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1 Introduction

The Local Implementation Plan (LIP) is a statutory plan setting out how Croydon Council intends to implement the London Mayor’s Transport Strategy within the borough.

The LIP looks as far forward as 2031 but includes a focused delivery plan for the period 2011/12 – 2013/14. It responds to the ‘Goals’ and ‘Challenges’ of the Transport Strategy, draws upon and reflects work undertaken to inform the development of the Sub-Regional Transport Plan (for the South London region) (SSRTP). It also seeks to deliver locally important objectives from the Croydon Community Strategy developed by the Local Strategic Partnership.

A long term vision for Croydon has been developed through an ambitious programme of consultation with residents. This was distilled by the Local Strategic Partnership into a long term Vision for the Borough. This is for Croydon to be:

“London’s most enterprising borough – a city that fosters ideas, innovation and learning and provides skills, opportunity and a sense of belonging for all”

The vision was interpreted through a number of themes, each of which expressed a different characteristic of Croydon’s future. These themes are:

   An Enterprising City

   A Learning City

   A Creative City

   A Connected City

   A Sustainable City

   A Caring City

---

1 Mayor’s Transport Strategy [TfL/ The Greater London Authority May 2010]
The vision statement sets out the quality and scope of change that is sought over the coming years. It is the point of reference for all strategies and plans in the Borough to help ensure that the same vision and priorities are met and that we are consistent and act together to create a better place in which to live and work. Components of ‘Our Vision’ are referred back to within this LIP.

The Council’s proposed Local Development Framework Core Strategy² develops this vision of the future into a spatial plan. It interprets how Croydon’s varied communities and people, its places and neighbourhoods, buildings and spaces, facilities and services can contribute towards achieving a better future through the right combination and location of development, regeneration, conservation and investment. The LIP in turn translates the vision of a Connected City and a Sustainable City and sets out proposals for better connecting communities and people, places and neighbourhoods, buildings and services while reducing environmental costs. The LIP works with the emerging objectives of the proposed spatial strategy, and begins delivery of many of the transport enhancements envisaged in the draft Infrastructure Delivery Plan³.

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² Croydon Core Strategy ‘Towards a Preferred Core Strategy’ [Croydon Borough Council March 2010]
³ Draft Infrastructure Delivery Plan
The LIP is further shaped by linked processes looking at the environmental implications of its objectives and proposals, and the potential implications of its proposals on equality of opportunity.

In order to understand where it is we want to get to, we must first understand our starting point. The following chapter (LIP Chapter 2) begins by describing Croydon, its people, places and connections today. It then employs the ‘Challenges’ drawn from the Transport Strategy to describe the opportunities and pressures Croydon faces moving forward. These pressures and opportunities are reflected upon, in the light of local priorities, to shape a set of objectives for the LIP.

The LIP objectives are then used to define a Delivery Plan (LIP Chapter 3) focusing on the period 2011 to 2014. In the final LIP chapter (Performance Monitoring Plan) indicators and targets are established with which to gauge success.
2 Transport objectives

2.1 Overview
This chapter establishes the objectives which shape the LIP Delivery Plan and wider activities. It explores the local context and policy drivers, along with anticipated challenges and opportunities in delivering the Transport Strategy. A check is also made that the resultant LIP Objectives are aligned with and support the Transport Strategy goals and the Croydon Community Strategy priority themes and vision components.

2.2 Croydon’s spatial and strategic context
Croydon is one of London’s largest boroughs covering an area of 87km². It is bordered by the London Borough of Bromley to the east, Lambeth to the north and Merton and Sutton to the west. To the south are the Surrey districts of Reigate and Banstead, and Tandridge. It is strategically placed on the main rail connections between London and Gatwick, and the south coast. It has Britain’s ninth busiest rail station East Croydon, which provides direct connections to three London main line terminals (Victoria, London Bridge and St Pancras) and to Gatwick Airport. Croydon has newly created connections to The City, Docklands and East London via London Overground. Croydon Tramlink provides high quality and high capacity east-west connections across the borough and sub-region. The connectivity and accessibility of Croydon ‘city’ centre, is only rivalled by that of the City of London and West End. This connectivity has resulted in Croydon being a main focus for regional and sub-regional growth strategies.

The draft London Plan⁴ places Croydon at the heart of the ‘Wandle Valley’ and Gatwick Diamond growth corridors. Croydon ‘city’ centre is the largest of four metropolitan centres designated in the London Plan. The London Plan also designates Croydon Metropolitan Centre as a ‘Strategic Office Centre’ and an ‘Opportunity Area’ being identified as an area strongly placed to support growth in London’s population and economy, in large part due to its connectivity. Croydon Metropolitan Centre is also one of the Capital’s Strategic Centres and the only one in the South London sub-region.

⁴ The Draft replacement London Plan [Mayor of London Sept 2010]
Figure 2-1: Croydon's connectivity with the South of England and connections to other areas of growth

Figure 2-2: Public transport access to jobs within 45 minutes
The proposed Croydon spatial strategy (emerging LDF Core Strategy) aspires to Croydon becoming London’s most enterprising borough and a place of opportunity, a place to belong and a place with a sustainable future. The proposed strategy identifies the Croydon Metropolitan Centre in particular as the place providing the greatest opportunity for positive change, and is seen as having capacity for thousands of new jobs and homes, and includes proposals for greatly improving the public realm, and providing enhanced facilities and amenities. The vision for the Croydon Metropolitan Centre is being set out in detail via a series of masterplans developed with our partners. In order to understand and meet the access needs arising from the growth strategy, Croydon Council is developing both a Transport Strategy for the borough and one focused on the Metropolitan Centre. In turn, Croydon Council is working with the Greater London Authority to develop an Action Plan for the Croydon Centre Opportunity Area, with transport and access needs being at the fore of the emerging plan.

At the same time, TfL is working with Croydon Council and the other South London local authorities to put in place a transport strategy to support growth across the whole South London sub-region.

This LIP draws on:

- work to inform the South Sub-regional Transport Strategy;
- the Borough Wide Transport Strategy (draft);
- the Croydon Metropolitan Centre masterplans and associated Metropolitan Centre Transport Strategy (draft); and
- the proposed borough spatial plan and the proposed plan to meet the associated infrastructure needs,

in order to inform its objectives and shape the Delivery Plan.
Figure 2-3: Planning Context

- London
- South London
- Croydon
- Metropolitan Centre
- Development Areas

- London Plan
- Local Development Framework
- Opportunity Area

- Mayors Transport Strategy
- Sub Regional Transport Plan
- Borough Wide Transport Strategy
- CMC Transport Strategy
- CMC Master Plan & Other Transport Proposals

- Local Implementation Plan
- Modal Strategies
- Development Plans

- Sub Regional Testing

的颜色编码:
- Growth & Economic Development Areas
- Planning Frameworks
- Transport Strategies, Plans & Proposals
- Assessment & Delivery
2.3 Croydon’s people

Croydon has the largest population of any London Borough. It is home to 341,800 people living in approximately 150,000 homes. Whilst there are nearly 70,800 young people (aged 0-15), more than any other borough in the capital, the population is also ageing. Croydon is a highly diverse borough, which creates opportunities, but also challenges – in terms of community cohesion, health inequalities and perceptions of crime. More than 100 languages are spoken with black and minority ethnic groups making up almost 42% of our population. Amongst these residents, those who are black or black British form the largest group at 15% of the total population and Asian and Asian British are the next largest at 13.9%.

There are higher proportions of Black and Minority Ethnic (BME) communities in the north of the borough. Wards such as West Thornton and Broad Green are some of the most diverse in the UK. Whilst the centre and south tend to be less diverse, the ethnic diversity of the school-aged population in all neighbourhoods is predicted to continue to change over the next twenty years.

Figure 2-4: Croydon and London’s 2009 BME profile (GLA 2008 Round projections PLP Low)

According to the Mosaic Social Classification, ‘Community Perspectives’ (30%) and ‘Secure Suburbia’ (22%) make up the majority of households in Croydon. However, there is wide diversity within the borough with strong concentrations of different social groups in particular neighbourhoods. For example, ‘Urban Intelligence’ tend to live close to town centres and/or transport interchanges.
There is a contrasting mixture of affluence and deprivation across Croydon’s neighbourhoods. According to the Index of Multiple Deprivation (IMD), 33 Lower Super Output Areas (LSOAs) out of the 220 Croydon LSOAs fall within the 20% most deprived areas in England. These areas are concentrated in Croydon’s major social housing estates and in the north of the borough. The areas of greater deprivation tend to correlate with the areas of higher population density.

Figure 2-5: Indices of Multiple Deprivation - Croydon (Department of Communities and Local Government 2007)
Figure 2-6: 2001 Population Density

Legend
- Green/Open Spaces
- Population Density (people per hectare)
  - < 50 people/ha
  - 51 - 100 people/ha
  - 101 - 200 people/ha
  - 201 - 300 people/ha
  - > 301 people/ha
- Ward
- Croydon Borough

Scale: 2 km
Outside central London, Croydon is the most important commercial centre for financial and business services. It serves as a major economic and employment centre for the region for both retail and public administration.

The Croydon Metropolitan Centre is the second largest town centre in London after the West End, with 288,000 sqm of floorspace, of which 211,000 sqm is retail and 47,000 sqm is leisure. Sales turnover in Croydon town centre is estimated to be £636 million per annum, almost double the average for a Metropolitan Centre. It is also a strategic office location. 40% of Croydon town centre’s floorspace consists of offices, the fourth highest amount of office floorspace in a London town centre behind the West End, Isle of Dogs/Canary Wharf and Liverpool Street. Croydon has the largest stock of office space in South London.

Croydon’s strengths are business services, retail and the public and health sectors. The financial and business sectors employ around 27,000 people; public administration, education and health activities provide 25,000 jobs. The balance of 21,000 jobs is mostly in retail including wholesalers, distributors, hotels, and restaurants.

Compared to the average for London, Croydon is a low wage economy and it has a relatively low skills base. The proportion of the working age population qualified to NVQ levels 2, 3 and 4 and above is lower than the national and London average. Just over 11% of Croydon’s working age population have no qualifications.

The recession and its aftermath are having a major impact on jobs and businesses in Croydon, but so far not to the extent that many had predicted. The numbers of Job Seekers Allowance claimants increased by 10% between 2009 and 2010 to 9,664, slightly lower than the London average. The deprived neighbourhoods of New Addington and Fieldway have the highest claimants, followed by Selhurst, Broad Green and South Norwood in the north of the borough.

---

5 Metropolitan Centres serve wide catchments which can extend over several boroughs. Typically they contain at least 100,000 sqm of retail floorspace with a significant proportion of high-order comparison goods relative to convenience goods. These centres generally have very good accessibility and significant employment, service and leisure functions.
2.5 Croydon’s places

The borough’s land use is primarily urban but over one third of the borough’s total area is protected green space, either Green Belt or Metropolitan Open Land. Indeed, Croydon is one of the greenest places in London. In addition to the Croydon Metropolitan Centre, the borough has a number of district centres and a network of local centres providing ready access to a range of services. The borough and its places have a long history reflected through many of its buildings and related heritage assets. It is important that changes to the street environment respect these assets.

2.6 Travel in Croydon

Around 65,000 people living in Croydon travel to work in Croydon, the largest ‘within borough’ flow of commuters in London. 8.5% of Croydon residents work from home, one of the highest proportions in London. Home working has increased by 134% between 1991 and 2001. East Croydon Station is reaching the limit of its present capacity with over 26,000 using the station daily. Over 70,000 people use Croydon Tramlink each day and the borough’s bus routes are of major importance in connecting people to places in and beyond Croydon. Most routes serve the Croydon Metropolitan Centre, which acts as a major bus hub for south London. Over 125,000 passengers get on and off buses within the Metropolitan Centre each day.

With the exception of the Croydon Metropolitan Centre, the areas of higher population density tend to be those of higher public transport accessibility. In turn, car ownership tends to be inversely related to public transport accessibility, with over 80% of households in the south and eastern parts of the borough having at least one car available. The car tends to be the predominant mode for the journey to work, with the exception of those living in Addiscombe ward, where the Croydon Metropolitan Centre largely sits. Here people’s modal choices are more akin to those of central and inner London, with public transport being the predominant mode for journeys out to work beyond the Metropolitan Centre and inwards into the Metropolitan Centre.

In common with other London boroughs, Croydon has a hierarchy of streets designated on the basis of the relative importance of their movement role. The A22, A23 and A232 are part of the Transport for London Road Network (TLRN) or more commonly known as ‘red routes’. Several of the busier traffic routes, which are the responsibility of Croydon Council, have been designated by central government a part of the ‘Strategic Road Network’
(SRN). The SRN comprises roads that are intended to provide for movements within the borough and to and from adjoining boroughs. Croydon Council can only make changes to traffic arrangements on these roads with the permission of TfL. The rest of the local distributor and local access roads/streets are the responsibility of Croydon Council.

Just as there is a hierarchy of routes in the borough, there is also a hierarchy of places, namely major, district and local centres. The more important places tend to sit on the more important routes. Whilst these places benefit from the connections provided by these routes, traffic using the route and the design of the route often have major impacts on the centres.
The main road corridor through the borough, the A23, connects central London to the M25, Gatwick and beyond. Along it are major junctions including Purley Cross, Fiveways, Croydon Road, the Lombard roundabout and Thornton Heath Pond. Some of the junctions are also at the centre of important places. The A232 provides an east-west route skirting the southern side of the CMC and linking the Borough with its neighbours in Sutton and Bromley.

Figure 2-8: 2010 Public Transport Accessibility Levels (PTAL)
Figure 2-9: Mode Share (main mode of trip) by borough of residence 2006/07 - 2008/09 Average (7 day week)

Figure 2-10: Car Ownership (2001 Census)
2.7  Local challenges and opportunities

2.7.1  Introduction

This section sets out some of the challenges and opportunities facing Croydon over the life of the Transport Strategy (up to 2031) in seeking to:

- deliver the Goals and meet the Challenges of the Transport Strategy;
- meet the challenges identified in the South Sub-regional Transport Plan; and
- address the priority themes of the Croydon Community Strategy and the Vision elements of the draft replacement Community Strategy.

The Mayor’s Transport Strategy (MTS) Goals and associated Challenges, the Sub-regional Transport Plan (SRTP) Challenges, and the Croydon Community Strategy (CCS) priority themes and vision elements are first outlined below.

**MTS Goals**

The five Transport Strategy Goals are:

- Supporting economic development and population growth
- Enhancing the quality of life for all Londoners
- Improving safety and security of all Londoners
- Improving transport opportunities for all Londoners
- Reducing transport’s contribution to climate change and improving resilience
MTS Challenges

The Transport Strategy also identifies and acknowledges the considerable challenges faced, once the goals are overlaid. These challenges include:

- Supporting sustainable population and employment growth
- Improving transport connectivity
- Improving journey experience
- Enhancing the built and natural environment
- Improving health impacts

The MTS Challenges are employed to structure the following sections of the LIP. Each Challenge relates to one of the MTS Goals. The link back to the MTS Goals is made through Figure 2-35 at the end of this Chapter.

