | | | ■ | ■ | | | | | | | |
| Otters | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Reptiles | | | ■ | ■ | ■ | | | | ■ | | | |
| Water Voles | | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | □ | | |
| White-Clawed Crayfish | | | | | | | ■ | ■ | ■ | | | |
| Habitats/Vegetation | | | | ■ | ■ | ■ | ■ | ■ | ■ | | | |

Table adapted from Validation of Planning Applications (Association of Local Government Ecologists, 2007)

Points to note regarding surveys are as follows:

- For certain species and habitats surveys can be carried out at any time of year, but for other species, particular times of year are required to give the most reliable results, as indicated in the above table.

- Surveys conducted outside of optimal times provided in the above table may be unreliable. For certain species (*e.g.* Great Crested Newt) surveys over the winter period are unlikely to yield any useful information. Similarly negative results gained outside the optimal period should not be interpreted as absence of a species and further survey work may be required during the optimal survey season. This is especially important where existing surveys and records show the species has been found previously on site or in the surrounding area.

- Species surveys are also very weather dependent so it may be necessary to delay a survey or to carry out more than one survey if the weather is not suitable, e.g. heavy rain is not good for surveying for water voles, as it washes away their droppings.  Likewise bat surveys carried out in wet or cold weather may not yield accurate results.

- Absence of evidence of a species does not necessarily mean that the species is not there, nor that its habitat is not protected (e.g. a bat roost is protected whether any bats are present or not).

- Greenspace Information for Greater London (GiGL), London's open space and biodiversity records centre, may have useful existing information and records.

- Competent ecologists should carry out any surveys. Where surveys involve disturbance, capture or handling of a protected species, then only a licensed person (as issued by Natural England) can undertake such surveys. Surveys should follow published national or local methodologies. Further details may be found on the following web sites:

  IEEM
  www.ieem.net

  Natural England:
  www.naturalengland.org.uk/publications

# Appendix 2: Protected and priority species likely to be found in Barking and Dagenham

The complete species lists for London for all Vertebrates; Invertebrates; Plants; and Fungi are available from the London Biodiversity Partnership and can be accessed at:

**www.lbp.org.uk/downloads/PrioritySppInfo/PriorityPlants01.08.xls**
**www.lbp.org.uk/downloads/PrioritySppInfo/PriorityFungi.xls**
**www.lbp.org.uk/downloads/PrioritySppInfo/PriorityInverts01.08.xls**
**www.lbp.org.uk/downloads/PrioritySppInfo/PriorityVerts01.08.xls**

**Protected and Priority species likely to be found in Barking and Dagenham**

*The following list should be taken as indicative and should not be relied upon as evidence that a particular species is present or absent in the borough

|  | Protected Species | UK BAP Priority Species | London BAP Priority Species |
|---|---|---|---|
| **Reptiles** | | | |
| Adder | Schedule 5 Wildlife and Countryside Act | Y | Y |
| Common lizard | Schedule 5 Wildlife and Countryside Act | Y | Y |
| Grass snake | Schedule 5 Wildlife and Countryside Act | Y | Y |
| Slow worm | Schedule 5 Wildlife and Countryside Act | Y | Y |
| **Amphibians** | | | |
| Common frog | Schedule 5 Wildlife and Countryside Act | | Y |
| Common toad | Schedule 5 Wildlife and Countryside Act | Y | Y |
| Great Crested Newt | European protected species and Schedule 5 Wildlife and Countryside Act | Y | Y |
| Smooth newt | Schedule 5 Wildlife and Countryside Act | | |

| Fish | | | |
|---|---|---|---|
| Atlantic salmon | European protected species | Y | |
| Eel | | Y | |
| River lamprey | European protected species | Y | |
| Sea lamprey | European protected species | Y | |
| Smelt | | Y | |
| Twaite shad | European protected species and Schedule 5 Wildlife and Countryside Act | Y | |
| Sea/Brown trout | | Y | |
| Bullhead | European protected species | Y | |
| Flounder | | Y | |
| **Mammals** | | | |
| Brown hare | | Y | Y |
| Brown long-eared bat | European protected species and Schedule 5 Wildlife and Countryside Act | Y | Y |
| Common pipistrelle | European protected species and Schedule 5 Wildlife and Countryside Act | | Y |
| Daubenton's bat | European protected species and Schedule 5 Wildlife and Countryside Act | | Y |
| Harvest mouse | | Y | Y |
| Hedgehog | Schedule 6 Wildlife and Countryside Act | Y | Y |
| Leisler's bat | European protected species and Schedule 5 Wildlife and Countryside Act | | Y |
| Nathusius' pipistrelle | European protected species and Schedule 5 Wildlife and Countryside Act | | Y |
| Natterer's bat | European protected species and Schedule 5 Wildlife and Countryside Act | | Y |
| Noctule bat | European protected species and Schedule 5 Wildlife and Countryside Act | Y | Y |
| Serotine bat | European protected species and Schedule 5 Wildlife and Countryside Act | | Y |
| Soprano pipistrelle | European protected species and Schedule 5 Wildlife and Countryside Act | Y | Y |
| Water vole | Schedule 5 Wildlife and Countryside Act | Y | Y |

| | | | |
|---|---|---|---|
| Whiskered/Brandt's bats | European protected species and Schedule 5 Wildlife and Countryside Act | | Y |
| Badger | Schedule 6 Wildlife and Countryside Act and the Protection of Badgers Act | | |
| Common shrew | Schedule 6 Wildlife and Countryside Act | | |
| Pygmy shrew | Schedule 6 Wildlife and Countryside Act | | |
| Water shrew | Schedule 6 Wildlife and Countryside Act | | |
| **Birds** | All wild birds (except certain listed pest species and sporting birds) are protected under the Wildlife and Countryside Act 1981 (as amended). Species on Schedule 1 receive additional protection. | | |
| Black redstart | Schedule 1 Wildlife and Countryside Act | | Y |
| Bullfinch | | Y | Y |
| Corn bunting | | Y | Y |
| Cuckoo | | Y | Y |
| Dunnock | | Y | Y |
| Grasshopper warbler | | Y | Y |
| Grey partridge | | Y | Y |
| Hawfinch | | Y | Y |
| Herring gull | | Y | Y |
| House sparrow | | Y | Y |
| Lapwing | | Y | Y |
| Lesser redpoll | | Y | Y |
| Lesser spotted woodpecker | | Y | Y |
| Linnet | | Y | Y |
| Marsh tit | | Y | Y |
| Marsh warbler | Schedule 1 Wildlife and Countryside Act | Y | Y |
| Peregrine | Schedule 1 Wildlife and Countryside Act | | Y |
| Reed bunting | | Y | Y |
| Sand martin | | | Y |
| Skylark | | Y | Y |
| Song thrush | | Y | Y |
| Spotted flycatcher | | Y | Y |
| Starling | | Y | Y |
| Swift | | | Y |
| Tree pipit | | Y | Y |
| Tree sparrow | | Y | Y |
| Turtle dove | | Y | Y |
| Wood warbler | | Y | Y |

| | | | |
|---|---|---|---|
| Yellow wagtail | | **Y** | **Y** |
| Yellowhammer | | **Y** | **Y** |
| Avocet | Schedule 1 Wildlife and Countryside Act | | |
| Barn owl | Schedule 1 Wildlife and Countryside Act | | |
| Bearded tit | Schedule 1 Wildlife and Countryside Act | | |
| Cetti's warbler | Schedule 1 Wildlife and Countryside Act | | |
| Common tern | European protected species | | |
| Firecrest | Schedule 1 Wildlife and Countryside Act | | |
| Garganey | Schedule 1 Wildlife and Countryside Act | | |
| Hobby | Schedule 1 Wildlife and Countryside Act | | |
| Kingfisher | Schedule 1 Wildlife and Countryside Act | | |
| Little ringed plover | Schedule 1 Wildlife and Countryside Act | | |
| Pintail | Schedule 1 Wildlife and Countryside Act | | |
| **Invertebrates** | | | |
| **Butterflies** | | | |
| Dingy skipper (*Erynnis tages*) | | **Y** | **Y** |
| Small heath (*Coenonympha pamphilus*) | | **Y** | **Y** |
| Wall (*Lasiommata megera*) | | **Y** | **Y** |
| **Macro-moths** | | | |
| Buff ermine (*Spilosoma luteum*) | | **Y** | **Y** |
| Cinnabar (*Tyria jacobaeae*) | | **Y** | **Y** |
| Garden tiger (Arctia caja) | | **Y** | **Y** |
| Ghost moth (*Hepialus humuli*) | | **Y** | **Y** |
| Lackey (*Malacosoma Neustria*) | | **Y** | **Y** |
| Latticed heath (Chiasmia clathrata) | | **Y** | **Y** |
| Mouse moth | | **Y** | **Y** |

| | | | |
|---|---|---|---|
| (*Amphipyra tragopoginis*) | | | |
| Mullein wave (*Scopula marginepunctata*) | | Y | Y |
| Shaded broad-bar (*Scotopteryx chenopodiata*) | | Y | Y |
| Small square-spot (*Diarsia rubi*) | | Y | Y |
| White ermine (*Spilosoma lubricipeda*) | | Y | Y |
| **Dragonflies and Damselflies** | | | |
| Scarce emerald damselfly (*Lestes dryas*) | | Y | Y |
| **Beetles** | | | |
| *Harpalus (Harpalus) froelichii* | | Y | |
| *Ophonus melletii* | | Y | |
| *Ophonus puncticollis* | | Y | |
| Stag Beetle (*Lucanus cervus*) | Schedule 5 Wildlife and Countryside Act | Y | Y |
| **Bees, Ants and Wasps** | | | |
| Brown-banded carder bee (*Bombus (Thoracombus) humilis*) | | Y | Y |
| Five-banded tailed digger wasp (*Cerceris quinquefasciata*) | | Y | Y |
| **True flies** | | | |
| Phoenix fly (a picture-winged fly*) Dorycera graminum* | | Y | Y |
| **Plants** | | | |
| Juniper (*Juniperus communis*) | | Y | Y |
| Borrer's saltmarsh-grass (*Puccinellia fasciculate*) | | Y | Y |
| Cornflower (*Centaurea cyanus*) | | Y | |

| | | | |
|---|---|---|---|
| Divided sedge (*Carex divisa*) | | **Y** | **Y** |
| Field Wormwood (*Artemisia campestris*) | | **Y** | |
| Mistletoe (*Viscum album*) | | | **Y** |
| Black poplar (*Populus nigra betulifolia*) | | | **Y** |