SRTP Challenges

The Challenges identified in the South Sub-regional Transport Plan are:

- Reducing public transport crowding
- Improve access and movement to, from and within key places
- Improve connectivity to, from and within the sub-region
- Manage highway congestion and make efficient use of the road network
CCS Priority Themes

The priority themes of the Croydon Community Strategy are:

- Safer, Stronger and more Sustainable Communities
- Achieving Better Outcomes for Children and Young People
- Promoting Economic Growth and Prosperity
- Improving Health and Wellbeing
- Improving the Environment
- Delivering High Quality Public Services and Improving Value for Money

CCS Vision

In September 2008 representatives from all of the key public, private and community organisations in Croydon were brought together to encourage wide ranging debate on the major challenges and opportunities facing the borough, which could impact on Croydon’s future. This was followed by the largest consultation exercise undertaken in the borough - asking more than 18,000 local people to ‘Imagine Croydon’. This Vision which looks as far forwarded as 2040 has shaped the draft Croydon Community Strategy 2010-2015 and the LIP. The six elements of the Vision are:

- An Enterprising City
- A Learning City
- A Creative City
- A Connected City
- A Sustainable City
- A Caring City

These shape the draft replacement Community Strategy. The most relevant to the LIP are ‘connected city’ and ‘sustainable city’, which the LIP works to support.

The Transport Strategy and Sub-regional Challenges plus the Community Strategy priority themes and vision elements, cannot be addressed individually. Smart solutions are required by us and our partners to meet several challenges and priorities at once and ensure that action and progress
relating to one does not work against achievement of others. Inward investment and economic development are sought in order to raise living conditions, reduce poverty and deprivation. Housing growth is required to accommodate household change and to enable households and communities to grow in close proximity without excessive outward migration. Economic development and population growth offer further benefits in terms of revitalising the Croydon Metropolitan Centre and other parts of the borough. However, they also pose challenges in terms of accommodating access and managing travel demand whilst still ensuring that the Goals of ‘Enhanced Quality of Life’, ‘Improved Transport Opportunities for All’ and ‘Reducing Transport’s Contribution to Climate Change’ are all delivered.

The Transport Strategy Challenges are employed to structure the following sections. Each Challenge relates to one of the Transport Strategy Goals. The link back to the MTS Goals is made through Figure 2-35 at the end of this Chapter.

Figure 2-11: London Mayor's Transport Strategy Goals, Challenges and Outcomes

<table>
<thead>
<tr>
<th>Goals</th>
<th>Challenges</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support economic development and population growth</td>
<td>Supporting sustainable population and employment growth</td>
<td>• Balancing capacity and demand for travel through increasing public transport capacity and/or reducing the need to travel</td>
</tr>
<tr>
<td>Improving transport connectivity</td>
<td>• Improving people’s access to jobs</td>
<td>• Improving public transport reliability</td>
</tr>
<tr>
<td>Delivering an efficient and effective transport system for people and goods</td>
<td>• Improving access to commercial markets for freight movements and business travel, supporting the needs of business to grow</td>
<td>• Reducing operating costs</td>
</tr>
<tr>
<td></td>
<td>• Smoothing traffic flow (managing delay, improving journey time reliability and resilience)</td>
<td>• Bringing and maintaining all assets to a state of good repair</td>
</tr>
<tr>
<td></td>
<td>• Improving public transport reliability</td>
<td>• Enhancing the use of the Thames for people and goods</td>
</tr>
<tr>
<td>Enhance the quality of life for all Londoners</td>
<td>Improving journey experience</td>
<td>• Improving public transport customer satisfaction</td>
</tr>
<tr>
<td></td>
<td>• Improving road user satisfaction (drivers, pedestrians, cyclists)</td>
<td>• Improving road user satisfaction (drivers, pedestrians, cyclists)</td>
</tr>
<tr>
<td></td>
<td>• Reducing public transport crowding</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enhancing the built and natural environment</td>
<td>• Enhancing streetscapes, improving the perception of the urban realm and developing 'better streets' initiatives</td>
</tr>
<tr>
<td></td>
<td>• Protecting and enhancing the natural environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improving air quality</td>
<td>• Reducing air pollutant emissions from ground-based transport, contributing to EU air quality targets</td>
</tr>
<tr>
<td></td>
<td>Improving noise impacts</td>
<td>• Improving perceptions and reducing impacts of noise</td>
</tr>
<tr>
<td></td>
<td>Improving health impacts</td>
<td>• Facilitating an increase in walking and cycling</td>
</tr>
<tr>
<td>Improve the safety and security of all Londoners</td>
<td>Reducing crime, fear of crime and antisocial behaviour</td>
<td>• Reducing crime rates (and improving perceptions of personal safety and security)</td>
</tr>
<tr>
<td></td>
<td>Improving road safety</td>
<td>• Reducing the numbers of road traffic casualties</td>
</tr>
<tr>
<td></td>
<td>Improving public transport safety</td>
<td>• Reducing casualties on public transport networks</td>
</tr>
<tr>
<td>Improve transport opportunities for all Londoners</td>
<td>Improving accessibility</td>
<td>• Improving the physical accessibility of the transport system</td>
</tr>
<tr>
<td></td>
<td>• Improving access to services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supporting regeneration and tackling deprivation</td>
<td>• Supporting wider regeneration</td>
</tr>
<tr>
<td>Reduce transport’s contribution to climate change, and improve its resilience</td>
<td>Reducing CO2 emissions</td>
<td>• Reducing CO2 emissions from ground-based transport, contributing to a London-wide 50% reduction by 2025</td>
</tr>
<tr>
<td></td>
<td>Adapting for climate change</td>
<td>• Maintaining the reliability of transport networks</td>
</tr>
</tbody>
</table>
2.7.2 Population and employment growth

**MTS Challenge:** Supporting sustainable population and employment growth

**SRTP Challenge:** improving access and movement to, from and within key places;

**SRTP Challenge:** improving connectivity to, from and within the sub-region; and

**SRTP Challenge:** managing highway congestion and efficient use of the road network.

**CCS Priority:** Safer, Stronger and more Sustainable Communities

**CCS Priority:** Promoting Economic Growth and Prosperity

The growth strategy within the proposed spatial plan provides for an increase of approximately 21,510 new homes and many new jobs up until 2031. The Croydon Metropolitan Centre has been assessed as capable of taking 8,000 new homes and several thousand new jobs. The Borough’s population is likely to grow by 38,230 people to 375,236 in 2031.

Croydon’s economy is predicted to grow by 6,000 new jobs by 2026. Croydon should become increasingly more attractive as a business location due to its ability to provide a large office pool at moderate rents, and its improving town centre environment. Croydon is well placed to help the metropolis compete with lower cost centres. Croydon Metropolitan Centre’s office sector offer however, is under threat from competitor centres, not just in the South-East of England, but also places as far away as India. When the economy picks up again, environmentally sustainable, safe and modern city centres will be as influential as rental costs in companies’ decisions to locate. Central Croydon
is predicted to become the third largest retail centre, in terms of turnover, in London by 2016 and its turnover to grow by £700 million between 2006 and 2026.

The Council’s approach to providing for access to services and activities for this growing population (whilst reducing the impacts arising from travel), is multi-faceted and includes:

- co-location of facilities;
- locating people and development in easy reach of existing services and public transport;
- improving transport connectivity for all modes but particularly the network of greenways; and
- facilitating sustainable growth in the Croydon Metropolitan Centre and Purley/ Purley Way (A23).

The approach is aimed at minimising the demand for travel and hence the impact on the road network.

2.7.3 Transport connectivity, efficiency and journey experience

MTS Challenge: Improve transport connectivity

MTS Challenge: Delivering an efficient and effective transport system for people and goods

MTS Challenge: Improving journey experience

SRTP Challenge: reducing public transport crowding;

SRTP Challenge: improve access and movement to, from and within key places;

SRTP Challenge: improve connectivity to, from and within the sub-region; and

SRTP Challenge: manage highway congestion and make efficient use of the road network.

The emerging Borough Wide Transport Strategy considers how growth can be accommodated whilst improving amongst other things, transport connectivity, efficiency and sustainability along with journey experience. It proposes phased action and investment, some required by Croydon Council, but much of it by its partners. This has been translated into the ‘Connected Croydon Programme’ within the LDF proposed Infrastructure Delivery Plan. The Programme, is structured around the main transport modes and investment required in the short medium and long term.
2.7.3.1 National Rail services

A key principle underpinning the growth strategy is to make best use of the extensive railway system in the Borough and to invest in its long term future. Action is required both in the long and short term to increase the capacity of Croydon’s two principal stations namely East and West Croydon.

**Short term:** East Croydon masterplanning is completed and includes proposals to provide a second access bridge for the station. This will allow much improved bus / rail interchange and improvement to the environment of the current interchange at the front of the station. The bridge will also greatly increase the passenger handling capacity of the station. The station also requires enlarged space in the concourse for passenger circulation and subsequently to provide another platform. At West Croydon the masterplan makes proposals to improve interchange between rail and all other forms of transport and to improve passenger access.

Many stations in the Borough need improvements to access, including that for people with disabilities, and more secure and better signed way marking.

**Medium term:** In the medium term, the capacity of the rail network needs to be increased through longer trains and platforms to provide for an increase in demand arising from economic growth and an increased population. It is also necessary to maintain convenient and reliable linkage to Central London, the City, Docklands and Gatwick.

**Long term:** In the longer term it is anticipated that longer trains will not be sufficient to ensure adequate capacity. Studies will be required to investigate improvements to the critical Norwood Junction and the provision of a new ‘through track’, possibly in tunnel, to ease congestion at East Croydon. The feasibility of double-decked trains as a long term option will also need investigation.

The responsibility for these investments lies principally with Network Rail and the train operators, but Croydon Council intends to support and encourage investment through the planning process, liaising with developers and lobbying Central Government.

2.7.3.2 Tramlink services

Croydon’s tram system, Tramlink, (now owned and operated by TfL) has proved highly successful, so much so that it reaches capacity at the peak hours over several parts of the network, particularly in and around the Croydon Metropolitan Centre.
Short Term: Croydon Council is working with TfL to reduce overcrowding by investment in the additional trams and through improvements to tram stops. Additionally the implementation of masterplans at East and West Croydon stations and potentially along the length of Wellesley Road would benefit safe pedestrian flows and the public realm at key tram stops and interchanges. Commercial, retail and housing developments associated with the central area masterplans will enhance the business case for these and further Tramlink improvements.

Medium Term: In the medium term, the capacity of the track in the central area will need to be increased. Research will be needed in the short term to plan for this. Additional potential extensions to the track are indicated in the South Sub-region Transport Plan. Options for extensions include four shortlisted directions: east toward Bromley; south toward Sutton; and north toward Brixton or Tooting. A possible extension to Crystal Palace has recently been added to the list by the Mayor of London.
**Long Term**: For the longer term, the Borough Wide Transport Strategy (draft) and proposed Infrastructure Delivery Plan suggest that the viability and feasibility of extending Tramlink to Mitcham, and within Croydon towards Purley and Coulsdon should be investigated. A programme of review and setting of priorities amongst these potential network extensions should be carried out in partnership with TfL in the short term.

### 2.7.3.3 Buses services

Buses are a vital part of the system connecting people and places in Croydon and into the wider sub region. Each day buses in Croydon carry more people than Tramlink. Croydon Metropolitan Centre is the main bus service interchange hub for South London, served by over 18 routes, all of which terminate within the Centre. Bus reliability in Croydon has improved considerably over recent years to the point where it is amongst the best in London. Reliability can however still be affected by local traffic congestion, particularly when this occurs on busy routes such as Brighton Road, London Road and Whitehorse Road. Within town centres and along main corridors, side road vehicle movements and on-street parking/loading activity are common problems; whilst parking near schools can cause localised delays at key times of the day.
Buses will continue to be a main part of the solution to meeting the challenge of growth. To do so, the efficiency, convenience and punctuality of buses need to be maintained and ideally improved. The capacity and coverage of the bus system will also need to expand to meet the access needs of a growth area such as Croydon, and be a responsive and adaptable system.
TfL, as the LSP partner responsible for the bus system, will need to continue to invest in infrastructure and operation. Action needs to be taken by Croydon Council and TfL on its respective road networks to make further improvements including:

- continuing improvements to bus stop accessibility and security;
- bus information improvements using new technology;
- improvements at major interchanges at East and West Croydon stations as part of the masterplanning initiatives;
- bus priority measures on intensively used routes; and
- ensuring that there are sufficient and well located bus stands to facilitate good time keeping and contingency bus standbys.

These infrastructure requirements need to complement other changes including plugging the remaining gaps in the bus network.

Figure 2-17: Public Transport coverage - 10 minute walking catchment
Improving transport connectivity clearly includes improving connections across borough boundaries. The Council is working with its neighbouring authorities and TfL through the South London Partnership Transport Board to ensure that improvements to Tramlink, buses, cycling and other modes are coordinated across borough boundaries. Other matters to be investigated by the Partnership Transport Board include the role and feasibility of park & ride associated with Tramlink.
2.7.3.4 Road Maintenance

Croydon Council has been investing its own capital in its own street network. Also, with the help of funding provided by TfL, the condition of the Principal Road Network managed by Croydon Council has improved measurably over recent years.

Figure 2-19: Percentage length of Principal Road Network in poor overall condition

The critical future investment in maintaining and improving the structural integrity of the road network includes:

- completing bridge strengthening on Network Rail bridges;
- providing a programme of anti-flood measures on highways e.g. soakaways;
- progressing smart traffic management/light coordination;
- ensuring a continuing programme of capital structural maintenance for both TFL and LBC roads maintenance; and
- renewal of life expired street lighting.
2.7.3.5 Cycling

Cycling is to be encouraged and promoted in the Borough as part of the thrust toward smarter and healthier travel. To improve the cyclist’s journey experience, a programme of infrastructure for cycling is required to:

- refurbish the London Cycling Network;
- provide for cycling parking and security at East and West Croydon stations and other cycle hubs;
- provide off carriageway provision and completion of Connect 2 and Greenway routes;
- cycling measures at key junction improvements;
- general cycling provision and security at most rail stations; and
- improvements to road junctions to assist cycle movement and safety along with the application of minimum cycling standards for new developments.

Croydon is one of London’s ‘Biking Boroughs’, a status bestowed by the London Mayor to further energise and foster action to aid cycling.

2.7.4 Built and natural environments

**MTS Challenge:** Enhance the built and natural environment

**CCS Priority:** Improving the Environment

Croydon Council seeks to make the most of its parks and open spaces by:

- improving access to each, particularly on foot and by bike; and
- using them to create, expand and enhance a network of walking and cycling routes.

The Council has an improvement programme for a number of its parks. Routes between parks and the street environment in general are enhanced by virtue of existing street trees and the introduction of new trees.

Croydon Council and the other London local authorities have a major role to play in delivering the London Mayor’s ‘Better Streets’ objective.
The Transport Strategy explains that:

- The London Mayor has set out his ambition to revitalise London’s public space in his manifesto ‘London’s Great Outdoors’; and

- Public spaces help to define a city and a well-designed built environment – encompassing the historic and new – can bring communities and people together. They can also encourage physical activity and recreation, restore a sense of pride in an area and attract businesses and jobs.

The Transport Strategy also reminds us that: ‘London’s Great Outdoors’ was accompanied by ‘Better Streets’, a practical guide intended to make the vision for great spaces a reality, setting out how ‘better streets’ can be created and proposes a series of actions to deliver them.

The underlying principles of ‘Better Streets’ include finding a new working balance between the different users of London’s streets and spaces, distinguishing our streets with good quality sustainable materials with high levels of craftsmanship, and reflecting local character. The ‘Better Streets’ approach applies to all streets and spaces rather than just flagship schemes. Improving the streetscape effectively will require coordination and integration with other public bodies to create imaginative and liveable environments for everyone.

The Strategy explains that enjoyment of the built environment and setting of the historic environment can be negatively affected by unnecessary signs and guardrailing that restrict pedestrian movement. Consolidating street features helps, while major rethinking of the function of streets can have dramatic effects. It also explains that because ‘better streets’ must be sensitive to location and context, ‘the key to their successful creation is found less in highway design manuals than in the imaginative application of certain principles to the design of the urban realm’. It shows six principles for ‘better streets’. The Strategy also sets five stages for improving the street. Reference will be made to this hierarchy of stages whenever we intervene in the street. The stage within the hierarchy will depend on the street’s ‘place status’ plus the level of investment and intervention proposed.
The Strategy makes clear that there is no one design or template of ‘better streets’. Each location and context is unique; streets will fulfil different purposes, have different vehicle and pedestrian flows and will have their own character. However, for town centres, the Strategy suggests that:

- the package of possible solutions could include improved facilities for pedestrians, cycling, essential deliveries and ‘better streets’;
- regeneration benefits may be realised too; and
- improvements need to be considered on a location by location basis and solutions that are appropriate to the local context.
Figure 2-22 Green spaces and cycling and walking routes
2.7.5 Air quality

MTS Challenge: Improve air quality

SRTP Challenge: Improved access and movement to, from and within key places

SRTP Challenge: Improved connectivity to, from and within the sub-region

SRTP Challenge: Managing highway congestion and make efficient use of the road network.

CCS Priority: Improving the Environment

CCS Priority: Improving Health and Wellbeing

Croydon Council has designated the whole Borough an Air Quality Management Area. The national air quality objective for Nitrogen Dioxide (NO₂) one of the main pollutants from road traffic, is breached along most of the Borough’s main roads and particularly in central areas⁶. However, the major arterial roads (A22, A23 and A232) in Croydon are managed by TfL. As with most of the transport and environment challenges facing Croydon, coordinated action is needed by Croydon Council with its partners.

The areas of the Borough in breach of the air quality objective levels needs to be reduced, as does the number of people exposed to air pollution. The main source of air pollution in Croydon is road traffic. It is estimated⁷ that around 4,083 tonnes of pollutants were produced from road traffic in Croydon each year in 2004, although by 2010 this was estimated to have reduced to 3,015 tonnes.

We monitor air pollution via five automatic monitoring stations:

- Purley Way (south of Fiveways)
- Beulah Road, Thornton Heath
- Junction of George Street and Wellesley Road, central Croydon
- London Road, Norbury
- Euston Road (between Mitcham Road and Purley Way)

The stations measure NO₂, ozone and PM10 particles. We also operate a non-automatic monitoring network of diffusion tubes measuring NO₂ at 14 sites around the borough.

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⁶ London Borough of Croydon Air Quality Action Plan 2007-2010
⁷ London Borough of Croydon Air Quality Action Plan 2007-2010
In 2010, concentrations NO₂ were predicted to exceed the national Air Quality Strategy (AQS) objective value (40 μg/m³) for annual average concentrations, on some major roads, particularly those close to Wellesley Road, Purley Way and London Road. Our masterplan proposals for the Wellesley Road will however, in the medium to long term, reduce the pollutant load along the Wellesley Road. More generally, it is essential that opportunities are sought to reduce emissions from vehicle use, the adoption of cleaner technology and/or modal shift. Ensuring there is good access by means other than the private car will contribute to emission reductions.

2.7.6 Noise

MTS Challenge: Improve noise impacts

CCS Priority: Improving the Environment

CCS Priority: Improving Health and Wellbeing

The Environmental Noise Directive requires all EU member states to produce strategic noise maps showing major road, rail, air and industrial noise sources. As part of the implementation of this Directive, Defra will be required to identify candidate noise management areas and quiet spaces. Candidate noise management areas are likely to be prioritised based on noise levels and the number of people exposed to unacceptable noise levels. Action plans to reduce exposure to high noise levels in these areas will also be required in the
future, and therefore noise impacts are likely to become an increasingly important driver for change within transport strategy development and transport management.

The railway lines passing north-south through the borough are the main sources of noise. The main road sources of noise are the A23 and A232. Road noise is also generated around Croydon Town Centre from the A236 and A2124.

Noise action mapping and planning by Defra8 indicates ‘first priority locations’ where further investing should be taken in central Croydon on the Transport for London Road Network and the railway line serving East Croydon Station.

2.7.7 Health

MTS Challenge: Improve health impacts

SRTP Challenge: improving access and movement to, from and within key places; and

SRTP Challenge: improving connectivity to, from and within the sub-region

CCS Priority: Improving Health and Wellbeing

Obesity is one of the main health issues facing this country. We are potentially looking at 40% of Briton’s population being obese by 2025 and over half of the UK adult population being obese by 2050.

Offering people greater choice about the way they travel, and encouraging more ‘active travel’ primarily by walking and cycling, is part of the solution. Consequently our ‘behaviour change’ programme aims to increase physical activity by encouraging;

- adoption of walking and cycling into regular routines such as the journey to work, school or to the shops and generally healthier lifestyles; and

- ‘life changes’ through in-school education as a part of travel planning.

Within his Transport Strategy, the London Mayor proposes a ‘cycling revolution’. The aim is to achieve a five per cent modal share for cycling (currently two per cent across London) by 2026, which equates to an approximate 400 per cent increase in cycling compared to 2000.

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8 Central government Foresight programme
The Transport Strategy reports that with a few exceptions, rates of cycling in Outer London are currently lower than Central and Inner London. Lower development densities (resulting in longer travel distances) combined with less congestion and higher traffic speeds, make the car an attractive travel choice. However, TfL analysis suggests that around two-thirds of the potential for increased levels of cycling in the Capital is in Outer London. About half of all car trips here are less than two kilometres and public transport provision is not as comprehensive as in Central or Inner London.

Figure 2-24: Potentially cyclable trips in London by trip origin (source: TfL)

TfL’s research\(^9\) indicates that the number of residents of Croydon that cycle at least twice a week, is among the lowest quartile in London (>5%), lower than the neighbouring boroughs to the west. However the level of potential cycle trips is in the highest quartile of Outer London boroughs.

The DfT carries out annual manual counts of cyclists across London. Counts are carried out at 66 sites in Croydon. In general the levels of cycling recorded in Croydon are lower than those observed in inner London (though similar to other Outer London boroughs). The highest daily flows at any location in Croydon are around 500. DfT counts over the 10 years 1999-2008 suggest that while cycling levels dropped towards the middle of the decade they have been gradually rising again, with an increase of around 40% between 2000 and 2008.

\(^{9}\) Attitudes to Cycling report, [TfL 2009]
Taking 2000 as the base year, a trend line was extrapolated from the DfT counts in the Croydon Biking Borough Study. Based on this trend line, cycling levels would increase to a level 250% higher than the 2000 level by 2026. While this is by no means an insignificant increase, it is well below the London Mayor’s objective of a 400% increase. This implies that simply to continue doing “more of the same” will not lead to a sufficiently rapid growth in cycling to meet the Mayor’s target. Whilst the potential to increase cycling is highest in places like Croydon, the major investment in the form of the Cycle Hire Scheme, Cycle Super Highways and the promotional work associated with Super Highways is focused on Central and Inner London. These factors are reflected in our target for the proportion of journeys to be undertaken by bike.

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10 Biking Borough Study [London Borough of Croydon Final Report, Cycling Star Alliance, July 2010]
2.7.8 Greenhouse gases

**MTS Challenge:** Reduce CO₂ emissions

**SRTP Challenge:** Improved access and movement to, from and within key places

**SRTP Challenge:** Improved connectivity to, from and within the sub-region

**SRTP Challenge:** Managing highway congestion and make efficient use of the road network.

**CCS Priority:** Improving the Environment

Surface transport is the third largest sector contributing to CO₂ emissions in Croydon. Of these transport CO₂ emissions, up to 66% are from car use.

One of the themed partnerships within the Croydon Local Strategic Partnership (LSP) - the Environment and Climate Change Partnership (ECCP), is tasked with addressing transport and the other sectors’ contributions to climate change. The ECCP is made up of a range of environmental stakeholders including Transport for London, the Energy Saving Trust, local businesses, schools and representatives from the faith and voluntary sector. It works to deliver the key environmental priorities for Croydon, namely:
- effective communications and marketing for individual behaviour change;
- tackling climate change by reducing CO₂ emissions, including domestic emissions;
- facilitating a shift to more sustainable transport modes;
- effective management of our natural resources to ensure climate resilience; and
- supporting the low carbon economy.

The ECCP published its action plan in 2010. This includes action to encourage a shift towards lower carbon modes of transport. The plan emphasises that this can only be achieved by increasing the relative attractiveness of the more sustainable modes by:

- providing more pleasant, reliable and sometimes faster journeys by lower carbon modes
- making the most of travel demand management policies
- improving the quality of urban design and environment
- taking steps to ensure that the cost to the user of each transport mode, reflects its true cost in terms of carbon emissions.

It also places emphasis on increasing the capacity of train and Tramlink services, especially those at East and West Croydon stations, and making network wide improvements to improve the safety and accessibility of stations and stops to increase the attractiveness of these services.

As part of development of the Action Plan, the Partnership gave very careful consideration to the target to be set for CO₂ emissions in Croydon. That target is to reduce CO₂ emissions by 34% from 2005 levels by 2025. The target is considered a realistic, and significant, local contribution to the national target stemming from the 2008 Climate Change Act of an 80% reduction by 2050, and the Mayor of London’s 60% reduction target by 2025 from a 1990 base.

The target was set for CO₂ emissions across all sources in Croydon. The level of contribution towards the target from different sectors (e.g. transport, domestic, industrial and commercial) was not specified. However, the target is applied to the Croydon emissions from transport in Table 2-1 below and this

11 The ECCP was set up in 2008 and is the successor to the Environment Partnership which was created in 2003
in turn forms the basis of the local target for reduction in CO₂ emissions within the final chapter of this LIP\textsuperscript{12}.

Table 2-1 The Croydon Climate Change Mitigation Action Plan CO₂ emissions target applied to transport emissions in Croydon (NI186 Data – November 2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>% CO₂ Reduction Target</th>
<th>Croydon Transport Reduction (kteCO₂/annum)</th>
<th>Total Croydon Transport Emissions (kteCO₂/annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 baseline</td>
<td></td>
<td></td>
<td>350.00</td>
</tr>
<tr>
<td>2015 interim target</td>
<td>15%</td>
<td>52.50</td>
<td>297.50</td>
</tr>
<tr>
<td>2020 interim target</td>
<td>20%</td>
<td>70.00</td>
<td>280.00</td>
</tr>
<tr>
<td>2025 long term target</td>
<td>34%</td>
<td>119.00</td>
<td>231.00</td>
</tr>
</tbody>
</table>

In his Transport Strategy, the Mayor of London anticipates that transport sector CO₂ emissions in the range of 5.3m to 4.6m tonnes will be required by 2025 to meet his target (a reduction from the 9.7m tonnes in 2008 of between 45.4% and 52.6%). A range is provided to reflect the range in estimates of how the 60% overall reduction will pan out across the various sectors. Also in his Transport Strategy, the Mayor of London proposes to structure his approach to reducing CO₂ emissions from ground-based transport around three core themes:

- Improved operational efficiency – to minimise unnecessary CO₂ emissions
- Supporting and enabling the development and use of low carbon vehicles, technology and energy - requiring close joint working with stakeholders and appropriate incentivisation
- Carbon efficient mode choice – improving the attractiveness of low carbon modes such as walking, cycling and public transport and enabling the movement of freight by water and rail.

Figure 2-28 below (taken from the Transport Strategy) indicates the relative contribution anticipated from the above approach towards achieving the Mayor of London’s target. It indicates that the major contribution is expected to come from improved vehicle efficiency and the use of biofuels plus low

\textsuperscript{12} The Croydon indicator and target are based on National Indicator (NI) 186 data published 9th November 2009. Since adoption of the target, the NI186 database has been revised twice. It was first revised on 16th September 2010 with a second update on 15th September 2011. For each revision, estimates of previous year emissions have been changed to match the estimating methodology used for the latest year. However to be consistent with the baseline in the Action Plan, Table 2-1above uses the November 2009 data.
carbon electricity. However, local authorities such as Croydon have little if no influence over these matters, which are primarily influenced at the supranational, national and regional levels. Without that action / influence being brought to bear at these levels, achievement of the required reductions in emissions from the transport sector will be highly challenging. Currently though movement towards the target may be being aided by recent trends in car use. Whilst the number of vehicle kilometres driven on roads in Croydon rose steadily from 1321 Million vehicle kms in 1993 to 1373 Million vehicle kms in 2004, by 2008 it had fallen back to 1323 Million vehicle kms, just slightly above the 1993 levels.

Figure 2-28 Mid-range estimate of CO2 reduction impacts of transport policy areas by 2025
(Source: Mayor of London’s Transport Strategy)

*NB re 2025 target range in Figure 2-28. The contribution required from the transport sector to meet the Mayor’s CO2 emissions target for 2025 is linked to the CO2 emissions reductions from other sectors. It is anticipated that transport sector CO2 emissions, in the range indicated on the chart, will be required to meet the Mayor’s target of a 60 per cent reduction in London’s CO2 emissions by 2025 compared to 1990.
2.7.9 Climate change adaption

MTS Challenge: Adapting for climate change

CCS Priority: Improving the Environment

CCS Priority: Safer, Stronger and more Sustainable Communities

Whilst working to reduce transport and other sectors’ contributions to climate change, the ECCP recognises that there is a financial imperative to take action to adapt to climate change, as the impacts will undoubtedly incur significant costs as a result of disruption to local service provisions and businesses. The ECCP has thus published the Croydon Climate Change Adaption Action Plan\textsuperscript{13}. The Adaptation Action Plan aims to build adaptive capacity within the Borough, putting in place the support systems, legislative and policy frameworks which will allow the borough to safeguard and increase the resilience of public services as well as encouraging local businesses to deliver adaptation action.

\textsuperscript{13} Croydon Climate Change Adaption Action Plan
Croydon Council signed the Nottingham Agreement in 2002, formally committing the borough to long-term climate change adaptation. Level 1 of the National Indicator 188 guidance has been met through the development of the Croydon Local Climate Impacts Profile. This has identified impacts from weather related events on service provision in the borough and thus the priority climate change risks. The key outcome from this work has identified the borough’s vulnerability to surface water flooding as well as the impact of extreme temperatures on local infrastructure and biodiversity. The CREW (Community Resilience to Extreme Weather) research which is being conducted by 15 universities across the country is hoped to inform much of the forthcoming risk assessment work with regards to climate.