# Appendix 3: Location of Sites of Importance for Nature Conservation and 250m buffers

A high resolution map is available online at: www/barking-dagenham.gov.uk

**Map 1**



Sites Of Importance for Nature Conservation

**Key**
Sites of Importance for Nature Conservation
SINCs 250m Buffer

**Map 2**



Sites Of Importance for Nature Conservation

Key

Sites of Importance for Nature Conservation

SINCs 250m Buffer

**Map 3**

Key

Sites of Importance for Nature Conservation

SINCs 250m Buffer
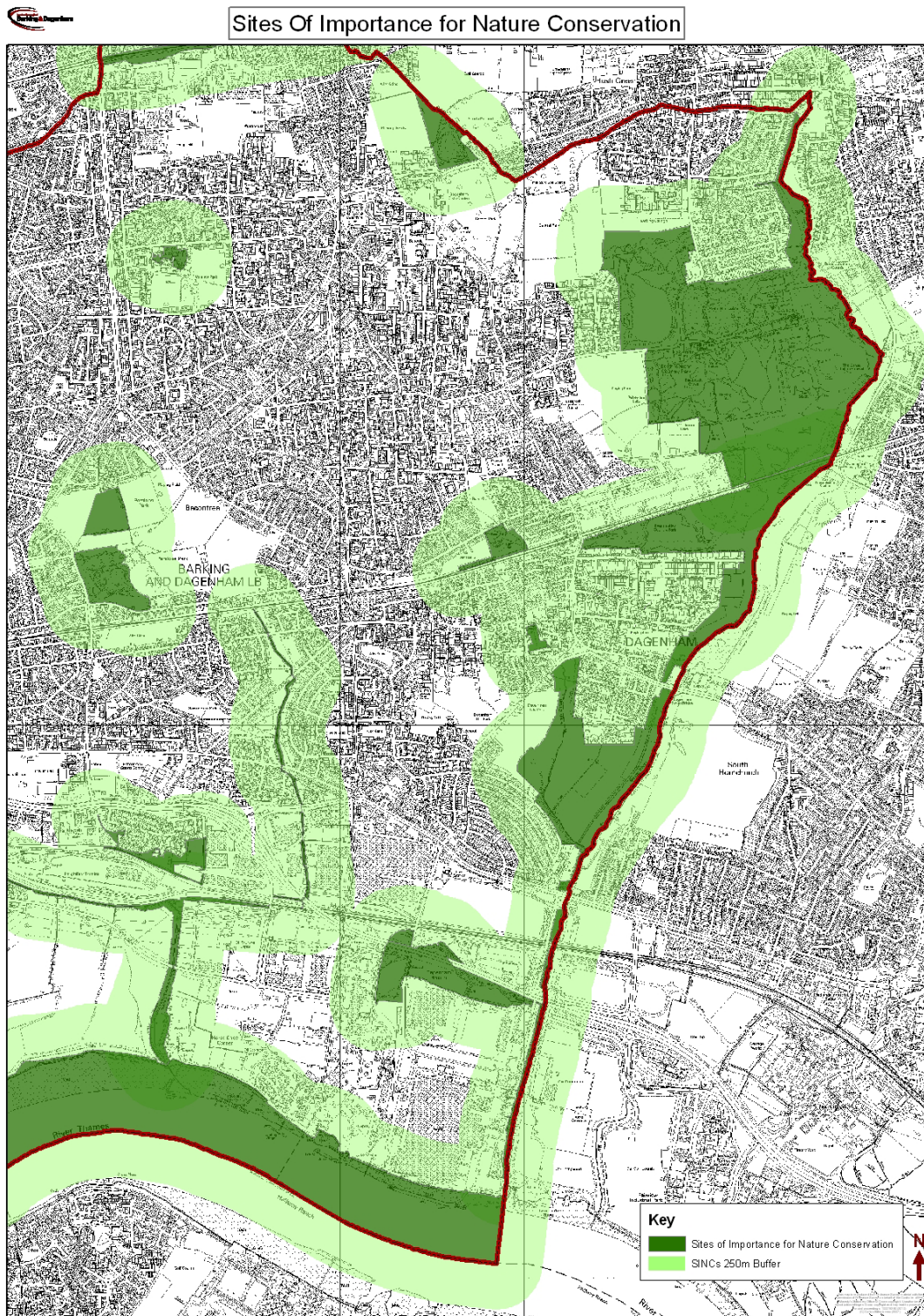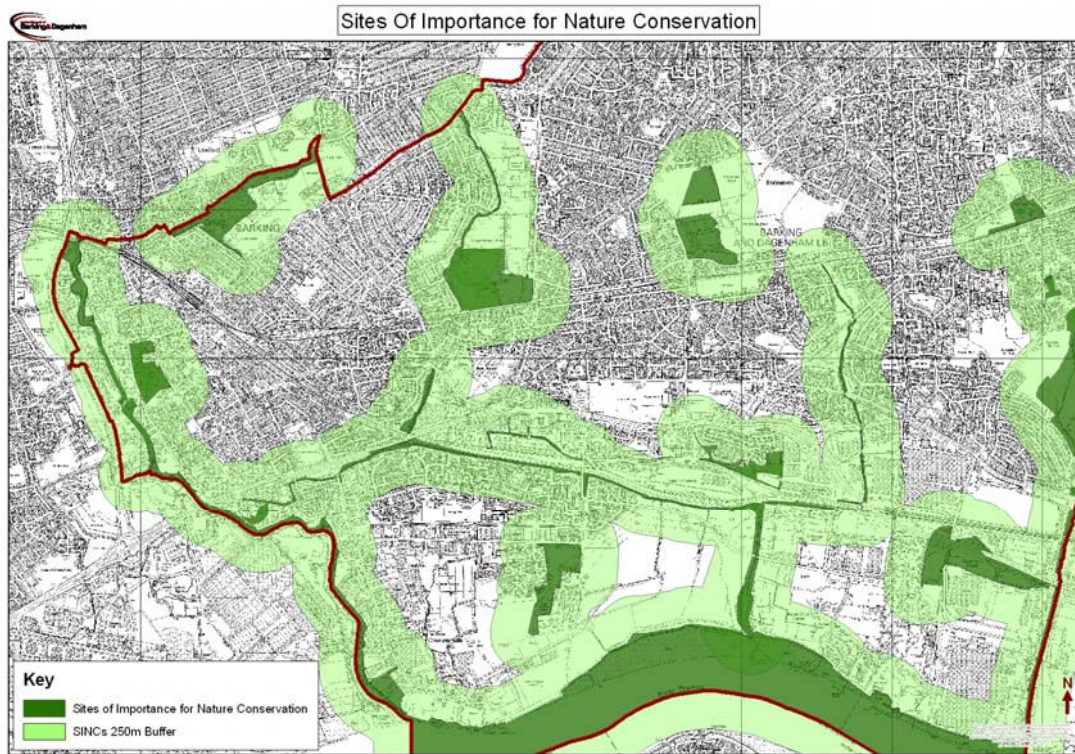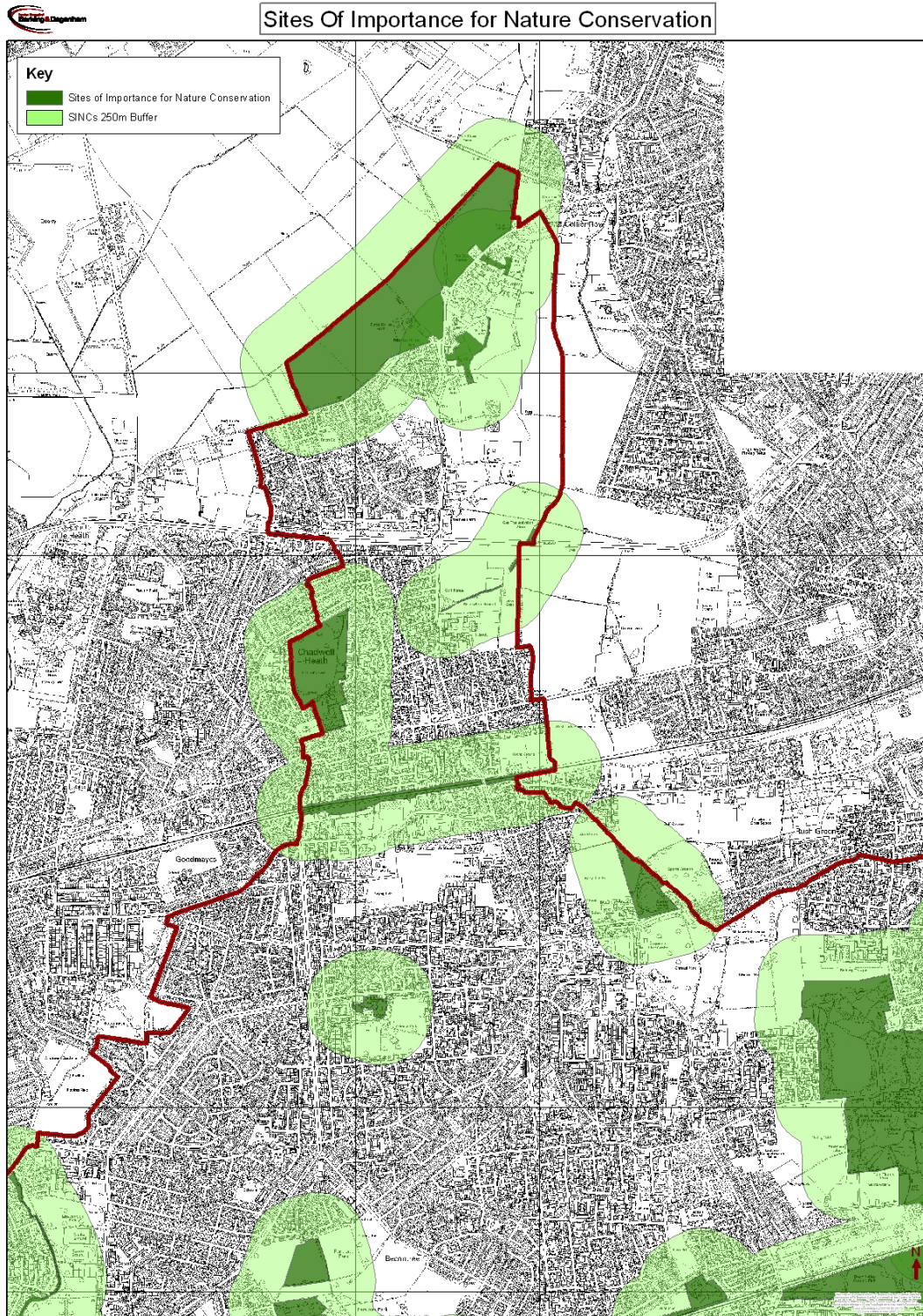
# Appendix 4: Draft London Regional Habitat Targets for 2020