London Councils commissioned a Local Climate Impacts Profile for Croydon Borough, as part of its ‘Local Climate Impacts Profiles (LCLIPs) for the London’s Local Authorities’ project. A wide variety of impacts and consequences from weather events were identified. The more transport related consequences include:

- The borough is vulnerable to surface water flooding which regularly caused disruption to transport (road closures, speed restrictions and lane restrictions).
- Public transport links were affected by the heat as temperatures on all public transport modes were uncomfortable or worse.
- There has been an increase in damage to council infrastructure caused by weather events (e.g. trees, roads, pathways) and an increasing propensity for insurance claims against the Council.
- The cold weather experienced during the winter of 2009 to 2010 has caused an estimated £1,000,000 of damage to roads as a result of freeze / thaw weathering.
- Snow events, have a considerable impact on all service areas. Severe disruption on roads (affecting cars, buses, and emergency services), rail and tram lead to transport difficulties.
- High winds can affect the highways and drainage teams as leaves block gullies leading to surface water flooding. Fallen trees must also be attended to by the green spaces and highways teams to ensure main transport networks are not disrupted.

14 London Borough of Croydon, Scott Wilson, Jan 2010, Local Climate Impacts profile for London Local Authorities; Croydon
Council service areas have adapted their response to events as well as everyday practices accordingly. For example:

- A programme of soakaway maintenance has been introduced
- Council-run passenger vehicles have started introducing climate control to reduce temperatures during hot weather.

As a consequence of hot weather and prolonged periods of dry weather, Croydon Council actively collects rainwater for watering green spaces within the borough and arid (i.e. with water-resistant plants) roundabouts have been trialled as an option to cope with drought conditions and reduce water usage.

The highways team have also trained more gritter drivers and are introducing a three-shift system to increase standby capability and flexibility.

The aim for the ECCP over the forthcoming year is to achieve Level 2 under the NI188 guidelines. A key aspect of this will be the development of a comprehensive assessment of climate threats and opportunities across the council and partners’ operations for specific periods in the future, identifying priority risks and adaptation options. Work on this will begin with a partnership risk workshop in late 2010. In order to drive progress on climate change adaptation in Croydon over the next 3 years a ‘quick wins’ action plan has been developed which sets out the body of work that is currently already underway to support climate change adaptation. This also includes a number of actions that can be easily achieved and that will contribute to the body of work that is required under the NI188 guidelines. The ‘quick wins’ action plan has been structured by risk type. This documents the work currently being carried out to measure and reduce flood risk in the borough, including actions for the Drain London project, the de-culverting of the River Wandle, Norbury Park and the soakaway cleansing programme.

2.7.10 Crime and antisocial behaviour

MTS Challenge: Reduce crime, fear of crime and antisocial behaviour

SRTP Challenge: Improved access and movement to, from and within key places

SRTP Challenge: Improved connectivity to, from and within the sub-region

CCS Priority: Safer, Stronger and more Sustainable Communities

The security of people travelling on trains, trams and buses, is primarily the responsibility of the service operators and the metropolitan / transport police. We however play a major role in helping to ensure the safety of the public
waiting at bus / tram stops, walking to or from those stops, or otherwise using the Borough’s streets. The key means by which we aim to improve both security and the sense of security are:

- careful and appropriate street design;
- good quality street lighting; and
- CCTV.

Figure 2-30: Map of crime and antisocial behaviour on buses in Croydon and the wider South London sub region

Figure 2-31: Map of crime and antisocial behaviour on the rail network in Croydon and the wider South London sub region

**NOTE:** The level of vulnerability is derived from a composite index which yields a score per ward indexed to the average ward score across the whole of London, rather than across the sub region.
2.7.11  Road safety

MTS Challenge: Improve road safety

SRTP Challenge: Improved access and movement to, from and within key places

SRTP Challenge: Improved connectivity to, from and within the sub-region

SRTP Challenge: Managing highway congestion and make efficient use of the road network.

CCS Priority: Safer, Stronger and more Sustainable Communities

CCS Priority: Achieving Better Outcomes for Children and Young People

CCS Priority: Improving Health and Wellbeing

The number of road casualties in the borough has been significantly reduced. Croydon is on track to achieve nearly all of the casualty reduction targets set by central government and the London Mayor.

![Figure 2-32: Total number of people killed or seriously injured on roads in Croydon 1994-98 to 2006-08](image)

Many of the remaining casualties occur on the busier traffic routes in the borough, a large part of which is the Transport for London Road Network (TLRN). The following tables list the main lengths of road and junctions on both the TLRN and Croydon Council managed roads, at which higher numbers of casualties and more severe casualties are known to occur. Reducing the number and severity of road casualties further will require
concerted action by both us and TfL. This action is more pressing as we and TfL seek to encourage more people to walk and cycle, potentially increasing the number of more vulnerable users. The Council and TfL are encouraging all freight operators to join the Freight Operator Recognition Scheme, which includes training for divers on cycle awareness and safer driving.

Table 2-2: Worst affected road links (3 years – 2006 to 2008)

<table>
<thead>
<tr>
<th>Link</th>
<th>Ward</th>
<th>Total</th>
<th>Slight</th>
<th>Serious</th>
<th>Fatal</th>
<th>Ped</th>
<th>Cycle</th>
<th>% (P&amp;C)</th>
<th>PIC /Km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purley Way</td>
<td>Broad Green</td>
<td>45</td>
<td>39</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>4%</td>
<td>27.8</td>
</tr>
<tr>
<td>London Road</td>
<td>Norbury</td>
<td>43</td>
<td>35</td>
<td>8</td>
<td>0</td>
<td>6</td>
<td>7</td>
<td>30%</td>
<td>58.9</td>
</tr>
<tr>
<td>London Road</td>
<td>West Thornton</td>
<td>36</td>
<td>31</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>6</td>
<td>28%</td>
<td>41.9</td>
</tr>
<tr>
<td>Addington Rd / Selsdon Park Rd</td>
<td>Heathfield, Selsdon &amp; Ballards</td>
<td>32</td>
<td>29</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>19%</td>
<td>15.8</td>
</tr>
<tr>
<td>Purley Way</td>
<td>Waddon</td>
<td>32</td>
<td>30</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>19%</td>
<td>15.0</td>
</tr>
<tr>
<td>High Street</td>
<td>Fairfield</td>
<td>31</td>
<td>24</td>
<td>7</td>
<td>0</td>
<td>15</td>
<td>3</td>
<td>58%</td>
<td>57.4</td>
</tr>
<tr>
<td>Parchmore Road</td>
<td>Thornton Heath</td>
<td>29</td>
<td>23</td>
<td>6</td>
<td>0</td>
<td>10</td>
<td>1</td>
<td>38%</td>
<td>27.4</td>
</tr>
<tr>
<td>London Road</td>
<td>Selhurst</td>
<td>28</td>
<td>21</td>
<td>7</td>
<td>0</td>
<td>10</td>
<td>3</td>
<td>46%</td>
<td>39.4</td>
</tr>
<tr>
<td>Thornton Road</td>
<td>Broad Green</td>
<td>28</td>
<td>23</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>7%</td>
<td>24.8</td>
</tr>
<tr>
<td>Lower Addiscombe Road</td>
<td>Addiscombe, Ashburton</td>
<td>28</td>
<td>25</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>25%</td>
<td>20.3</td>
</tr>
<tr>
<td>Brighton Road</td>
<td>Coulsdon East / Coulsdon West</td>
<td>28</td>
<td>22</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>25%</td>
<td>18.8</td>
</tr>
</tbody>
</table>

Table 2-3: Worst affected junctions (3 years – 2006 to 2008)

<table>
<thead>
<tr>
<th>Node</th>
<th>Ward</th>
<th>Total</th>
<th>Slight</th>
<th>Serious</th>
<th>Fatal</th>
<th>Ped</th>
<th>Cycle</th>
<th>% (P&amp;C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park Lane/ Croydon Flyover/ Barclay Road</td>
<td>Fairfield</td>
<td>22</td>
<td>20</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Old Town/ Duppas Hill Lane</td>
<td>Fairfield, Waddon</td>
<td>18</td>
<td>17</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>17%</td>
</tr>
<tr>
<td>Purley Way/ Denning Avenue</td>
<td>Waddon</td>
<td>17</td>
<td>15</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>6%</td>
</tr>
<tr>
<td>George Street/ Park Lane</td>
<td>Fairfield</td>
<td>15</td>
<td>13</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>47%</td>
</tr>
<tr>
<td>Whitehorse Road/ Northcote Road</td>
<td>Selhurst</td>
<td>15</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>13%</td>
</tr>
<tr>
<td>Kent Gate Way/ Lodge Lane</td>
<td>Heathfield</td>
<td>14</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
Figure 2-3283: Borough wide personal injury collisions (general traffic) 2006 - 2008
2.7.12 Accessibility

**MTS Challenge:** Improve accessibility (including physical accessibility and access to jobs and services)

**SRTP Challenge:** Improved access and movement to, from and within key places

**SRTP Challenge:** Improved connectivity to, from and within the sub-region

**SRTP Challenge:** Managing highway congestion and make efficient use of the road network.

**CCS Priority:** Safer, Stronger and more Sustainable Communities

**CCS Priority:** Promoting Economic Growth and Prosperity

**CCS Priority:** Improving Health and Wellbeing

This LIP began by emphasising that Croydon is unique and the fact that much of that uniqueness stems from the connectivity and accessibility of the Croydon Metropolitan Centre. Chapter 2 outlined the patterns of development and transport provision beyond the Croydon ‘city’ centre. It suggested a correlation between higher levels of public transport accessibility, higher population density and lower car ownership and these factors in turn reflected through patterns of car use. Earlier in this chapter, the interrelationship between most of the London Mayor’s Transport Goals was highlighted. For example ensuring / improving accessibility is an important element in the achievement of several of the Goals including ‘Supporting economic development and population growth’, and ‘Reducing transport’s contribution to climate change’. In turn the challenges faced in meeting these Goals are also interlinked.

This chapter outlined the Council’s strategy for growth, components of which are:

- Collocating facilities, reducing or removing the need to travel in order to gain access to people, jobs and services; and

- Focusing growth in areas of higher public transport access.

Parts of the borough, (tending to be towards the east and the south) where public transport accessibility is lower and some of the higher greatest reliance car ownership/car use is observed, are predicted to experience a fall in population.
The notion of collocating facilities and focusing growth in areas of public transport accessibility is exemplified at the Croydon Metropolitan Centre, where it is planned to provide many more homes in an area of unrivalled public transport accessibility, an area of retail and other services and one planned for an increasing number of jobs. Croydon Council, its development partners and other partners including TfL, must then work together to tackle congestion at east Croydon Station and on Tramlink to ensure that the accessibility benefits of the Croydon ‘city’ centre continue to be realised.

Figure 2-34: Housing Density and Public Transport Provision
Ensuring access however also requires that the borough’s streets and transport infrastructure can be used by a broad band of the spectrum of the borough’s population as possible. It requires Network Rail to continue to make improvements to the accessibility of stations within the borough. Croydon Council and TfL need also to continue to improve the accessibility of the street environment. For example, whilst all vehicles within London’s bus fleet are built to accommodate people using wheelchairs, around a third of the borough’s bus stops fully meet TfL’s access design standards. Our programme of large ‘better streets’/public realm proposals at town centres provide the opportunity to make wholesale improvement to bus stops and other factors affecting access to and ease of movement within these important places. The intention is to supplement this programme with a wider ‘access’ focused programme to make improvement elsewhere.

For many, the cost of travel can be a barrier to access. To reduce this barrier, the council with the other London local authorities and TfL supports the Freedom Pass. For some people, mainstream public transport, still remains inaccessible or difficult to use. To this end Croydon Council with the other London local authorities and TfL support Taxicard. The service provides reduced cost taxi and minicab travel to people with long term disabilities reducing their ability to travel. The Council also provides support to ‘Croydon Accessible Transport’ (CAT), a community transport provide based in the voluntary sector. CAT provides accessible vehicles and trained volunteer drivers / driver training along with other resources to enable local groups to devise solutions to meeting their own access needs.

2.7.13 Regeneration and deprivation

*MTS Challenge:* Support regeneration and tackle deprivation

*SRTP Challenge:* Improved access and movement to, from and within key places

*SRTP Challenge:* Improved connectivity to, from and within the sub-region

*CCS Priority:* Safer, Stronger and more Sustainable Communities

*CCS Priority:* Achieving Better Outcomes for Children and Young People

*CCS Priority:* Promoting Economic Growth and Prosperity

Focussing growth at particular locations in and around particular centres is in part aimed at strengthening those centres, principally the Croydon metropolitan Centre. It is intended, along with improved street environment, to help sustain those centres help ensure their viability and vitality is increased.
2.8 LIP transport objectives

In the light of the challenges and opportunities facing Croydon and the resulting local priorities of Croydon Council and the Local Strategic Partnership, a set of Croydon specific priorities and objectives have been established to guide action via the LIP Delivery Plan set out in the following chapter. These LIP Priorities and Objectives are:

<table>
<thead>
<tr>
<th>LIP Priorities</th>
<th>LIP Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Safer Streets</strong></td>
<td>a) Fewer road casualties</td>
</tr>
<tr>
<td></td>
<td>b) Traffic speeds better controlled</td>
</tr>
<tr>
<td></td>
<td>c) Reduced crime and fear of crime</td>
</tr>
<tr>
<td><strong>2. Providing a Better Environment</strong></td>
<td>a) Increased sustainable travel through better choice and effective communications</td>
</tr>
<tr>
<td></td>
<td>b) Reduced transport contribution to climate change.</td>
</tr>
<tr>
<td></td>
<td>c) Reduced air pollutant emissions from transport</td>
</tr>
<tr>
<td><strong>3. Retaining Croydon’s Character</strong></td>
<td>a) Respecting local character</td>
</tr>
<tr>
<td></td>
<td>b) recognising the need to conserve and enhance Croydon’s historic environment</td>
</tr>
<tr>
<td></td>
<td>c) Designing for ‘place’ as well as ‘passage’</td>
</tr>
<tr>
<td><strong>4. Value for Money</strong></td>
<td>a) Make the best use of public transport infrastructure by improving and expanding where possible and effective maintenance where not.</td>
</tr>
<tr>
<td></td>
<td>b) Achieving best value in how we deliver and what we deliver</td>
</tr>
<tr>
<td><strong>5. Enhanced Quality of Life</strong></td>
<td>a) Increased access to transport and choices as well as targeted regeneration of key neighbourhoods.</td>
</tr>
<tr>
<td></td>
<td>b) Better integrated, safer and more reliable accessible transport systems for disabled and vulnerable people</td>
</tr>
<tr>
<td></td>
<td>b) Facilitate sustainable growth</td>
</tr>
<tr>
<td></td>
<td>c) Support and deliver regeneration</td>
</tr>
<tr>
<td><strong>7. Better Streets</strong></td>
<td>a) Enhanced public realm particularly within our town centres</td>
</tr>
<tr>
<td></td>
<td>b) Reduce in stages the pedestrian barrier created by the Wellesley Road,</td>
</tr>
<tr>
<td></td>
<td>c) Deliver the Connected Croydon Programme in stages</td>
</tr>
</tbody>
</table>
These have been checked (Figure 2-35) for compatibility against:

- Goals of the London Mayor's Transport Strategy;
- Priority Themes of the Croydon Community Strategy; and
- Vision Components of the draft replacement Croydon Community Strategy.

They will be delivered over the lifetime of the LIP ie the period to 2031.

The LIP Objectives have been shaped directly and indirectly by processes of consultation and engagement, Strategic Environmental Assessment and Equalities Impact Assessment. Public engagement began with ‘Imagine Croydon’ a process guided by the Croydon Local Strategic Partnership to develop a long-term vision for the borough.

The Vision was also drawn on when drafting the Core Strategy of the Local Development Framework. In turn the emerging core strategy influenced the LIP Objectives, principally LIP Priorities 6 and 7. The emerging Core Strategy and associated draft Infrastructure Delivery Plan in turn were part of the process to shape the LIP Delivery Plan and principally the ‘Connected Croydon’ Major Scheme proposals for the Croydon Metropolitan Centre and the major projects to enhance the public realm within other town centres. A draft of the LIP was consulted on locally. The draft was placed on the Council’s web site and in libraries along with consultation questionnaires. The consultation was advertised in the local press and the Council published ‘Your Croydon’. The consultation also extended to those organisations required to be consulted by the Greater London Authority Act 1999, namely:

(a) the Commissioner of the Metropolitan Police,

(b) Transport for London;

(c) such organisations representative of disabled persons as the council considers appropriate (in Croydon’s case this was the Croydon Mobility Forum and the Croydon Disability Forum); and

(d) each other London borough council whose area is, in the opinion of the council preparing the local implementation plan, likely to be affected by the plan (in Croydon’s case this was all neighbouring London boroughs and also neighbouring district councils outside of London).
<table>
<thead>
<tr>
<th>LIP Priorities</th>
<th>LIP Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ Devt &amp; Pop Growth</td>
<td>Quality of Life</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>Opportunities for All</td>
</tr>
<tr>
<td>Climate Change &amp; Resilience</td>
<td>MTS Goals</td>
</tr>
<tr>
<td>Reducing Public Transport crowding</td>
<td>SSRTTP Challenges</td>
</tr>
<tr>
<td>Improve access to/from and within key locations ('the place')</td>
<td>Community Strategy Priority Themes</td>
</tr>
<tr>
<td>Improve connectivity to/from and within the South sub-region ('the links')</td>
<td>Draft Community Strategy</td>
</tr>
<tr>
<td>Manage Highway congestion and make efficient use of the road network</td>
<td>Safer, Stronger and more Sustainable Communities</td>
</tr>
<tr>
<td>Achieving Better Outcomes for Children and Young People</td>
<td>Promoting Economic Growth and Prosperity</td>
</tr>
<tr>
<td>Improving Health and Wellbeing</td>
<td>Improving the Environment</td>
</tr>
<tr>
<td>Improving the Environment</td>
<td>Delivering High Quality Public Services &amp; Improving Value for Money</td>
</tr>
<tr>
<td>A Connected City</td>
<td>A Sustainable City</td>
</tr>
</tbody>
</table>

**1. Safer Streets**
- Fewer road casualties
- Traffic speeds better controlled
- Reduced crime and fear of crime
- Increased sustainable travel through better choice and effective communications

**2. Providing a Better Environment**
- Reduced transport contribution to climate change.
- Reduced air pollutant emissions from transport

**3. Retaining Croydon’s**
- Respecting local character
<table>
<thead>
<tr>
<th>LIP Priorities</th>
<th>LIP Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ Dev &amp; Pop Growth</td>
<td>Quality of Life</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MTS Goals</th>
<th>SSRTP Challenges</th>
<th>Community Strategy Priority Themes</th>
<th>Draft Community Strategy</th>
</tr>
</thead>
</table>

**Character**

- **b)** recognising the need to conserve and enhance Croydon's historic environment
- **c)** Designing for 'place' as well as 'passage'

**Value for Money**

- **a)** Make the best use of public transport infrastructure by improving and expanding where possible and effective maintenance where not.
- **b)** Achieving best value in how we deliver and what we deliver

**Enhanced Quality of Life**

- **a)** Increased access to transport and choices as well as targeted regeneration of key neighbourhoods.
- **b)** Better integrated, safer and more reliable accessible transport systems for disabled and vulnerable people
<table>
<thead>
<tr>
<th>LIP Priorities</th>
<th>LIP Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Econ Devt &amp; Pop Growth</strong></td>
<td>A) An efficient and effective transport system, prioritising sustainable modes where possible.</td>
</tr>
<tr>
<td></td>
<td>B) Facilitate sustainable growth</td>
</tr>
<tr>
<td></td>
<td>C) Support and deliver regeneration</td>
</tr>
<tr>
<td><strong>Opportunities for All</strong></td>
<td>A) Enhanced public realm particularly within our town centres</td>
</tr>
<tr>
<td></td>
<td>B) Reduce in stages the pedestrian barrier created by the Wellesley Road,</td>
</tr>
<tr>
<td></td>
<td>C) Deliver the Connected Croydon Programme in stages</td>
</tr>
<tr>
<td><strong>Climate Change &amp; Resilience</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Quality of Life</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Safety &amp; Security</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Reducing Public Transport crowding</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Improve access to/from and within key locations (The place)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Improve connectivity to/from and within the South sub-region (The links)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Manage Highway congestion and make efficient use of the road network</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Safer, Stronger and more Sustainable Communities</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Achieving Better Outcomes for Children and Young People</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Promoting Economic Growth and Prosperity</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Improving Health and Wellbeing</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Improving the Environment</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Delivering High Quality Public Services &amp; improving Value for Money</strong></td>
<td></td>
</tr>
<tr>
<td><strong>A Connected City</strong></td>
<td></td>
</tr>
<tr>
<td><strong>A Sustainable City</strong></td>
<td></td>
</tr>
</tbody>
</table>
The process of Equalities Impact Assessment (EqIA) ran in parallel with the development and refinement of the draft LIP. This led to the retention of a specific ‘Local Area Accessibility’ programme within the LIP Delivery Plan to make bus stop access and other small access improvements over and above those being made as part of many of the other projects within the Delivery Plan. A facilitated meeting was held with representatives of the Croydon Mobility and Disability forums to draw in views from the two forums and to involve them in the Equality Impact Assessment process running in parallel with, and as part of the LIP development process. Involvement of the Croydon Mobility and Disability forums led to the highlighting of a number of issues that cannot be directly influenced through the LIP, but being important to Forum members, these are highlighted here. These issues include:

- Bus drivers not ensuring priority is given to wheelchair users in the wheelchair space on buses.
- Lack of public awareness regarding the priority to be given to wheelchair users in the wheelchair space on buses.
- Buses not pulling up to the kerb and / or the ramp not being deployed for people with reduced mobility / using wheelchairs.
- Blind or partially sighted passengers waiting at bus or tram stops served by a number of routes, having no way of knowing which bus / tram is pulling up to the stop.

These issues will be taken up by the Council with TfL and the bus operators via the Croydon Public Transport Liaison Panel.

The LIP EqIA has also resulted in changes to the content and method of delivery of some of the projects and programmes within the Delivery Plan. These include:

- The feasibility and design stages of developing major public realm improvement projects are to include an access audit conducted with members of the Mobility Forum.
- People with certain disabilities are unable to see and / or hear cyclist approaching. Hence the cycle training provided to children and adults should be revised to include disability awareness.
- Speeding and other antisocial driving can potentially have a bigger effect on people with disabilities / reduced mobility. Hence the Young
Driver Training programme forming part of the Delivery Plan should be revised to include disability awareness.

Further issues were simply to be acknowledged in the LIP. These include car ownership being lower amongst women and hence women are more likely to be dependent on public transport.

The development of the LIP was also subject to process of Strategic Environmental Assessment (SEA). The Scoping stage of the SEA was conducted during the early part of preparing a first draft of the LIP. The scoping stage drew in issues to be considered as part of LIP development from European, National, London and local legislation, strategies and guidance and then indicated opportunities for the LIP to potentially address these issues. In particular the scoping stage ensured and/or strengthened the link between the LIP and other Croydon plans such as the Croydon Air Quality Management Action Plan, Climate Change Mitigation Strategy and Climate Change Adaption Action Plan. It led to the inclusion of the following LIP priorities and objectives:

**LIP Priority 2. Providing a Better Environment**

a) Increased sustainable travel through better choice and effective communications

b) Reduced transport contribution to climate change.

c) Reduced air pollutant emissions from transport

**LIP Priority 3. Retaining Croydon’s Character**

a) Respecting local character

b) recognising the need to conserve and enhance Croydon’s historic environment

Some of the opportunities identified for the LIP via the SEA scoping stage included:

**Air Quality**

It is essential that opportunities are sought to reduce emissions from vehicle use, the adoption of cleaner technology and/or modal shift.

The LIP2 should aim to support existing legislation and provisions for the protection and improvement of air quality along with the reduction of associated emissions levels.
Given the uncertainties regarding human health effects an opportunity exists to promote a precautionary approach with respect to air quality effects.

**Climatic Factors**

The LIP2 should ensure that new transport development takes into account implications of climate change. It should promote measures that attempt to minimise emissions of CO₂.

The LIP2 should promote sustainable modes of transport across Croydon, encouraging people to reduce reliance on private cars – this should include use of public transport and active travel.

**Landscape and Townscape**

Opportunities should be sought to ensure high quality design and landscaping at the local level, in order to positively contribute to the quality of the local environment.

Opportunities should be sought to promote the local character and distinctiveness through transport proposals, in order to encourage inward investment.

The protection of the natural and built environment, including urban greenspace, would generate positive implications for local residents and visitors.

Walking and cycling provision should make the most of opportunities for the strategic use of Green Corridors within Croydon, which would contribute to improved connectivity whilst indirectly benefiting existing townscapes and human health.

**Human Health**

Good health can be linked to improved accessibility to high quality open spaces and participation in sport and physical activities.

Walking and cycling opportunities should be promoted through the LIP2 to help deliver public health benefits. Cycle opportunities should target all sectors of the population including the young and the elderly. The need to encourage greater levels of physical activity is particularly important in view of the ageing population and the need to maintain healthy lifestyles. Encouraging the young to cycle could also contribute in the reduction of childhood obesity in Croydon.
There are opportunities to further reduce accident rates across Croydon in key hotspots through a number of means – these should be explored further through the LIP2 to further improve safety records and to potentially improve perceptions of the safety of

**Croydon’s Transport Network**

The LIP2 presents an opportunity to promote awareness of the benefits of walking and cycling and to promote new opportunities for these activities across Croydon.

The LIP2 should give consideration to improving perceptions of safety in Croydon’s public transport network (particularly on local buses).

The LIP is being prepared in parallel with the Local Development Framework (LDF) Core Strategy. Hence the opportunity has been taken to ensure that the two documents work to support each other, with the LIP drawing on and reflecting the spatial, locational and access objectives within the emerging Core Strategy. The development of the LIP Delivery Plan was also able to draw on the list of transport interventions with the draft Infrastructure Delivery Plan (part of the evidence base for the LDF).

The Croydon Environment and Climate Change Partnership (ECCP) was established as one of the theme partnerships within the Local Strategic Partnership (LSP). The ECCP membership extends over various environmental stakeholders including Transport for London, the Energy Saving Trust, local businesses, schools and representatives from the faith and voluntary sector. The ECCP developed and consulted on both the Croydon Climate Change Mitigation Action Plan and Croydon Climate Change Adaptation Action Plan. In particular, the CO₂ reduction target developed in partnership with TfL and the other members of the ECCP (and included in the Climate Change Mitigation Action Plan adopted by Croydon Council) is reiterated and employed in the Performance Plan element of this LIP.

The Croydon Air Quality Action Plan 2007-10 was nearing its end as development of the LIP2 was starting. Most of the actions in the Air Quality Action Plan had been started / implemented. Preparation of the new / replacement Action Plan has run in parallel with the development of the LIP2, offering the opportunity to coordinate the content of both. One of the key actions from the Action Plan being taken forward through the LIP Delivery Plan is the development of a Construction and Logistics Plan for the Croydon Metropolitan Centre.
The current Highways Asset Management Plan is nearing the end of its life and is being revised. The strategic approach to the management of Croydon Council’s highway assets taken in the Plan, results in the level of capital maintenance indicated within this LIP. The Plan identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future customers. It takes a longer-term view of how the Council manages its assets. It also uses lifecycle planning and the minimisation of whole life costs to help allocate resources to where they are likely to provide the best long-term benefits.

Figure 2-33 The Croydon Asset Management Process
3 Delivery plan

3.1 Introduction

This chapter takes as its focus, the period 2011/2012 to 2013/14, describing the proposed actions to implement the Transport Strategy in Croydon in the short term. It does however look further into the future for a number of actions and activities, particularly those related to land use planning and master planning. A number of the projects and programmes will continue beyond the three year life of the Delivery Plan. Action to deliver the goals and objectives of the MTS and to meet the challenges of the Sub-regional transport strategy will be ongoing achieving them within the lifetime of the MTS, namely 2031. The Delivery Plan is shaped by, and structured around the LIP Objectives established in the preceding chapter.

Section 3.2 outlines the various anticipated funding sources and amounts being employed to deliver proposals in the period 2011/12 to 2013/14.

Section 3.3 summarises our Delivery Actions. It also describes how our more detailed annual programme will be drawn up in the form of an annual spending submission to Transport for London.

3.2 Potential funding sources

Table 3-1 outlines some of the proposed investment / spend along side that provided by TfL through the LIP funding allocation and bidding processes. It indicates some of the Croydon Council capital investment such as £7.5 million pa over the next three years to be invested in maintaining non-principal roads. It gives an indication of some of the Section 106 (development related) funding to be employed to support investment in streets, transport and access improvement. Other areas of funding indicated include SusTrans ‘Connect2’ funding and Network Rail funding. The ‘Connected Croydon’ Major Scheme proposal has a value over three years of over £10 million. Of this it is proposed that £4 million be provided from TfL’s Major Scheme programme, with the remainder of the funding coming from a variety of sources.