(Based on consultation draft replacement London Plan (October 2009))

**Table 5.1    Draft London Regional Habitat Targets for 2020**

| Habitat type | Maintain Current  Net Extent (ha unless stated) – 2008 figures* | Target to enhance by 2020 (ha unless stated) – from 2008 baseline | Target to increase by 2020 (ha unless stated) – from 2008 baseline |
|---|---|---|---|
| Coastal and floodplain grazing marsh | 850 | 200 | 50 |
| Chalk grassland | 350 | 30 | 10 |
| Acid grassland | 1466 | 40 | 10 |
| Heathland | 45 | 20 | 5 |
| Reedbeds | 131 | 20 | 16 |
| Woodland | 4909 | 500 | 20 |
| Orchards | 18 | 3 | 1 |
| Meadows and pastures | 685 | 40 | 20 |
| Tidal Thames | n/a | 2km | n/a |
| Rivers and streams | 1407 | 100km | 25km (restoration) |
| Standing Water – Large Sites > 2ha | 188 | 7 sites | n/a |
| Standing Water – Small sites < 2ha | 411 | 20 | 250 ponds |
| Fen, marsh and swamp | 109 | 10 | n/a |
| Private gardens | n/a | N/A | Reduction in paved area of 10ha |
| Wastelands | n/a | n/a | 10 to be retained and/or created in new developments |

* Figures derived from 2008 GiGL baseline habitat data for London which includes data for all London Boroughs and the City with the exception of LB Bromley. Figures to be updated in September 2009 to incorporate London Borough Bromley data.

# Appendix 5: Protected species

**European Protected Species**

6.7    Certain species are defined as **European Protected Species** and are protected by the Conservation of Habitats and Species Regulations 2010, which transposes the European Union's Habitats Directive into UK law. It is an offence to kill, deliberately disturb, take or destroy the eggs, damage or destroy the breeding site or nesting place, or keep, transport, sell or exchange any of these species.

In Barking and Dagenham the most common European Protected Species likely to be found are:

- o   Bats (all species) and their roosts
- o   Great crested newt and its aquatic and terrestrial habitats

When considering a planning application that affects a European protected Species the local planning authority must determine if:

- There is no satisfactory alternative to the development.
- Impacts are not detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.
- The development is in the interests of public health or safety, or for other imperative reasons of overriding public interest, including those of social, economic and environmental benefit.

The local planning authority can only fulfil its duty if adequate ecological information is made available by the applicant. Survey and assessment requirements are discussed below.

If the ecological survey and assessment show that the proposed activity is considered reasonably likely to result in an offence being committed, a Natural England licence is required. Further information on Natural England licences and requirements for appropriate assessment and mitigation can be found on the Natural England web site: www.naturalengland.org.uk

**Nationally protected species (Wildlife and Countryside Act 1981 (as amended))**

6.8    The Wildlife and Countryside Act 1981 (as amended) provides different levels of protection to native plant and animal species in England and Wales. Species protected by this legislation are listed on Schedules that are reviewed every five years.

Species protected under the Wildlife and Countryside Act 1981 (as amended) include:

- All wild birds (except certain listed pest species and sporting birds): It is an offence to intentionally kill, injure, take, damage or destroy birds, their chicks, eggs or nests.

- Schedule 1 birds and their nests receive additional protection: Protection from intentional or reckless disturbance at or near the nest. Species include barn owl, kingfisher, black redstart and peregrine falcon.

- Bats (all species) – intentional or reckless disturbance in a place used for shelter and protection. Intentional or reckless obstruction of a place used for shelter or protection.

- Great crested newts – intentional or reckless disturbance in a place used for shelter and protection. Intentional or reckless obstruction of a place used for shelter or protection.

- Dormouse - intentional or reckless disturbance in a place used for shelter and protection.

- Badger – may not be taken or killed by certain methods. (Badgers (and their setts) are also protected under the Protection of Badgers Act 1992).

- Water vole – intentionally kill, injure or take water voles. Intentional or reckless disturbance whilst occupying a structure or place for shelter or protection. Intentional or reckless damage, destruction or obstruction of access to places of shelter.

- Adder, common lizard, grass snake, slow worms – protected from intentional killing, injuring and sale.

Certain plant species are also protected by this legislation, including all species listed in Schedule 8 of the Act.

## Appendix 6: Areas deficient in access to nature in the London Borough of Barking and Dagenham



Key
- Area of Deficiency (2009)
- SINCs (2009)
- Open Space
- Borough Boundary
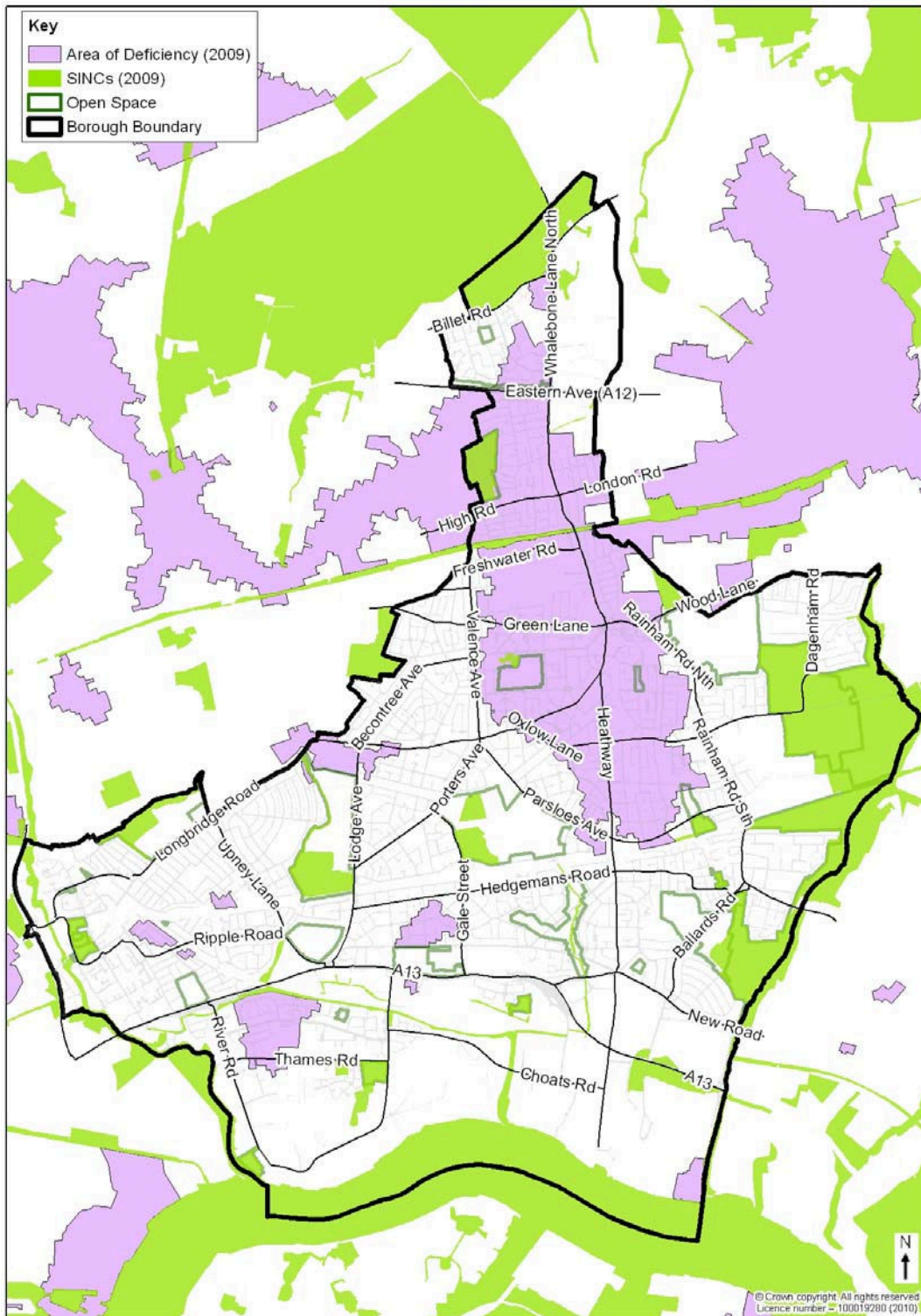
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**London Borough of Barking and Dagenham**
**Local Development Framework**

# Barking and Dagenham SPD

# Trees and development

**Draft Supplementary Planning Document**

**August 2010**

# Contents

# Summary

The Trees and Development Supplementary Planning Document sets out the London Borough of Barking and Dagenham's policies on the protection of trees in the borough. These policies are based on the Local Development Framework and the Urban Design Framework, the London Plan and best practice as recommended by DEFRA and CLG. Its purpose is to guide developers and householders on legislation, planning requirements and the protection of trees.

This document provides guidance on key issues including:

- Trees and the design of development: New development and extensions to existing developments need to be designed so that existing trees are protected and integrated into the design of the development as far as possible and given long term protection.

- Surveys of land and trees: Land and tree surveys need to be carried out before designs for a site are developed. These surveys will help with the production of a tree constraints plan which in turn will influence the layout of development so that the retention and protection of trees is maximised.

- Protecting trees during construction: Trees are vulnerable to damage from a variety of construction activities. As well as the guidance in this document, developers are advised to take account of the British Standards Institute British Standard BS 5837: 2005 Trees in relation to construction.

- Tree preservation orders (TPOs): TPOs may be applied to trees before, during or following construction, to ensure they are protected from accidental or intentional damage.

- Conservation Areas: There are currently four Conservation Areas in Barking and Dagenham. Trees in Conservation Areas receive a similar level of protection to trees protected by TPOs.

- Wildlife: Developers and householders need to be aware that bats, birds and water voles are protected by the law. It is important the developer employs a suitably qualified ecologist to determine if any of these species are present


Greening the urban environment and securing trees for future generations can only be achieved by protecting trees at each stage of the development cycle. The benefits of protecting trees now will be appreciated by existing and future residents of the borough.

# 1. Introduction

1.1    The London Borough of Barking and Dagenham is committed to creating a greener environment for local people to enjoy. This commitment is reflected in the council's Community Plan (2009), Regeneration Strategy (2008 – 2013), Urban Design Framework (2007) and the Local Development Framework. These policies and strategies recognise the importance of green space and trees and the benefits they bring to the people that live and work in the borough.

The Government's Strategy for England's Trees, Woods and Forests (2007) promotes the creation of liveable neighbourhoods through the protection and creation of green infrastructure. The aims of the strategy include:

- Securing trees and woodlands for future generations.
- Ensuring resilience to climate change.
- Protecting and enhancing natural resources
- Increasing the contribution that trees, woods and forests make to our quality of life.
- Improving the competitiveness of woodland businesses and products.

1.2    The Trees and Development Supplementary Planning Document (SPD) is a material consideration for the local authority when processing planning applications. Its purpose is to guide developers and householders on legislation, planning requirements and the protection of trees. It should help protect those trees that make an important contribution to the local landscape whilst ensuring new developments make use of trees in their landscaping schemes whenever possible. This will help create liveable neighbourhoods in both existing and new developments.

1.3    A tree takes many years to grow to maturity but it only takes minutes to cut it down. As the development cycle becomes shorter (the average is 30 years in London) mature trees are being continually lost to development. Their replacements are then felled before they are significant enough to make a contribution to the amenity or wildlife of an area. The loss of tree cover in the urban environment is an important issue for local residents and will have a major impact on the local effects of climate change.

1.4    The Trees and Development SPD seeks to redress the balance between trees and development so that trees are retained and protected during the development cycle. The council's Community Plan makes a commitment to ensuring our streets and public spaces are cleaner, tidier and greener. This will help the borough achieve its ambition for a greener environment.

## 2. Status of the Trees and Development SPD

2.1    This guidance has been put together in accordance with the framework provided in the Government's Planning Policy Statement 12: Local Spatial Planning (2008). The Statutory Development Plan is the starting point when determining planning application for the development or use of land. The Development Plan consists of the London Plan (consolidated with Alterations since 2008) the London Borough of Barking and Dagenham's Development Plan Documents (DPDs) and the saved Unitary Development Plan policies.

2.2    This SPD provides further detail on the implementation of DPD policy that applicants must follow to ensure they meet the policy requirements.

## 3. Consultation

3.1    The consultation on this Draft SPD is inline with Barking and Dagenham's Statement of Community Involvement and runs from **XX** 2010 to **XX** 2010.

Copies are available on the Barking and Dagenham website at http://barking-dagenham.limehouse.co.uk/portal/

Alternatively, you can request a copy by emailing planningpolicy@lbbd.go.uk or writing to:

Linda Beard
Planning and Policy
London Borough of Barking and Dagenham
3rd Floor, Maritime House
1 Linton Road
Essex
IG11 8HG

Responses can be made online at http://barking-dagenham.limehouse.co.uk/portal/, sent by email to planningpolicy@lbbd.go.uk or by post to the above address.

# 4. Relevant policies and legislation

4.1 The Town and Country Planning Act 1990, as amended, sets out the duties of the local planning authority, when it is considering planning applications. Section 70(2) states that:

"In dealing with such an application the authority shall have regard to the provisions of the development plan, so far as material to the application, and to any other material considerations."

Section 197 requires the local planning authority:

"To ensure whenever it is appropriate that, in granting planning permission for any development, adequate provision is made by the imposition of conditions for the preservation or planting of trees,"

To make such orders (Tree Preservation Orders) under Section 198 as appear to the authority to be necessary in connection with the grant of such permission, whether for giving effect to such conditions or otherwise".

In addition the Natural Environment and Rural Communities Act 2006 places a duty on local authorities to have regard to the conservation of biodiversity in exercising their functions.

Barking and Dagenham Local Development Framework

4.2 The Local Development Framework sets out the council's policies for ensuring sustainable development within the borough. The relevant policies that impact on the protection and promotion of trees are provided in Appendix 1 Local Development Framework Policies. Sections of certain policies are provided below.

| Core Strategy Development Plan Document | |
| --- | --- |
| CM1: General principles for development | Sustaining the Natural and Built Environment: Natural and built assets including natural resources, air and water quality, biodiversity and habitats, the historic environment, local distinctiveness, and the borough's network of open spaces should be protected and enhanced. Development should take account of natural constraints, particularly the risk of flooding, and should incorporate measures to mitigate and adapt to the impacts of climate change. |
| CM3: Green Belt and Public Open Spaces | The Council will ensure that important areas of public open space are identified and protected from development, that public open space is created and improved in areas of |

| | deficiency, and support the implementation of the East London Green Grid, the Blue Ribbon Network and the Barking and Dagenham Landscape Framework Plan. |
|---|---|
| CR1: Climate Change and Environmental Management | The Council will plan in harmony with landscape and biodiversity. |
| CR2: Preserving and enhancing the natural environment | The Council will encourage development that enhances existing sites and habitats of nature conservation value (including strategic wildlife and river corridors) or which provide new ones, in particular where this will help meet the objectives of the Local Biodiversity Action Plan for Barking and Dagenham. |
| CC4: Achieving community benefits through developer contributions | Developer contributions could be used to provide: Environmental sustainability measures Environmental and biodiversity enhancements (including those identified in the Landscape Framework Plan) |
| CP2: Protecting and promoting our historic environment | The council will take particular care to: Protect and wherever possible enhance our historic environment Reinforce local distinctiveness |
| Borough Wide Development Policies Development Plan Document | |
| BR3: Greening the urban environment | The Council will expect, where appropriate, all development proposals to demonstrate that the sequential approach set out below to preserving and enhancing the natural environment has been followed: Retain, enhance or create features of nature conservation value and avoid harm; Mitigate for impacts to features of nature conservation value; Where there is no viable alternative, compensate for the loss of features of nature conservation value. Where there are no existing features of nature conservation on a site, development should seek to create nature conservation enhancements to help 'green the urban environment'. |
| BP2: Conservation Areas and Listed Buildings | The Council will seek to preserve or enhance the special character and appearance of each of Conservation Areas and secure their setting. Aside from the four conservation areas, other areas which are locally distinctive and historically important (such as the Becontree Estate) will be identified, celebrated and promoted. |

| BP11: Urban Design | To naturalise and green the urban environment through an interconnected network of parks, open spaces, tree-lined streets, wildlife corridors, woodlands, pedestrian and cycle paths. |
|---|---|
| Barking Town Centre Area Action Plan | |
| BTC30: Parks, Open Spaces, Play Areas and Tree Planting | To improve the linkages between the parks and open spaces in the Area Action Plan area, the Council will wish to see extensive tree planting along some streets to form a network of "green streets" which has well linking parks and open spaces also softens the environment, and provides pleasant routes for pedestrians and cyclists.<br><br>The key routes which the Council wishes to develop as tree lined streets radiate out from Abbey Green to Barking Park, Greatfields Park, Essex Road Gardens, the Quaker Burial Ground and the River Roding.<br>Where appropriate the Council will expect developers to contribute towards programmes of tree planting in town centre. |

Biodiversity Supplementary Planning Document

4.3    This document sets out how the council will protect and enhance wildlife and habitats within the borough. It explains what is required of developers in the planning process to both protect existing biodiversity and make use of opportunities to increase biodiversity on development sites. The protection of trees and the planting of trees are an important aspect of biodiversity and the reader is recommended to consult the Biodiversity Supplementary Planning Document which is available on the council's web site www.barking-dagenham.gov.uk

Regional policies and strategies

4.4    The London Plan (consolidated with Alterations since 2004) is the current planning strategy for London and has specific policies concerning trees and woodland, including:

**Policy 3D.15**  Trees and woodland states that the Mayor will and boroughs should protect, maintain and enhance trees and woodland in support of the London Tree and Woodland Framework.

**Policy 4.33** Development should maximise opportunities to orientate buildings and streets to minimise summer and maximise winter solar gain; use trees and other shading.

**Policy 4.103** London is a green city with rich biodiversity. Development proposals should respect and enhance the natural environment and

incorporate greening and planting initiatives. They should identify new opportunities for creating private space, for example in roof gardens and terraces. They should ensure that opportunities to naturalise and green the urban environment, for example through tree planting, are maximised.

**Policy 4.108** Natural planting and trees can enhance the public realm and also help to address the impacts of climate change.

London Plan Tree & Woodland Framework

4.5     The Tree and Woodland Framework sets out the Mayor of London's key aims for trees and woodlands in London:

- To ensure trees and woodlands contribute to a high quality natural environment.
- To help shape the built environment and new development in a way that strengthens the positive character and diversity of London.
- Through people's contact with trees and woodlands to help foster community and individual people's well-being and social inclusion.
- To support the capital's economy.

The framework advocates a Right Place Right Tree approach to planting trees to help ensure trees are located in the right place and are not planted to the detriment of other habitats. Appendix 2 provides a copy of the Right Tree Right Place Checklist. More information can be found at:

www.right-trees.org.uk

East London Green Grid

4.6     The East London Green Grid is a strategy for implementing green infrastructure in East London. It consists of a spatial framework, identifying deficiencies in access to public open space and nature sites as well as specific projects that will contribute to the creation of the green grid. The East London Green Grid Supplementary Planning Guidance can be downloaded from:

http://www.london.gov.uk/thelondonplan/guides/spg/spg_09.jsp

Detailed information can be found in the following documents: Area Framework 2 Epping Forest and River Roding; Area Framework 3 Thames Chase, Beam and Ingrebourne; and Area Framework 4 London Riverside. These documents can be downloaded at: www.designforlondon.gov.uk

# 5.     Trees and Development

5.1     Trees are a material consideration in the determination of planning applications. Developers are advised that land and tree surveys, and tree constraint plans, are important elements in the evaluation of planning applications by Barking and Dagenham Council and should be submitted prior to the planning application validation stage.