Funding for planning for the future such as the various masterplans and the development of the Opportunity Area Planning Framework, is not included in table 3-1. We have not attempted to include in the table, the annual value of street lighting improvement that would be delivered via the PFI the Council is moving towards. Croydon Council is also supporting provision of extra Tramlink cars by TfL.
<table>
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<tr>
<th>Funding Source</th>
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<th>2012/13</th>
<th>2013/04</th>
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<td><strong>Integrated Transport</strong></td>
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<td></td>
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</tr>
<tr>
<td>LIP ‘Corridors, Neighbourhoods’</td>
<td>3,297</td>
<td>3,163</td>
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<td>LIP ‘Local Transport’</td>
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<td>100</td>
<td>100</td>
<td>300</td>
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<td>TfL ‘Biking Borough’</td>
<td>83.5</td>
<td>103.5</td>
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<tr>
<td>Additional Trams Council Contribution</td>
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</tr>
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<td>Other Council Capital / Revenue funding</td>
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<td>200</td>
<td>200</td>
<td>600</td>
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<td><strong>Maintenance</strong></td>
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<td>1,000</td>
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<td>Council Capital funding</td>
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<td>7,850</td>
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<td><strong>Major Projects/Programmes</strong></td>
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<tr>
<td>East Croydon footbridge/new station entrance:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Council Capital</td>
<td>3,000</td>
<td></td>
<td></td>
<td>3,000</td>
</tr>
<tr>
<td>- Growth Area funding</td>
<td>2,000</td>
<td></td>
<td></td>
<td>2,000</td>
</tr>
<tr>
<td>- Developer Contributions</td>
<td>1,000</td>
<td></td>
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<td>1,000</td>
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<tr>
<td>- Network rail</td>
<td>2,000</td>
<td>12,000</td>
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<td>14,000</td>
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<td>Wider Connected Croydon (public realm improvement):</td>
<td></td>
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<td></td>
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<tr>
<td>- Council Capital</td>
<td>2,618</td>
<td>2,598</td>
<td>2,135</td>
<td>7,351</td>
</tr>
<tr>
<td>- LIP Major Schemes funding (Bid submitted, awaiting announcement)</td>
<td>4,000</td>
<td>4,000</td>
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</tr>
<tr>
<td>- Various External Sources</td>
<td>8,000</td>
<td>13,000</td>
<td>1,000</td>
<td>22,000</td>
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</table>
3.3 Delivery actions

This section describes the types of intervention we propose to deliver the LIP objectives. These will be delivered in line with the MTS timeline namely through to 2031. Figure 2-32 above identifies where these objectives help deliver the Goals of the MTS and the key challenges identified for the South London Subregion.

3.3.1 LIP Objective 1(a)

Safer streets: Fewer road casualties

The delivery programme includes a series of proposals aimed at reducing road danger and road risk, plus others intended to increase the sense of personal safety. The programme includes a series of ‘hard’ engineered measures to tackle:

- known casualty locations; and
- locations where perceptions of road danger and road risk are potentially acting as a deterrent to walking.

The proposed programme of physical interventions within Croydon’s streets is supplemented by a programme of ‘soft’ measures, such as education, training and publicity initiatives aimed at adjusting attitudes and behaviour and reducing the number and severity of casualties.

Higher vehicle speeds are linked to many of the more severe casualties. Thus many of the ‘hard’ measures proposed to reduce road casualties are aimed at reducing the numbers of speeding vehicles. Other programmes aimed at improving conditions for cycling, such as the proposed ‘Connect 2’ cycle link, and measures to aid walking such as new crossings, also have a secondary aim of making cycling and walking safer.

The programme of ‘softer’ measures - Road Safety Education, Training and Publicity activities, focuses primarily on children and young people. It includes:

Young Driver Awareness Training: Training for those approaching driving age or under 25 and new to driving.

‘Transition’ Road Safety Training: Training aimed at primary school children approaching the move to Secondary School and the widened independent travel horizon this brings.

Junior Road Safety Officer Scheme: Training information and resources aimed at children aged 7 to 11 to promote the road safety message throughout the school.
3.3.2  **LIP Objective 1(b)**

**Safer streets: Traffic speeds better controlled**

We use information collected by the police and provided by TfL to identify locations where road casualties are occurring and to understand the causes of those casualties. This ‘data led’ approach has shaped a programme of ‘Route’ based and ‘Junction’ based actions to reduce the number and severity of casualties principally by tackling ‘speeding’ traffic. ‘Routes’ along which such action is proposed include:

- London Road between Canterbury Road and Brigstock Road
- Lower Addiscombe Road, between Cherry Orchard Road and Black Horse Lane
- County Road / Thornton Heath High Street / Parchmore Road.

Junctions at which action is proposed include Kent Gateway / Lodge lane.

Further measures are proposed at specific locations as part of a borough wide programme. The location specific proposals include:

- installing speed indicator signs at Green Lane; and
- using traffic signs at Downs Road to make drivers more aware of their speeds and to adjust their driving behaviour.

At various locations where speeding causes road danger, it is planned to make drivers more aware of their speeds and reduce the incidence of speeding by:

- deploying mobile speed indicator signs; and
- the use of road markings.

3.3.3  **LIP Objective 1(c)**

**Safer streets: Reduced crime and fear of crime**

Croydon Council is entering into a ‘Street Lighting Private Finance Initiative’. Over the period of this Delivery Plan, much of the Borough’s street lighting will be replaced. Lighting will be brought up to the required brightness standards, while white light will aid facial recognition.
Much of our efforts to improve both security and the sense of security, flow from ‘Safer by Design’15 principles. The series of masterplans developed for the Croydon Metropolitan Centre aim in part to:

- create streets and thoroughfares with greater activity and more active frontages, increasing the level of natural surveillance; and
- change and expand the evening and night time economies, increasing the number of ‘legitimate’ street users.

Similar principles and objectives underlie proposals to improve the public realm within several of the borough’s District Town Centres via the ‘Better Streets’ proposals.

3.3.4  LIP Objective 2(a)

Providing a better environment: Increase sustainable travel through better choice and effective communications

Our approach to encouraging the use of more sustainable modes of travel is three fold, namely:

- increasing the availability and attractiveness of alternatives to private car ownership and use;
- advertising the availability of these alternatives, and the health and other benefits of using them; and
- leading by example.

Cycling

In order to support and encourage more cycling we are:

- delivering the east / west ‘Connect2’ cycle route linking to, and through the Croydon Metropolitan Centre;
- developing and delivering wider cycle route improvements;
- providing cycle training aimed particularly at children and young people to develop road sense, increase cycling skills, encourage safer cycling and to get more people cycling; and
- working to create a ‘cycle hub’ at East Croydon Station.

15 ‘Safer by Design’
Croydon is one of London’s / the London Mayor’s ‘Biking Boroughs’. As such we have researched in some depth:

- the numbers of people cycling;
- who these cyclists are; and
- the potential for more cycling.

During 2011/12 this information will be used to develop our Biking Borough Action Plan. Implementation of the Action Plan will follow in subsequent years.

Delivering the Biking Borough promise is being considerably assisted through the provision of £450,000 Biking Borough Funding by TfL for 211/12-2013/14. This funding will help improve permeability for cyclists in and around the Croydon Metropolitan Centre; be used to encourage and facilitate cycling in certain parks; provide cycling for health sessions and guided local rides; and help deliver a high quality cycle park/cycle hub at East Croydon station. Whilst developing the Action Plan and implementing the Biking Borough funded programme we will continue to develop and implement measures to aid and encourage cycling using LIP funding. As well as the Connect 2, specific examples include the:

- Thornton Heath: East Croydon Cycle route connecting via the BRIT School with East Croydon Station / public transport interchange, proposed cycle hub and the ‘city’ centre
- St James Road: West Croydon cycle route creating a new route from the wider network to West Croydon Station / public transport interchange and the ‘city’ centre

Whilst the network of Cycle Superhighways does not penetrate the Borough to any great extent, the Council is pursing promotional activities similar to those of Cycle Superhighway boroughs, to bring added value to the Superhighways. Croydon Council runs a very popular / well subscribed programme of cycle training for both children and adults. With the help of Biking Borough funding, we are able to build on this training by providing led local rides, engage with business to encourage cycling amongst employees, and undertake other activities to encourage cycling and widen access to cycles. All are intended in part to increase the numbers potentially able to use and benefit from the network of Cycle Superhighways.
As well as improving and expanding the network of cycle routes, we are also working to increase the availability of cycle parking in the Borough. On-street, we are doing this primarily as part of the major public realm improvement projects and the Connected Croydon Major Scheme within the Croydon Metropolitan Centre. Thus, the numbers of cycle parking space being introduced on-street will increase over the three years of this Delivery Plan, as Connected Croydon move into the implementation phase. It is expected that 50 additional cycle parking spaces will being delivered during 2013/14. We are also working with Network Rail and employing Biking Borough funding to deliver a new 200+ space cycle park at East Croydon Station in 2013/14. It is perhaps through the planning process and the application of development standards that we can have the most significant effect on the supply of cycle parking. One development alone within the Croydon Metropolitan Centre includes around 1900 cycle parking spaces for residents, office workers and shoppers, plus additional ‘on-street’ parking for other visitors. Other developments of similar scale, including considerable cycle parking provision, have planning permission within the Croydon Metropolitan Centre. Whilst the Council can negotiate levels of cycle parking to be provided as part of the development proposals and can grant planning permission, it has no control over whether and when the planning permission is implemented. The scale rate of increase in on and off-street cycle parking is very much dependent on planning permissions being implemented. The nature of the development market makes it very difficult to predict the rate at which off-street cycle parking numbers will increase. Thus only the coarsest of estimates can be made as to the likely provision of off-street cycle parking across the Borough over the three years of this Delivery Plan. However, it is envisaged that around 30 on street spaces will be achieved each year in 2011/12, 20012/13 and 20012/13 and 200 spaces off-street in each of the three years (NB the Council does not monitor if and when planning permissions are implemented and so does not monitor when new cycling parking spaces are delivered within new development).

Walking

The Council and its partners are proposing action on a grand and ambitious scale to facilitate and encourage walking within the Croydon Metropolitan Centre / Opportunity Area. Much of the centre was rebuilt in the 1960’s along functionalists lines based on access and distribution by car. This made for and environment difficult to negotiate on foot. The public realm is being re-planned via a series of masterplans which seek to create a much more walkable environment. The East Croydon Masterplan for example proposes
breaking the barrier created by the railway by providing a new pedestrian bridge. It also proposes breaking the barrier either side of railway posed by the large land blocks, via redevelopment that allows pedestrian connections through the sites and across the Bridge. This is being supplemented with the Connected Croydon programme to greatly improve the walking experience within the existing streets. A major element of Connected Croydon is to breakdown the barrier to pedestrian movement created by the Wellesley Road, initially with a series of surface crossings. The first of these is due to be constructed in 2012 and forms part of the new Connect2 east / west walking and cycling Route being created across the borough in partnership with Sustrans. These improvements are being further supplemented by the biggest single introduction of ‘Legible London’ pedestrian signing outside of central London. The emerging Local Development Framework Core Strategy and the Opportunity Area Planning Framework, plan outline the ambitions of the London mayor and Council to regrow the Croydon centre. Both seek to place thousand of new residents in the centre. In easy walking distance of new and existing jobs, shops and other services.

Our further ‘Better Streets’ / Public Realm proposals for district and other centres, also aim to enhance the walking experience within the high streets. Smaller, localised action to facilitate walking is proposed across the borough. This is mostly in the form of new zebra crossings and signal controlled crossings, and pedestrian refuge islands. The proposed programme of works at traffic signals is also predominantly to introduce or improve pedestrian phases / crossings.

It is intended to advertise these widening travel choices and the health and other benefits of walking and cycling, through a series of promotional and ‘travel planning’ activities. These include ‘Walk to Work’ promotional activities and working through ‘ENVIBE’ to encourage and support businesses to develop and implement travel plans.

We intend to lead the way and lead by example, conducting new staff travel surveys to update our travel plan. Specific measures arising from that travel plan include reducing the:

- need for staff to bring their own cars to work (to use during the course of work), by providing ‘Car Club’ cars as pool cars;
- reducing the amount of staff car parking.
3.3.5 **LIP Objective 2(b)**

*Providing a better environment: Reduced transport contribution to climate change*

The Croydon Climate Change Mitigation Action Plan proposes behaviour change as a key means of delivering carbon reduction. It describes action needed on a broad front.

‘The key challenge to achieve our target to reduce transport’s contribution to climate change is to promote behavioural change to encourage people to switch from the private car to more sustainable modes of transport, reduce congestion and the dependency on car travel, reduce levels of air pollution and noise from transport, improve the accessibility and encourage the use of environmentally-friendly modes of transport, raise awareness of the impact of transport and travel decisions, reduce the risk and perception of risk of danger from the use of all modes of transport and promote sustainable growth in terms of economic development and land-use planning.’

Specific areas of intervention set by the Action Plan include addressing the:

- Large number of trips made using high carbon emitting forms of transport. It explains that action needs to be taken to promote cycling and walking through Work Place Travel Planning and School Travel Plans.

- Level of freight movement using high carbon emitting forms of transport. It explains that action needs to be taken to rationalise freight movements through the implementation of Delivery Services Plans (DSP) and Construction Logistic Plans.

- Rate of uptake of low carbon and fuel efficient vehicles and barriers to this, including the cost, available infrastructure and public awareness. Transport’s contribution to poor air quality is due to the amount of traffic, how vehicles are driven, whether vehicles can flow freely or are constrained by congestion and the type of vehicles (size, emissions standard built to, how it is maintained etc).

The Action Plan also explains the contribution each activity and resulting shift in behaviour is predicted to make to achieve the CO2 reduction target set within the Action Plan.
The LIP delivery plan responds to the Action Plan by including proposals to:

- continue to develop School and Work Place Travel Plans;
- develop a construction logistics plan for the Croydon Metropolitan Centre;
- increase the number of car club parking bays; and
- increase the number of electric vehicle charging points.

It also includes a proposal to work with partner organisations to develop Management Plans to reduce carbon emissions to agreed target levels, and then to use the ‘Carbon Hub’ software to enable all partners to monitor and report achievements.

3.3.6  LIP Objective 2(c)

Providing a better environment: Reduced air pollutant emissions from ground based transport

Much of the improvement in Air Quality is being brought about through improvements in vehicle efficiency and technology. The larger more polluting vehicles are given extra incentive for improvement due to the London-wide Low Emissions Zone. Also, many of the actions described in the preceding sections, are intended also to reduce emissions of locally important pollutants. Whilst taking such action, we propose to continue to monitor its effectiveness by maintaining our network of air pollution monitoring stations and diffusion
tube monitoring. The actions within this LIP are generally intended to have a cumulative and widespread effect. There is however one proposal intended to significantly lessen pollutant concentrations and exposure at a pollution hot spot. The ‘canyon’ design of the Wellesley Road, combined with the volume of traffic running along it leads to raised pollution levels beyond the objectives set by central government. The fact that it sits is at the heart of the Croydon ‘city’ centre means that large numbers of people are exposed to these raised pollution levels. The ultimate aim for Wellesley Road is to reduce the volume of traffic and eventually create a greener and predominantly public transport corridor.