This section describes the requirements for:

- Trees and the design of development
- Land surveys
- Tree surveys
- Tree constraint plans
- Tree protection during construction
- Arboricultural Implications Assessment (AIA)
- Arboricultural Method statement (AMS)

Trees and design of development

5.2     Developers must endeavour to design new developments or extensions to existing developments so that:

- Existing trees and other natural features do not need to be removed.
- Existing trees and other natural features are not harmed, either in the short or long term.
- Conflict between trees and buildings in the future is minimised through the design, layout and construction of the development. The removal of trees to avoid this conflict is not acceptable.
- Where tree removals are exceptionally agreed, a greater number of replacements will be expected. Replacement trees will require an appropriate level of maturity.

Developers are encouraged to employ a trained professional to advise on landscape design from the outset of a development project.

The layout of the development will need to take into account the canopy of existing and newly planted trees both in the short term and the long term. For certain species of trees this will be for more than 100 years.

The layout of the development will need to take into account the root spread of existing and newly planted trees both in the short term and the long term. Building foundations must be designed to accommodate the retention of existing trees and the planting of new trees. Foundations must be constructed to appropriate standards to ensure

they are resistant to any future soil shrinkage whether the cause is trees or climate change.

5.3     Underground services should wherever possible be routed in shared service ducts. This will improve access for maintenance and prevent the creation of large areas where tree planting is prevented due to utilities.

Where new highways are being created pavements should be wide enough to accommodate pedestrians and street trees. Developers should aim to create tree lined streets whenever possible.

5.4     Trees live longer than the average development cycle and this makes it difficult to increase the stock of mature trees in the borough. Developers should identify areas where trees are likely to be retained permanently, regardless of redevelopment in the future, and therefore will be able to grow to maturity. Larger trees should be planted in these areas.

Land and tree surveys

5.5     A detailed land survey and tree survey must be submitted with any planning application where trees are on the development site or adjacent to the site (except where the application is for change of use). These documents must be submitted before the validation of the planning application by the local planning authority takes place.

Householder applicants do not need to provide a full tree survey but they do need to indicate where trees are on the land affected by the planning application.

The applicant will need to provide details of how the trees will be protected from the impacts of construction during development (please see Page 10).

Following the completion of a new development a TPO may be applied to trees on the site (and adjacent to the site if necessary) to ensure their long term protection.

New trees that replace trees protected by an existing TPO will become protected by the original order or may become the subject of new orders.

<u>Land surveys</u>

5.6 The land survey should be topographical and accurate and should show:

- The position of all trees, shrub masses, significant individual shrubs, hedges, and tree stumps within the site.
- Any relevant features such as streams, structures, boundary features, service and drainage runs.
- Spot heights of ground level throughout the site so as to avoid level changes in proximity to retained trees
- The location of trees on adjacent land, including highway trees,

A topographical negative can assist in determining the impact of changes in surface treatment and ground level on trees. A full hydrological and / or soil survey may also be required on larger or more complex sites.

<u>Tree surveys</u>

5.7 The pre-development tree survey must be carried out by a qualified arboriculturist and should be carried out before any specific design is produced. The survey should include all trees identified in the land survey and any trees that have not been identified in the land survey. The survey should categorise trees and groups of trees for their quality and value and should comply with the British Standards Institute British Standard BS 5837:20-05 Trees in relation to construction.

The survey should include a plan that shows:

- The location to within 1 metre of all existing trees on the site.
- The trees should be individually numbered as specimens or individuals, or as groups where the trees are growing together.
- Hedgerows should be accurately plotted.
- Shrubs of significant interest should be shown.

Woodland
- If woodland is within the site, it must be plotted accurately and all boundary trees shown.
- If the proposed development is within the woodland, all trees must be plotted.
- If woodlands are outside the site boundary, the woodland edge (including crown spread) must be plotted.

5.8    The tree survey will need to provide the following information for each tree:

- Reference number as recorded on the tree survey plan
- Tree species
- Height in metres
- Stem diameter in millimetres
- Branch spread in all directions
- Height of crown clearance
- Age class
- Physiological condition
- Structural condition
- Preliminary management recommendations
- Estimate of safe useful life expectancy in years
- Retention category grade

Any trees that are protected by Tree Preservation Orders (TPOs) must be identified and their TPO reference provided if known.

Any evidence of bats, nesting birds and / or water voles should be recorded (please see Chapter 6 for more information).

Tree constraints plan

5.9    A tree constraints plan should be produced that indicates the influence that trees on and adjacent to the site will have on the layout of the development. It should show below ground constraints (the root protection zone) and the above ground constraints (size, position, aspect and future growth of the tree).

Where there are no trees on the site, a tree constraints plan is required where new trees will be planted as part of landscaping.

Tree protection during construction

5.10    Developers are advised to take account of Section 11 and Annex C of the British Standards Institute British Standard BS 5837: 2005 Trees in relation to construction, which deals with

i)        Demolition and construction in proximity to existing trees on and adjacent to development sites;
ii)       How development can damage trees.

The following protection / precautions must be taken before construction / development works begin, including site clearance and fencing of the site:

<u>Protective fencing</u>

5.11   Trees must be fenced around the Root Protection Area or the extent of the canopy, whichever is greatest. The fencing will prevent damage to the trees from construction / site clearance activities such as the storage of materials, fires, excavations, erection of site accommodation, deposition of waste due to tipping or leakage, ground compaction by traffic or any other actions likely to affect the health of the tree.

The fencing must be to the standard set out in British Standard Document BS 5837:2005 or any subsequent updates: the fencing will normally be at least 2m high, constructed of metal mesh panel fencing and braced by scaffold poles to the standard set out in British Standard Document BS 5837:2005.

All protective fencing must be correctly maintained during construction to provide adequate protection. Protective fencing may only be removed when the development is complete.

If protective fencing needs to be temporarily removed or rearranged before completion of the development, permission must first be obtained from the council.

<u>Bracing of protective fencing.</u>

5.12   Fencing should be braced by scaffold poles or similar to ensure the fencing is robust. Trees of high amenity value, trees in areas close to construction activity, or trees particularly sensitive to damage may require more substantial fencing or protective measures.

<u>Warning signs</u>

5.13   The protected area will require signs to be in place informing staff on site of the nature of the protected area as set out in the above British Standard or any subsequent updates.

<u>Fires</u>

5.14   As fires are often used during demolition and site clearances, extreme care needs to be taken to ensure that trees are not damaged by radiated heat. There must be a distance of at least 5m between a fire and any part of a tree. Large fires will need a greater exclusion zone than 5m.

<u>Signage and trees</u>

5.15   Cables, signs, boards, timbers or other materials must not be nailed or screwed to tree as the puncture wounds damage the health of the tree and can lead to decay and premature death.

<u>Winching</u>

5.16   No tree should be used as an anchor point for winching as this can cause compression damage beneath the tree's bark and to the bark itself and can weaken the tree's root system.

<u>Arboricultural Implications Assessment</u>

5.17   An Arboricultural Implications Assessment (AIA) and an Arboricultural Method Statement (AMS) may be required as a condition of planning permission to ensure trees are adequately protected during construction and to protect areas for new trees from compaction.

The Arboricultural Implications Assessment is based on the land and tree survey and the tree constraints plan following consultation with the council's Tree Officer. The AIA is often required as a condition attached to planning permission and will include:

- A protected tree protocol for workers on site. This protocol should be incorporated into the site induction procedure.

- A detailed description of the site including tree cover, topography and soils.

- Analysis of tree cover including: total number of trees, the numbering sequence, analysis of trees to be lost for development, trees to be lost for any other reasons and proposals for replacement planting.

- An Arboricultural Method Statement (AMS) with specifications and methodology for the implementation of any aspect of the development that may lead to loss or damage to a tree.

- A tree protection plan:  a scale drawing that shows the final layout, tree protection measures with the root protection zone and the construction exclusion zone.

<u>Arboricultural Method Statement</u>

5.18   The Arboricultural Method Statement provides detailed information on how construction works will be managed and trees protected when construction takes place close to trees. An AMS will often be required as a condition for planning consent to ensure that retained trees are adequately protected.

An AMS will need to provide a timetable showing when and how specific works close to trees will be carried out. This will cover:

- Demolition of built structures.
- Removal of hard standing.
- Air-spade and hand excavation within 2m of root protection areas.
- Root-zone soil decompaction / amelioration, root pruning, surface changes etc.
- Installation of root-barriers.
- Installation of tree protective barriers.

Engineering specification sheets should be included for items such as the design of protective fencing, special surfaces, methods of trenching etc.

Bills of quantities for materials such as specialised tree sands, soils, porous paving etc must be included where necessary.

Site supervision by an arboriculturist will usually be required for some or all of the operations associated with trees. An Arboricultural Association Approved Contractor with experience of root - zone and aerial Arboricultural operations will be required to carry out such works.

5.19    The method statement should include:

- Schedule and timing of
    - ○  Tree surgery works (prior to and upon completion of construction works).
    - ○  Root zone soil amelioration works etc.
    - ○  Construction of protective barriers.
    - ○  All tree related construction or specialist engineering works.
- Root protection area and exclusion zone detail (areas, distances, type of barrier, installation method etc).
- Specification for any surface changes.
- Method of operation for surface changes.
- Specification for any level changes.
- Specification for trenching works.
- Method of operation for trenching works.
- Proposed location of bonfires, chemicals, site huts etc.
- Contingency Plans (chemical spillage, collision, emergency access to the root protection zone).
- Proposed post construction landscaping near trees.
- Tree planting (storage of trees, site preparation).
- Contact listing (council officers, arboriculturist, architect etc).
- Other Items – e.g. use of trenchless technology for service runs.

Additionally a method statement may need to include items such as copies of site plans and a tree survey schedule.

# 6.    Trees and landscape proposals

6.1    Borough Wide Development Policy BR3: Greening the urban environment requires all development proposals to retain, enhance or create features of nature conservation. All proposals should be accompanied by a landscape scheme that incorporates existing features of nature conservation, including trees, and new nature conservation features to help green the urban environment.

Further information is provided in the Biodiversity Supplementary planning Document available on the council's web site www.barking-dagenham.gov.uk

6.2    Developers should include tree planting in landscaping proposals wherever it is feasible. Areas for future planting should be plotted on the tree constraints plan and protected from damage by construction activities such as soil compaction, for example by the use of barriers. If this protection is not possible, remediation measures should be carried out prior to planting.

The use of peat for soil improvement or the planting of shrubs and trees should be avoided.

Areas designated for car parking and cycle parking are expected to be landscaped to a high standard and make extensive use of trees and shrubs.

Species for new planting

6.3    Development sites within 250m of a Site of Importance for Nature Conservation are expected to use only native species of local provenance. (Maps showing the location of SINCS and the 250m zones are provided in the Biodiversity Supplementary Planning Document). On other development sites, at least 50 per cent of the area planted should consist of native species AND all new tree and plant species should be shown to have benefits for native wildlife.

Street trees

6.4    The Local Development Framework and the Urban Design Framework require the naturalisation of the urban environment, including the provision of tree-lined streets.

Where appropriate the council may require street trees to be included in the landscaping scheme. This may include streets created within developments and / or where the development fronts onto a street where there are already trees in the highway. Where this is not feasible the council will expect developers to contribute to programmes of tree planting off site, including street trees.

6.5     The Barking Town Centre Area Action Plan specifically plans to
        develop tree lined streets that radiate out from Abbey Green to Barking
        Park, Greatfields Park, Essex Road Gardens, the Quaker Burial
        Ground and the River Roding.

# 7.   Tree Preservation Orders

7.1     The Town and Country Planning Act 1990, Section 23 of the Planning and Compensation Act 1991 and the Town and Country Planning (Trees) Regulations 1999 enables local planning authorities (in this case the London Borough of Barking and Dagenham) to apply a Tree Preservation Order or TPO to any trees within its area.

The term 'tree' is not defined in the legislation and there is no minimum size below which a TPO cannot be applied. A TPO can also be made to protect trees within hedges or to protect an old hedge which has become a line of trees.  However shrubs and bushes are not covered by the above legislation.

7.2     The following works are prohibited on any tree protected by a TPO unless the Local Planning Authority has given written consent:

1. Cutting down
2. Uprooting
3. Topping
4. Lopping
5. Pruning
6. Cutting of roots
7. Wilful damage
8. Wilful destruction

Any works that may affect the roots of the tree such as construction work or compaction of soil will also need written permission from the Local Planning Authority.

7.3     In designated Conservation Areas works cannot be carried out on any trees that have a diameter greater than 75mm at 1.5m above the ground without the written permission of the local planning authority. More information on Conservation Areas in the borough is provided below and in Appendix 3.

If any works are carried out that affect a tree protected by a TPO or a tree within a Conservation Area and written permission from the local planning authority has not been obtained, the authority may take enforcement action. The person responsible may be fined up to £20,000 and where a tree has been felled or significantly damaged, a replacement tree will be planted. Note that it is no defence for a defendant to plead that they were unaware that a TPO existed on a particular tree.

7.4     Trees that are on land owned by the council but rented to council tenants cannot be pruned or felled without the permission of the council, even if the tree is not protected by a TPO. Council tenants

should contact the council's Housing Department or the council's Tree Officer for further advice.

## When are TPOs made?

7.5 Local Planning Authorities use TPOs to protect the local environment and its enjoyment by the public. Trees protected by TPOs are usually visible from a public place such as a road or footpath. However, trees not in public view (for example, in back gardens) may still be protected by TPOs if the trees are considered to contribute to the overall amenity of the area.

Factors that are taken into account when a tree is being assessed for a TPO include:

- Intrinsic beauty of the tree.
- Contribution the tree make to the landscape.
- Screening of eyesores or future development by the tree.
- Scarcity of trees.
- Importance of the tree as wildlife habitat.

A standardised assessment form is used by the council's Tree Officers to ensure consistency and fairness in the application of TPOs.

TPOs may be applied during the planning application process to ensure that trees identified for retention, and newly planted trees, on and adjacent to the development site are protected. Further information on trees and planning applications is provided in Chapter 2.

7.6 Tree Preservation Orders are used to protect individual trees as well as groups of trees and areas of trees. Where a tree is under immediate threat an emergency TPO can be applied. An emergency TPO will be reviewed and within 6 months of the order being made, the TPO will either be made permanent or revoked. Trees protected by TPOs are regularly checked to ensure they have not been damaged or felled.

In general TPOs are not applied to trees that are already under the arboriculture management of the local authority. For example, street trees and trees in parks are usually on council owned land and are managed by the local authority. However if a tree on council managed land is considered to be under threat or is of exceptional value, a TPO can be applied.

Applications for tree works to protected trees

7.7     The local planning department will be able to inform you if a particular tree is covered by a TPO or if the tree is in a Conservation Area. If you wish to carry out work to a protected tree you will need to apply to the local planning authority on a form that they will provide. This form is also available on the council's web site: www.barking-dagenham.gov.uk

A tree inspection by the council's Tree Officer may be necessary before permission for works can be granted. The Tree Officer can also provide a list of contactors qualified to carry out tree work.

7.8     The council occasionally receives requests for the pruning or felling of a protected tree due to issues such as bird droppings, bird noise, fallen leaves, fallen fruit or honey dew on cars. These problems do not justify the pruning or felling of a protected tree. However, the Tree Officers can provide advice on measures that can be taken to help reduce problems for residents.

If a tree protected by a TPO is considered to be immediately dangerous then measures may be taken to render it safe. You are advised to consult the council prior to undertaking such work to avoid the possibility of legal action. You are also advised to keep evidence of the need for this work. It is likely that a replacement tree will be required.

7.9     Where the removal of a tree protected by a TPO has been agreed by the Local Planning Authority, any replacement tree will become protected by the original order or may become the subject of new orders.

# 8. Conservation Areas

8.1    Conservation Areas are designated to protect the architecture, historical interest, character or appearance of a particular area. This is a planning designation and is enforced by the local planning authority. In a Conservation Area works cannot be carried out on any trees that have a diameter greater than 75mm at 1.5m above the ground without the written permission of the local planning authority.

There are four Conservation Areas in the London Borough of Barking and Dagenham

- Abbey and Barking Town Centre Conservation Area
- Abbey Road Riverside Conservation Area
- Dagenham Village Conservation Area
- Chadwell Heath Anti-aircraft Gun Site Conservation Area

Detailed information is provided on the council's web site www.barking-dagenham.gov.uk

8.2    The locations of the Conservation Areas within Barking and Dagenham and a map of each one are provided in Appendix 3.

# 9.  Wildlife Protection

<u>Birds</u>

9.1     The Wildlife and Countryside Act 1981 makes it an offence to kill, injure, or take wild birds, their young, their eggs or nests. It is also an offence to disturb birds at the nest. In addition, there are special penalties for offences related to birds listed on Schedule 1 of the Act.

9.2     Any works to trees, hedges or shrubs, including pruning or felling, should not take place between 15 February and 31 August if nesting birds are present or if it is not possible to determine if nesting birds are present. A survey by a qualified ecologist should take place no more than 5 days before the planned works to determine if nesting birds are present.

<u>Bats</u>

9.3     All bat species are defined as **European Protected Species** and are protected by the Conservation of Habitats and Species Regulations 2010, which transposes the European Union's Habitats Directive into UK law. Bats are also protected by the Wildlife and Countryside Act 1981 (as amended).

It is an offence to kill, injure, or take, any bat. It is also an offence to interfere with places used by bats for shelter or protection, or to intentionally disturb bats occupying such places.

9.4     Bat roosts are protected regardless of whether they are occupied at the time of the intended works. For example a tree that is used for a summer roost is still protected by law during the winter even though the bats are absent. Bats can make use of trees throughout the year: for maternity roosts in the summer (May to September); for mating roosts in the autumn (September to November); and for hibernation in the winter (November to April).

9.5     Trees identified for removal or for pruning should be surveyed by a qualified ecologist no more than 5 days before the planned works to determine if bats are present. If bats are found, the developer must apply to Natural England for a licence. Works cannot proceed without the licence being granted.  In addition the developer must inform the local authority's planning officers.

9.6     If a bat is discovered once works have started, work should cease immediately, and the licensed bat worker and Natural England called for advice. This advice may include leaving the bat to disperse of its own accord, or waiting for the licensed handler to arrive and move the bat. Builders and contractors are explicitly forbidden from handling bats.

<u>Water Voles</u>

9.7    Trees are a common feature of riverbanks and contribute to water vole habitat. Water voles are protected under Schedule 5 of the Wildlife and Countryside Act 1981 which makes it an offence to kill, injure, or take water voles. It is also an offence to interfere with places used by water voles for shelter or protection, or to intentionally disturb water voles occupying such places.

Any proposal to remove trees on the banks of water courses must demonstrate there will be no impact on water voles or their habitat.

# 10. Checklist for planning applications

Pre-application

10.1 These documents need to be supplied with your planning application and must be available before the application is validated. (Validation is the process where the planning application form is checked to see that is has been completed properly and all required information has been submitted):

- Land survey

- Tree survey

- Tree constraints plan

- Wildlife survey

Post-application

10.2 These documents may be required as a condition of planning permission:

- Arboricultural Implications Assessment (AIA)

- Arboricultural Method Statement (AMS)

# References

| Author | Title |
|---|---|
| Barking and Dagenham Partnership (2009) | Barking and Dagenham's Community Plan |
| Communities and Local Government (2008) | Trees in Towns II: A new survey of urban trees in England and their condition and management. |
| Communities and Local Government (2000) | Tree Preservation Orders: A Guide to the Law and Good Practice |
| DEFRA (2007) | Strategy for England's Trees, Woods and Forests |
| London Borough of Barking and Dagenham (2010) | Biodiversity Supplementary Planning Document |
| London Borough of Barking and Dagenham (June 2009) | Barking Town Centre Area Action Plan Pre-submission Report |
| London Borough of Barking and Dagenham (November 2008) | London Borough of Barking and Dagenham Local Development Framework Core Strategy pre-submission report |
| London Borough of Barking and Dagenham (November 2008) | London Borough of Barking and Dagenham Local Development Framework Borough wide development policies pre-submission report |
| London Borough of Barking and Dagenham | Regeneration strategy 2008 – 2013 |
| London Borough of Barking and Dagenham (2007) | Urban Design Framework Supplementary Planning Document |
| London Borough of Havering (April 2009) | Protection of Trees during Development Supplementary Planning Document |
| Design for London (2007) | East London Green Grid Area Frameworks 2 (Epping Forest and River Roding), 3 (Thames Chase, Beam and Ingrebourne) and 4 (London Riverside) |
| Mayor of London (2005) | Connecting Londoners with Trees and Woodlands: A Tree and Woodland Framework for London |
| Mayor of London (2008) | East London Green Grid Framework London Plan (Consolidated with Alterations since 2004) Supplementary Planning Guidance |
| Norwich City Council (September 2007) | Trees and Development Supplementary Planning Document |
| Trees and Design Action Group (2008) | No trees, No future - Trees in the urban realm |