Croydon Council is also working with TfL and other partners to expand the network of electric vehicle charging points. We are in the process of signing up to the London ‘Plugged in Places’ partnership in order to access central government support towards the installation and maintenance of charging points. In parallel we are in the process of joining the TfL coordinated ‘Source London’ agreement providing a centrally administered electric vehicle charging membership scheme. Being a part of the ‘Source London’ agreement will mean that Croydon residents with electric vehicles will be able to use any ‘Source London’ charging point across the Capital. Our ambitions for new on-street charging points are modest over the short term. Points will primarily be delivered as part of the major public realm improvement projects such as those in Purley, Addiscombe and South Croydon. Hence during the period of this delivery plan we envisage delivering two on-street charging points per year. It is off-street where the bigger growth in electric vehicle charging infrastructure will take place. We have already provided electric vehicle charging in several of our car parks and some other operators have done the same. Southern Railways, the main train operating company in the Borough has a programme of delivering charging points at some of its park-and-ride facilities. Other large car trip attracting organisations such as supermarkets are similarly introducing electric vehicle charging points at their exiting facilities. In addition, the Council is encouraging and/or requiring the provision of electric vehicle charging at certain developments via the planning process. For example, electric vehicle charging is proposed as part of several large developments granted planning permission within the Croydon Metropolitan Centre. However, when these electric vehicle charging points are delivered is dependent on when the planning permission is implemented. Thus we are making a cautious estimate of the likely number of charging points to be delivered over the three years of this Delivery Plan, estimating points being delivered off-street at the rate of 10 per year.
3.3.7  LIP Objective 3(a) and (b)

**Retaining Croydon’s Character: Respecting local character**

Retaining Croydon’s Character: Recognising the need to conserve and enhance Croydon’s historic environment

Respecting local character when making changes within Croydon’s streets is linked strongly with the London Mayor’s ‘Better Streets’ objective. It is about acknowledging the difference in architectural style across the different places in the borough. It is also about ensuring that the design of carriageway and footway (the ‘floor’ of the street) does not distract from/ draw attention away from the buildings forming the ‘walls’ of the street. It is also about ensuring the use of appropriate surface materials, and minimising the number of traffic signs and other pieces of traffic management ‘paraphernalia’. These principles are being followed in the design and implementation of the major public realm improvement proposals for Purley, Addiscombe and the South Croydon, key components of the LIP Delivery Plan.

3.3.8  LIP Objective 3(c)

Retaining Croydon’s Character: Designing for ‘place’ as well as ‘passage’

In chapter two we explained that as well as there being a hierarchy of traffic routes through the borough, there is also a hierarchy of places within it. Most of the borough’s more important places, its various town centres, sit on the more important traffic routes. Traditionally these routes become the high street as they pass through the town centre. In the recent past, design of these routes, even within town centres, has tended only to reflect and respond to the vehicle movement function and status. In future, principally via our ‘Better Streets’ programme, the main streets through some of borough’s important places will be remade. The redesign of the streets will seek to respond to and support the many functions high streets fulfil beyond catering for through movement.

3.3.9  LIP Objective 4(a)

Value for Money: Make the best use of public transport infrastructure by improving and expanding where possible and effective maintenance where not

Generally, the cost of delivering tram and rail infrastructure is beyond the scale that could be met through LIP funding. The Council is working with TfL to make the best use of the existing tram line infrastructure, helping TfL purchase an additional 6 trams (with a possible further 4) to increase the
passenger throughput on the busiest parts of the network. It is similarly working with TfL and its subregional partners with a view to the tram network being expanded incrementally along the potential routes identified in Figure 2-14 above and to Crystal Palace.

In terms of numbers of passenger journeys, the bus network is equally as important as Tramlink in connecting people and places in and beyond Croydon. It is on the bus network that LIP funding can be employed to noticeable effect. The Delivery Plan consequently includes proposals for bus priority measures to improve the speed and reliability of bus services; and to help reduce the cost of bus operation. These include the design and implementation of measures along:

- the A235 north of the Croydon Metropolitan Centre, from the A23 to West Croydon Station;
- Cherry Orchard Road to East Croydon Station /public transport interchange; and
- to improve bus service reliability and journey times to and from these hubs and Croydon ‘city’ centre.

The programme also includes proposal for new/ additional bus stands, to further support the efficiency and reliability of the borough’s bus services. Many of these proposals are taken from the Croydon Metropolitan Centre Bus Strategy being developed with TfL. The purpose of the strategy is to set out how the bus capacity should be expanded (building on the existing network) to meet the regrowth in jobs and homes planned for the centre.

The East Croydon Masterplan includes proposals to significantly increase the capacity of the East Croydon station by:

- reconfiguring the existing station entrance hall; and
- creating a pedestrian bridge also acting as a second station entrance and exit.
3.3.10  **LIP Objective 4(b)**

**Value for Money: Achieving best value in how we deliver and what we deliver**

Croydon Council is pursuing an ‘invest to save’ approach, employing its own capital and LIP Principal Road Maintenance to undertake a programme of capital maintenance on the borough’s roads. This aims to reduce the need for and cost associated with reactive maintenance, bringing long term savings. The Council is currently reviewing its Highways Asset Management Plan and **plans to** bring it up to date by the end of 2011, and improving its accuracy to help optimise its street asset management and maintenance regime.

The delivery of all our big capital programmes and projects are the subject of competitive tendering with a view to ensuring the optimum level and balance of price and quality. Both the design and implementation of each of the large public realm improvement projects with the Delivery Plan will be procured though competitive bidding processes. Similarly, the Council’s road maintenance programme is delivered by contractors appointed after competitive tendering.

An example of the Council looking critically at what it delivers how it delivers is the Street Lighting Private Finance Initiative being undertaken jointly with Lewisham Council. The joint procurement of the service brings economies of scale and other value for money related benefits. In the first five years of the contract approximately 38,000 street lights and 8,000 street signs and bollards will be replaced across Croydon and 4,000 other street lights refurbished with an on-going 25-year maintenance and repair liability. The aims of the project include:

- Improving efficiency, including energy savings and reduced carbon emissions;
- Improving overall safety;
- Providing a better living and working environment;
- Providing value for money;
- Improved street lighting standards;
- Reduction in crime and the fear of crime; and
- Supporting the night-time economy.
The external lighting on council housing estates and in parks and open spaces is also included within the Project. Both local authorities have large housing portfolios and several parks, manage of which have public footpaths and cycle routes running through them. Good quality lighting in parks support the Authorities’ clean, green and liveable agendas, encourages healthy activity (increased walking and cycling, which are central to the Mayor of London' transport strategy), and reduces crime and the fear of crime.

The project includes a Central Management System (‘CMS’) will allow lighting to be controlled in a way that is not possible with the current infrastructure. It will allow for lighting levels to be varied and/or lighting to turn off if and when such steps are required. It will support energy management as an objective and will deliver a more sustainable, less carbon-polluting service. The CMS will also identify lights that are near to failure (from energy consumption profiles), which will facilitate change in advance of actual failure and, again, optimise energy use.

3.3.11 **LIP Objective 5 (a)**

*Enhanced Quality of Life: Increased access to transport and increased choice*

Action aimed at ‘Providing a better environment’, includes proposals to increase the attractiveness and availability of a wide range of alternatives to the conventionally powered private car. The second dimension of our approach to increase access and choice is to better meet the needs of those with impaired mobility. The Croydon Metropolitan Centre masterplans seek to deliver a much more accessible environment within the Metropolitan Centre. The ‘Better Streets’ proposals at a number of the district centres similarly seek to make the street environment more accessible. Beyond these areas the Delivery Plan includes:

- A general ‘accessibility’ programme to make bus stops accessible and to deliver dropped kerbs and tactile paving
- Proposals for signal controlled pedestrian crossings in order to reduce barriers to movement

The ‘co-location’ strategy within the proposed spatial plan aims to locate people and services in close proximity, increasing accessibility and choice whilst reducing the need to travel.
3.3.12  LIP Objective 5 (b)

Enhanced Quality of Life: Better integrated, safer and more reliable accessible transport systems for disabled and vulnerable people

The Council works with its partners to continually improve the accessibility of the public transport network. TfL has ensured that the whole of the bus fleet is accessible to people who use wheelchairs. The Council and TfL are continuing to make adjustments to bus stops to ensure that people who use wheelchairs can move from the stop onto the bus. The Equalities Impact Assessment conducted as part of the LIP2 development and the involvement of representatives of the Croydon Mobility and Disability Forums, highlighted concerns about bus driver training potentially affecting accessibility. These included drivers not always pulling up to the kerb and not enforcing the priority given to wheelchair users over buggies in the wheelchair space. These points were made strongly and the Council will work with TfL and the bus operators via the Public Transport Liaison Panel to seek to address these issues.

Network Rail has a programme of access improvements at stations and the Council will press Network Rail to expand its programme within Croydon. The Council also contributes to the running of the London-wide Freedom Pass.

Some people’s needs still cannot be met by mainstream public transport. For this reason the Council provides support to the local community transport provider. Croydon Accessible Transport provides accessible vehicles and volunteer drivers with which groups of people can provide some solutions to meeting their travel needs. It is for this reason also that the Council continue to contribute to the London-wide Taxicard Scheme, providing subsidised taxi travel for people with long term disabilities.

3.3.13  LIP Objective 6 (a), (b) and (c)

Support economic development and growth: Provide an efficient and effective transport system, prioritising sustainable modes where possible

Support economic development and growth: Facilitate sustainable growth

Support economic development and growth: Support and deliver regeneration

The London Plan (Policy 2.16) states that the London Mayor will and boroughs and other stakeholders should identify, develop and promote strategic development centres in outer London or adjacent parts of inner London with one or more strategic economic functions of greater than sub-regional importance by:
- coordinating public and private infrastructure investment;
- bringing forward adequate development capacity;
- placing a strong emphasis on creating a distinct and attractive business offer and public realm through design and mixed use development as well as any more specialist forms of accommodation; and
- improving Londoners’ access to new employment opportunities.

Croydon’s emerging Core Strategy sets the aspiration for Croydon to be London’s most enterprising borough and defines it as a place of opportunity, a place to belong and a place with a sustainable future. The emerging Core Strategy identifies Croydon Metropolitan Centre in particular as the place providing the greatest opportunity for positive change, and is seen as having capacity for thousands of new jobs and homes, and includes options for enhancing the quality of the public realm, and providing enhanced facilities and amenities. These will include new educational, cultural, retail, business, leisure and community uses, underpinned by robust green and grey infrastructure.

In looking to achieve growth in the Metropolitan Centre, Croydon Council is working with TfL to model and understand potential effects on transport infrastructure and to facilitate growth in homes and jobs whilst smoothing traffic flow. A key component in the strategy to grow the metropolitan centre is to reduce the barrier the Wellesley Road presents to pedestrians. More detailed modelling of the Wellesley Road Corridor is underway to design pedestrian crossings that also work with the objective of smoothing traffic flow.

The South Sub Region Transport Plan explains that:

‘Central Croydon is well connected by public transport, particularly by rail at its East and West stations. London Overground was recently extended to West Croydon, there is planned investment through HLOS1 for longer trains on Southern, Southeastern and the Thameslink Programme providing longer trains and higher frequency.’

and

‘Croydon Council is well advanced with five masterplans for the centre and is currently preparing its Local Development Framework and TfL is supporting the Council in preparation of an OAPF for the area.’
The following provides a summary of the actions and projects to support growth:

- HLOS1 longer trains on Southern services
- Thameslink programme – key output 1: longer trains (12 cars)
- HLOS2 – Lengthen all trains to 12 cars and 5 cars on ELL
- Expand ticket hall and platforms at East Croydon rail station, with resulting development opportunities and additional capacity
- New bus stopping / standing such as through redevelopment of West Croydon and mid-town or other locations within the CMC
- Review car parking in the town centre
- Improve urban realm around station and links to town centre particularly across Wellesley Rd
- Wellesley Road urban realm
- Extra trams on Tramlink
- Taxi and cycling facilities at West and East Croydon stations and other key locations
- Improved facilities for pedestrians and cyclists
- Longer term potential for tram extensions

Providing an efficient and effective transport system, prioritising sustainable modes where possible, combined with focusing development and growth within areas of good and improving public transport access (principally the Croydon Metropolitan Centre / Opportunity Area) are the key means by which Croydon Council aims to reduce road traffic congestion. There is no clear definition and hence measure of congestion, but data for some proxies are available. The Department for Transport’s monitoring of motor vehicles on the busier roads in Croydon, provides it with an estimate of the number of vehicle kilometres driven within the Borough each year. That estimate had been more or less stable / constant for some time, but in recent years has been falling.
Figure 3-2: Estimated total vehicle Kilometres driven in Croydon each year

On a day to day basis Croydon Council works to limit congestion and to smooth traffic flow, by carrying out its Network Management Duty. This includes managing disruption arising from road works via a system of permitting of works, and seeking to limit the impact on the traffic network of traffic predicated to access planned new development.

The Council is also aware of the vital role played by the transport of goods in supporting the national, London and Croydon economy. It seeks to aid servicing by providing or allowing on-street servicing where needed, practical and safe. In designing each of the public realm improvement proposals for district town centres, the needs of delivery and servicing are considered as part of the design process.

3.3.14 Objective 7(a)

Better Streets: enhanced public realm particularly within town centres

The London Mayor’s ‘better streets’ objective was outlined in the preceding chapter. Also outlined were the Mayor’s principles of ‘better streets’ and the ‘5 stages of improving streets’. We will be guided by those principles and the ‘5 stages’ when planning, designing and delivering many of the projects within our LIP programme. A good many of these projects are relatively small scale and localised. Some are straight forward resurfacing. With each of these
interventions we will be looking for opportunities to ‘to tidy up and to declutter’. In other instances we are aiming to make significant change and to clearly and obviously make ‘better streets’.

These changes are proposed at some of the busiest locations in the Borough, at town centres where greater numbers of people are focused within the street and consequently most people will benefit. The programme includes significantly improving the public realm within, Purley, Addiscombe and South Croydon centres.

Whilst being delivered as part of the ‘Corridors and Neighbourhoods’ element of the LIP programme, these projects are akin to ‘Major Schemes’ (as defined by TfL) and share the ‘Major Scheme’ objectives. Two ‘Major Schemes’ are proposed, the New Addington town centre and the ‘Connected Croydon’ project focused around and between East and West Croydon stations. The latter would begin to deliver the East and West Croydon Masterplans. At the heart of each of these masterplans sits the aim of ‘better streets’.

New Addington is a district centre located in the south east of Croydon. It has a distinctive character which sets it apart from other district centres in the borough. It is located on the fringes of the urban greenbelt surrounded by open countryside with a busy town centre high street (Central Parade) which is the heart of the community’s business and social activity and is the focus for the proposed Major Scheme bid.

New Addington has a long history of isolation, neglect and social deprivation which has lead to poor public perceptions of the place, and yet, perversely has also lead to a strong sense of community and independence reflected in its tradition of community events and festivals. The area is one of the most deprived in Croydon (in the top 2% IMD nationally) and has been included in the London Plan as a strategic area for regeneration.

Central Parade is the area’s high street offer and consists of a parade of shops supported by two smaller shopping parades; Calley Down Crescent and Milne Park East. Central Parade covers an epiliptical area of approximately 6.55 hectares.

The shopping parade to the north and east comprises a single long parade of ground floor street frontage shop units with two / three storeys of flats above and includes a mixture of convenience shops and a few national chains (Iceland, Co-op). There is also a significant representation of fast food outlets. The retail presence is further supported by a popular twice weekly street market which utilises much of the central car park and small Central Square.
In the long term, New Addington has enormous potential to develop as a future urban core, co-existing with and complementing the economy of the main town centre.