# Contacts

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Email: admin@trees.org.uk
Web site: www.trees.org.uk

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United Kingdom

Bat Helpline: 0845 1300 228
Office Telephone: 020 7627 2629
Web site: www.bats.org.uk

**London Bat Group**
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Web Site: www.londonbats.org.uk

**London Tree Officers Association**
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Web site: www.ltoa.org.uk

**Natural England**
Natural England
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123 Victoria Street
London SW1E 6DE

Tel: 0300 060 2634
Email: london@naturalengland.org.uk
General enquiries: Tel: (local rate): 0845 600 3078
Web site: www.naturalengland.org.uk

## Appendix 1: Local Development Framework Policies

| Core Strategy Development Plan Document | |
| --- | --- |
| CM1: General principles for development | Sustaining the Natural and Built Environment: Natural and built assets including natural resources, air and water quality, biodiversity and habitats, the historic environment, local distinctiveness, and the borough's network of open spaces should be protected and enhanced. Development should take account of natural constraints, particularly the risk of flooding, and should incorporate measures to mitigate and adapt to the impacts of climate change. |
| CM3: Green Belt and Public Open Spaces | The Council will ensure that important areas of public open space are identified and protected from development, that public open space is created and improved in areas of deficiency, and support the implementation of the East London Green Grid, the Blue Ribbon Network and the Barking and Dagenham Landscape Framework Plan. |
| CR1: Climate Change and Environmental Management | The Council will plan in harmony with landscape and biodiversity. |
| CR2: Preserving and enhancing the natural environment | The Council will encourage development that enhances existing sites and habitats of nature conservation value (including strategic wildlife and river corridors) or which provide new ones, in particular where this will help meet the objectives of the Local Biodiversity Action Plan for Barking and Dagenham. |
| CC4: Achieving community benefits through developer contributions | Developer contributions could be used to provide: Environmental sustainability measures Environmental and biodiversity enhancements (including those identified in the Landscape Framework Plan) |
| CP2: Protecting and promoting our historic environment | The council will take particular care to: Protect and wherever possible enhance our historic environment Reinforce local distinctiveness |

| Borough Wide Development Policies Development Plan Document | |
| --- | --- |
| BR2: Energy and On-Site Renewables | Energy assessments should demonstrate the following: That energy demand is minimised through passive design, appropriate use of thermal mass, external summer shading and vegetation on and adjacent to proposed developments. |
| BR3: Greening the urban environment | The Council will expect, where appropriate, all development proposals to demonstrate that the sequential approach set out below to preserving and enhancing the natural environment has been followed:<br><br>Retain, enhance or create features of nature conservation value and avoid harm,;<br>Mitigate for impacts to features of nature conservation value;<br>Where there is no viable alternative, compensate for the loss of features of nature conservation value.<br><br>Where there are no existing features of nature conservation on a site, development should seek to create nature conservation enhancements to help 'green the urban environment'. |
| BP2: Conservation Areas and Listed Buildings | The Council will seek to preserve or enhance the special character and appearance of each of Conservation Areas and secure their setting.<br><br>Aside from the four conservation areas, other areas which are locally distinctive and historically important (such as the Becontree Estate) will be identified, celebrated and promoted. |
| BP9: Riverside Development | Riverside development is expected to:<br>Protect and enhance biodiversity (important species and habitats) in and along the river and banks and provide, preserve and enhance wildlife corridors where appropriate. |
| BP11: Urban Design | To naturalise and green the urban environment through an interconnected network of parks, open spaces, tree-lined streets, wildlife corridors, woodlands, pedestrian and cycle paths. |

| | |
|---|---|
| Barking Town Centre Area Action Plan | |
| BTC30: Parks, Open Spaces, Play Areas and Tree Planting | To improve the linkages between the parks and open spaces in the Area Action Plan area, the Council will wish to see extensive tree planting along some streets to form a network of "green streets" which has well linking parks and open spaces also softens the environment, and provides pleasant routes for pedestrians and cyclists.<br><br>The key routes which the Council wishes to develop as tree lined streets radiate out from Abbey Green to Barking Park, Greatfields Park, Essex Road Gardens, the Quaker Burial Ground and the River Roding.<br>Where appropriate the Council will expect developers to contribute towards programmes of tree planting in town centre. |

# Appendix 2: Right Place Right Tree Checklist

**Tree & Woodland Framework: Right Place – Right Tree checklist**

<table>
<tr>
<td colspan="2"><strong>RIGHT PLACE - RIGHT TREE CHECKLIST:</strong></td>
</tr>
<tr>
<td rowspan="3"><strong>Appropriate locations</strong></td>
<td>-     <strong>What is the existing value of the space, and would the impact of trees be positive?</strong></td>
</tr>
<tr>
<td>-     Existing habitat and landscape value: establish the habitat and landscape type of the site - shade cast by trees, and their demands on soil, water and nutrients, mean that they can kill or damage valuable wildlife habitats such as wetlands, heathlands, flower rich grasslands and brownfields so check for existing value before committing to planting.</td>
</tr>
<tr>
<td>-     Tree cover history: check historical records to see if the site is in an area where there have been trees in the past, to establish whether the creation of new woodland or tree cover would be appropriate.</td>
</tr>
<tr>
<td rowspan="9"><strong>Appropriate species and design</strong></td>
<td>-     Development design: trees should not be located where they will experience inappropriate growing conditions e.g. in the shadow of tall buildings.</td>
</tr>
<tr>
<td>-     Local character: check if there is a history in the area for the use of particular species that could be a reflected in the planned planting.</td>
</tr>
<tr>
<td>-     Work with nature: in natural areas, employ stock of locally native origin. Best of all, work with natural colonisation.</td>
</tr>
<tr>
<td>-     Great trees of the future: where the setting allows, take opportunities to plant large species of trees with a long lifespan.</td>
</tr>
<tr>
<td>-     Accessibility: new trees and woodlands are most needed where they can provide people with access to nature and natural landscape in areas presently lacking in such access.</td>
</tr>
<tr>
<td>-     Infrastructure: consider existing and future infrastructure requirements – do not plant too close to over/underground infrastructure. Replace removed trees in the same pit if appropriate.</td>
</tr>
<tr>
<td>-     Highways: meet the statutory safety requirements to maintain a clear route along roads (consider heights of buses, HGVs, cars, cycles and horses).</td>
</tr>
<tr>
<td>-     Space: check available space against the final height and spread of the proposed species with a view to minimising frequency and amount of pruning required.</td>
</tr>
<tr>
<td>-     Soil condition: the soil in hard landscaped areas is often poor. Soil compaction needs to be limited in the tree pit and adequate nutrients supplied. Use species known to be robust to these limitations.</td>
</tr>
</table>

# Appendix 3: Conservation Areas

This appendix provides a map showing the location of the four Conservation Areas in the borough as well as a detailed map for each Conservation Area. The Conservation Areas are:
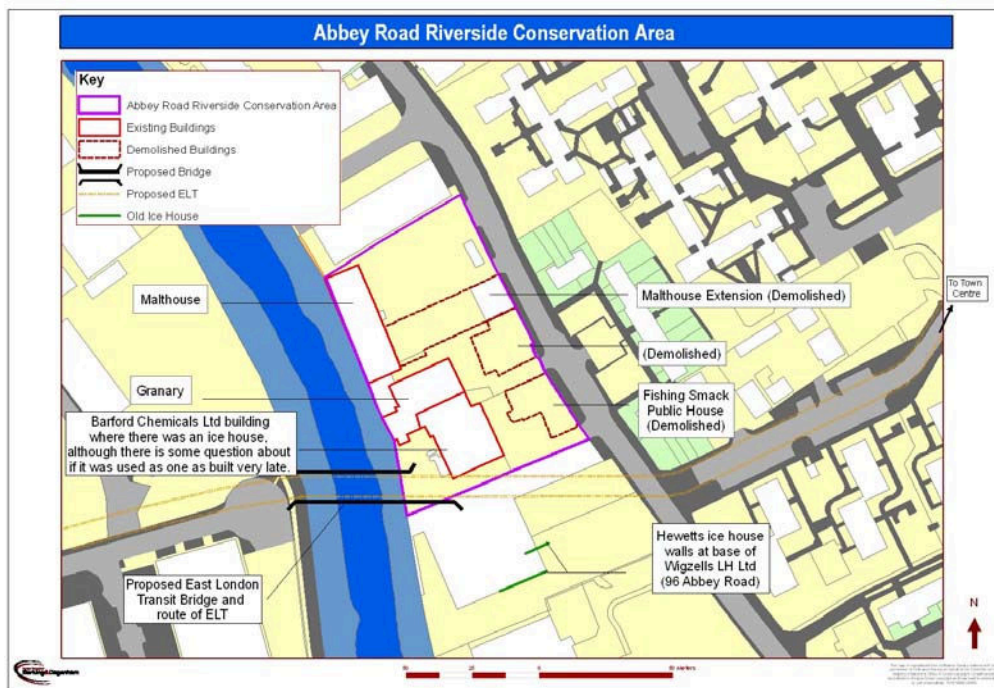
- Abbey and Barking Town Centre Conservation Area
- Abbey Road Riverside Conservation Area
- Dagenham Village Conservation Area
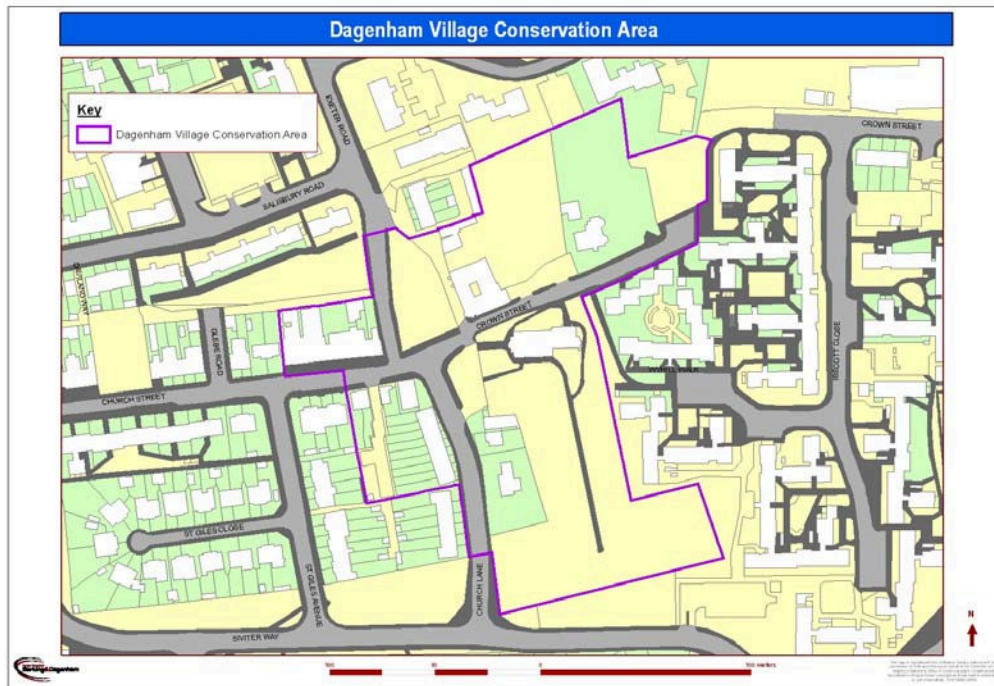- Chadwell Heath Anti-aircraft Gun Site Conservation Area



London Borough of Barking & Dagenham LDF Trees and Development Draft SPD    31
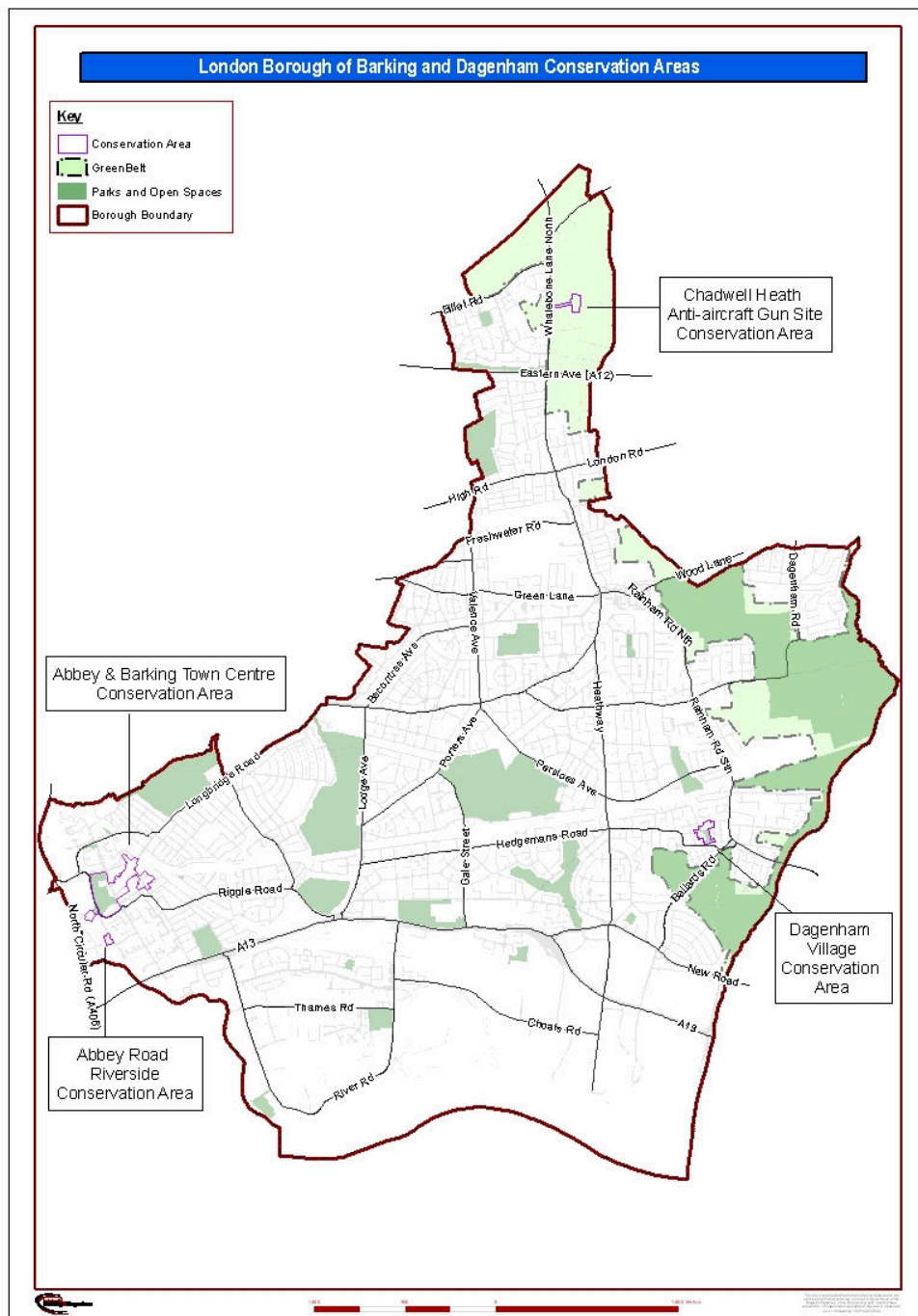
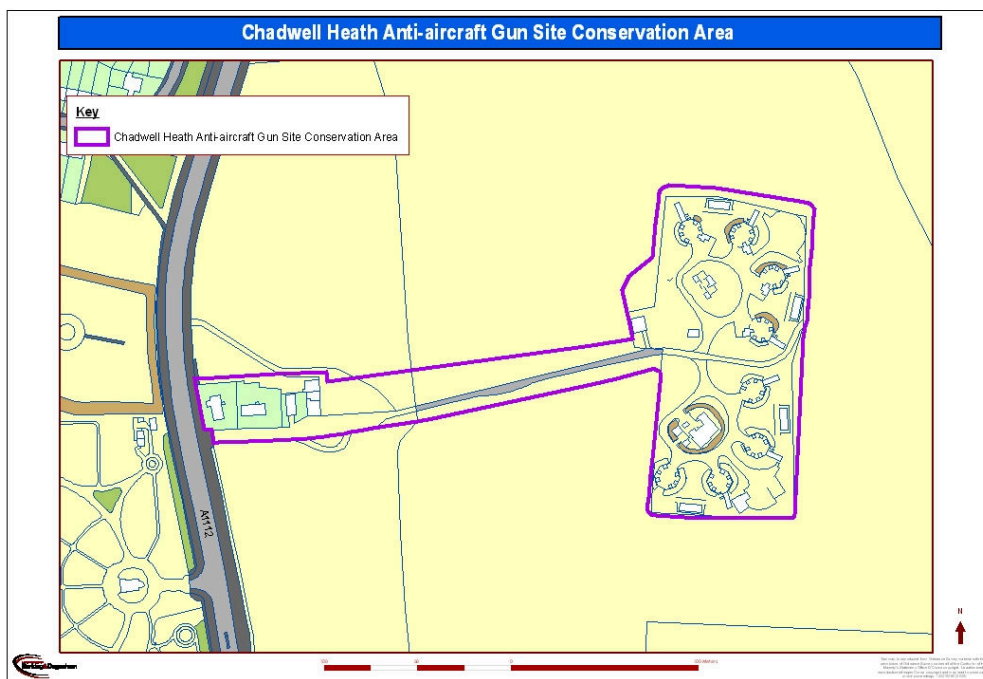## Abbey and Barking Town Centre Conservation Area
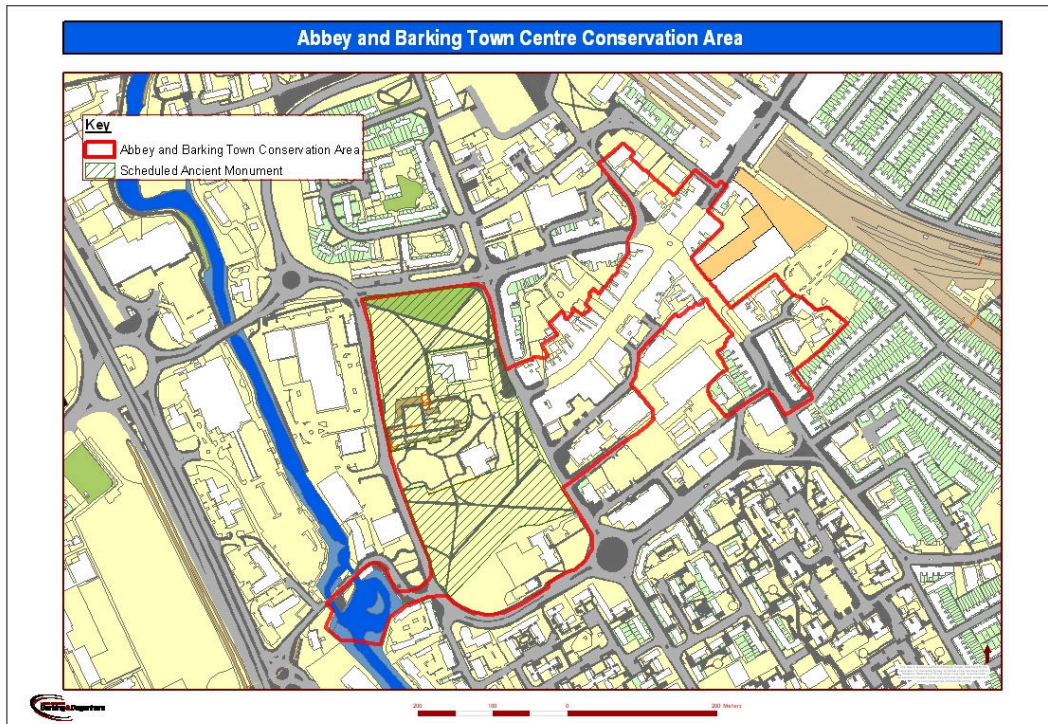


## Abbey Road Riverside Conservation Area

## Dagenham Village Conservation Area



## Chadwell Heath Anti-aircraft Gun Site Conservation Area

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