Its transport infrastructure, reasonable rents and proximity to Biggin Hill Airport and aerospace industry supply chain in Surrey make it a future contender for growth. In the short term, it is anticipated that improvements in the quality of the public realm within the high street will trigger the momentum required for sustainable economic growth.

The strategic objectives in New Addington are to:

- Reduce overall levels of deprivation particularly around income and health.
- Develop a coherent regeneration strategy for central New Addington which contributes to the Council's vision.
- Address the physical isolation of the area by integrating New Addington into the social and commercial fabric of the town.
- Ensure that economic development is spread out more evenly across the Borough so that all residents can enjoy the benefits of growth.

Specific objectives for the proposed major Scheme project include:

- Deliver an enhanced outer appearance and user-friendly public realm environment in Central Parade,
- Increase footfall and levels of economic activity on Central Parade

New Addington has been identified as one of the Mayor's Great Spaces and requires Major Scheme and/or other funding to become exactly that. The proposed improvements will make the area much more attractive and user-friendly. This will encourage people to spend more time in the parade spending more money and driving economic growth. Improvements to the public realm will generate greater levels of footfall in New Addington and in the high street.

It is envisaged that the Great Space enhancements will take place in phases with the design and delivery of the first phase in 2011/12 funded from the Outer London Fund. A second phase taking in the market area and potentially involving alterations to the routes taken by vehicles, would be primarily funded from Major Scheme Funding. This element of the project is likely to cost of the order of £2million. Some design and development work could be embarked upon prior to submission of a bid for Major Scheme
funding being made in 2012. Construction is envisaged in 2013/14 and 14/15. A third phase is envisaged associated with the redevelopment of the leisure centre, potentially creating a stronger link to the market and including enhancements to the streetscape and wider public realm (of the order of value of £2 million) funded as part of the development. These potential enhancements are subject to consultation and approvals.

3.3.15 Objective 7(b)

**Better Streets: Reduce in stages the pedestrian barrier created by the Wellesley Road,**

Wellesley Road and its environs is a part of the London Mayor’s ‘Great Spaces’, identified as an aspirational scheme within the ‘Better Streets’ stream. Traditionally, Wellesley Road would have been one of Croydon’s major places. The functionalist approach to designing Croydon in the 1950’s, disregarded its place function focussing only on its movement / vehicle distribution role. The result is not only a linear space devoid of most life, but a chasm through the urban form. At Wellesley Road and beyond the ‘city’ centre suffers form poor quality environment and poor pedestrian connectivity and legibility.

![Figure 3-2: Weak or missing pedestrian connections at and around the Wellesley Road](image)

We are proposing to break down the barrier presented to pedestrians and cyclist by the Wellesley Road through the staged introduction of surface crossings.
3.3.16  Objective 7(c)

Better Streets: Deliver the Connected Croydon Programme in stages

We have begun the process of regenerating the metropolitan centre with a series of master planning exercises for each of the quarters within the Croydon Metropolitan Centre (CMC). Together these masterplans have identified a latent movement network that could be made to work much harder for pedestrians and cyclists. We have developed The Connected Croydon Programme which brings together the masterplan components with a priority for the delivery of public realm connections. They form a joined-up and coherent public realm network across CMC.

The Connected Croydon Programme, is about improving accessibility to and from the key Croydon’s public transport interchanges: West and East Croydon and connecting them together, across Wellesley Road, strengthening the ‘movement economy’, creating new and better spaces, and in so doing delivering the Mayor’s ‘Better Streets’ objective. Ultimately, the core of the proposals goes beyond ‘Better Streets’. It is one of the key means of bringing about holistic regeneration of the centre. The general scheme objectives are to:

- To create a Croydon Metropolitan Centre wide network of public space with streetscape and urban design quality standards setting the key principles for future street improvement projects in the Borough.

- To improve the efficiency of Croydon’s two major public transport interchanges at East and West Croydon by increasing accessibility, providing more space for passengers, and facilitating links between modes. This will be measured by increases in passenger capacity and reduction of journey times.

- To improve Croydon’s environmental performance with special focus on public transport, walking, cycling and the provision of high quality, accessible and safe facilities. This will be measured by levels of modal shift, number of improved waiting facilities and the number of at grade East – West connections for pedestrians, cyclists and people with disabilities.

- To enliven the Croydon Metropolitan Centre with new uses and activities that interact with surrounding buildings, are welcoming, attractive and safe. This will be measured by the increase in the number of active frontages and recreational facilities.
To improve the public perception of Croydon as an attractive place with a unique character and identity and as a place to live and invest in. This will be measured by the increase in the number of new developments, including regeneration, in the New Town area.

The main features of the Connected Croydon proposals are:

- A linear interchange facility to improve the tram stop at West Croydon
- A welcoming, legible and efficiently designed arrival place outside West Croydon Station
- Public realm improvements around West Croydon Bus Station to increase capacity and efficiency, improve safety, and integrate with the urban context
- Transformation of the west half of Poplar Walk into a civilised street to improve links to the centre
- Decluttering of a heavily congested section of London Road
- Landscaping to enhance walking and cycling connectivity between the new footbridge and Wellesley Road
- Public realm improvements to the roundabout at the junction of Dingwall Road and Lansdowne Road to enhance connectivity between the new footbridge and Wellesley Road
- A high quality arrival space outside the existing East Croydon Station concourse with much improved interchange, wayfinding, and sense of place
- Reconfigured taxi and kiss & ride arrangements and a level walkway connecting the existing station concourse and the new footbridge, integrated with provision of a bicycle hub, all in Billinton Hill
- Decluttering, repaving and improved crossing facilities along highly congested George Street

Implementation of the latter components at the end of the above list focused around East Croydon Station is intended to be supported by Major Scheme funding from TfL. They form the package of proposals submitted to TfL as a bid for Major Scheme funding. The specific Connected Croydon components intended to be supported with Major Scheme funding are prefixed with EC in
Figure 3-3, namely EC.08 Billinton Hill, EC.03 East Croydon Square, EC.14 George Street east.

Figure 3-3 Connected Croydon Public Realm Schedule included 'Major Scheme' components
A bid for a little over £4million Major Scheme funding was submitted to TfL in the summer of 2011. Design development and consultation are planned to start in the last quarter of 2011/12 and to last for 12 months, followed by a construction phase of 16 months. The project is being supplemented with ‘Legible London’ funding and £200,000 ‘Biking Borough’ funding is being put towards the construction of a cycle park / ‘hub’ in Billinton Hill.

3.4 Programme of investment

Figure 3.4 sets out the proposed programme of investment for the period 2011/12 to 2013/14. The programme reflects the delivery actions identified in Section 3.3 and is focused on achieving our LIP objectives.
<table>
<thead>
<tr>
<th>Programme areas</th>
<th>Funding source</th>
<th>Funding (£,000s)</th>
<th>MTS goals</th>
<th>LIP Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2011/12</td>
<td>2012/13</td>
<td>2013/14</td>
</tr>
<tr>
<td><strong>Cycling and Walking</strong></td>
<td>LIP allocation</td>
<td>475</td>
<td>120</td>
<td>210</td>
</tr>
<tr>
<td>Includes &quot;Connect2&quot; east-west Cycle and walking route; cycle training for children and adults living in the borough; design and feasibility for new cycle routes to West Croydon Station</td>
<td>Lottery, ST105, LCn</td>
<td>190</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ST105</td>
<td>20</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Pedestrian Facilities</strong></td>
<td>LIP allocation</td>
<td>121</td>
<td>55</td>
<td>0</td>
</tr>
<tr>
<td>Provision of pedestrian refuges and signal controlled crossings at various locations</td>
<td>Croydon capital</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Public rights of way improvements</strong></td>
<td>LIP allocation</td>
<td>0</td>
<td>46</td>
<td>248</td>
</tr>
<tr>
<td>Improvements to footpaths/walkways across the borough</td>
<td>Croydon capital</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Bus Priority Schemes</strong></td>
<td>LIP allocation</td>
<td>72</td>
<td>150</td>
<td>160</td>
</tr>
<tr>
<td>Includes bus interchange improvements in the CMC at East and West Croydon Stations and bus journey time improvement on the A232 towards the CMC</td>
<td>Croydon capital</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Local Area Accessibility</strong></td>
<td>LIP allocation</td>
<td>160</td>
<td>43</td>
<td>57</td>
</tr>
<tr>
<td>Small scale access improvements and improvements to accessibility at bus stops, not being made as part of other schemes</td>
<td>Croydon capital</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Road Safety Schemes</strong></td>
<td>LIP allocation</td>
<td>72</td>
<td>150</td>
<td>160</td>
</tr>
<tr>
<td>Action along various routes and at various junctions to reduce speeds and improve safety</td>
<td>Croydon capital</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Speed Management*</td>
<td>LP allocation</td>
<td>72</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Traffic Signal Schemes*</td>
<td>LP allocation</td>
<td>267</td>
<td>278</td>
<td>11</td>
</tr>
<tr>
<td>Junction Improvements*</td>
<td>LP allocation</td>
<td>123</td>
<td>181</td>
<td>1,020</td>
</tr>
<tr>
<td>Controlled Parking Zones/Parking schemes*</td>
<td>LP allocation</td>
<td>25</td>
<td>112</td>
<td>120</td>
</tr>
<tr>
<td>Freight Management*</td>
<td>LP allocation</td>
<td>80</td>
<td>70</td>
<td>50</td>
</tr>
<tr>
<td>Public Realm Proposals*</td>
<td>LP allocation</td>
<td>1,510</td>
<td>1,517</td>
<td>512</td>
</tr>
<tr>
<td>Travel Plans (non-school)*</td>
<td>LP allocation</td>
<td>55</td>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td>Road Safety Education and Publicity*</td>
<td>LP allocation</td>
<td>111</td>
<td>101</td>
<td>91</td>
</tr>
<tr>
<td>School Travel Plans*</td>
<td>LIP allocation</td>
<td>225</td>
<td>155</td>
<td>146</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Promotion of Walking and Cycling*</td>
<td>LIP allocation</td>
<td>20</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

**TOTAL**

|         | LIP Allocation Total | 3,287 | 3,163 | 2,712 |

| Principal Road Maintenance* | LIP total | 577 | 0 | 0 | 577 | ✓ | ✓ | ✓ |
| Non-Principal Road Maintenance* | Croydon capital | 7,500 | 7,500 | 7,500 | 22,500 | ✓ | ✓ | ✓ |
| Seakaway Maintenance and Replacement* | Croydon capital | 350 | 350 | 350 | 1,050 | ✓ | ✓ | ✓ |
| Bridge Assessment and Strengthening* | LIP total | 290 | 742 | 50 | 1,082 | ✓ | ✓ | ✓ |
| | Croydon capital | 50 | 50 | 40 | 140 | ✓ | ✓ | ✓ |

**Biking Borough Programme**
Includes new cycle parking/cycle hub at east Croydon Station, local test cycle ride, cycle route signing.

| LIP Funding | 84 | 104 | 264 | 462 | ✓ | ✓ | ✓ | ✓ |

*NB All these programmes are ongoing and are not bound 2011-14
3.5 Timetable for delivery

The first part of this chapter outlined the strategy for accommodating growth whilst improving access and reducing environmental impacts. That strategy looks as far forward as 2031 and beyond. Figure 3.3. above sets out the programme of proposals to be delivered largely by Croydon Council in the short to medium term. Its focus is on delivery during the next three years. Some of the projects and programmes will continue beyond those three years. Once over this first three year period, the LIP objectives will continue to be delivered over the remaining course of the LIP, namely up until 2031.

3.6 Developing the programme of investment

A transport strategy (draft) has been prepared for the borough. The draft Borough Wide Transport Strategy identifies challenges and issues and suggests a series of actions. Projects and proposals that might potentially support the Mayor’s Transport Strategy Goals and the Subregional Challenges (and hence be considered for LIP funding) were drawn from this draft strategy and also from the draft Infrastructure Delivery Plan. The views and priorities of Executive Members with responsibility for environment and highways etc are also considered. Each potential project within the resulting list was then scored on the basis of:

- its ability to support achievement of the Goals of the London Mayor’s Transport Strategy;
- its deliverability; and
- its potential to attract funding from other sources

in order to prioritise projects for inclusion within the programme of investment/delivery plan.

3.7 Annual spending submission

The programme in table 4 will be continually adjusted as part of project and programme management, as some projects are delivered quicker than predicted and others take longer than originally planned. Some projects may be brought into the programme and others taken out. TfL will be formally informed of the revised programme via the Annual Spending Submission which will be made each autumn. Bids to TfL for funding to support the
maintenance of Principal Roads and the assessment and strengthening of bridges will also be made as part of the spending submission.

The Annual Spending Submission is also the mechanism by which we will report on outputs delivered and the degree to which outcomes have been achieved, reporting on the indicators set in Chapter 4.

3.8 Committed improvements

There are many committed improvements set out in the draft MTS and TfL Business Plan that are relevant to Croydon and will help address some of the challenges faced today, including:

- Southern franchise stations and staffing level improvements
- Congestion relief at certain stations, such as East Croydon, South Western train and platform lengthening
- High Level Output Specification upgrades to National Rail, with longer platforms for longer trains on large parts of the inner suburban network, across South Eastern, Southern and South West Trains lines
- Improvements to Tramlink which are already underway

3.9 Planned committed investment in south London

Significant improvements will be made to transport in South London over the next 10 years through TfL's Business Plan and the Department for Transport’s High Level Output Specification (HLOS) 1 for National Rail investment. These funded improvements are indicated in Figure 3-4.

Figure 3-5 shows the committed rail improvements (to 2014) across London as a whole. Many of which are funded by TfL but in the main through central Government. As can be seen, many improvements will benefit passengers in south London.
Figure 3-4: Committed improvements to transport in south London

Figure 3-5: Committed National Rail improvements

- **Thameslink (East Midlands)**
  - 12-car trains
  - 24 trains per hour through core

- **Great Northern**
  - Performance measures
  - 12-car outers & Thameslink

- **West Anglia**
  - 12-car capability Stansted & Cambridge
  - All 8-car inners

- **Great Eastern**
  - Additional inners & outers
  - Crossrail 1

- **Essex Thameside**
  - 12-car capability on all routes

- **High Speed 1**
  - Domestic services

- **South Eastern**
  - 12-car inner suburban via L Bridge
  - Longer fast services via Bromley

- **South Central**
  - 10-car inner capability
  - 12-car East Grinstead
  - Larger Thameslink network

- **South Western**
  - 10-car Windsor lines and inner suburban capability
The main improvements benefiting Croydon as a borough and East Croydon in particular are:

- Thameslink train lengthening to 12 cars and trains going via London Bridge in the peak
- Trains on the Sydenham line being extended to 10 cars.

The Council and Network Rail are investing heavily to maximise the benefit from these improvements. Work begins at the end of 2011 to construct a pedestrian/cycle bridge over the railway at East Croydon Station. The bridge not only breaks the barrier created by the railway but also provides a second access (and access for wheelchair users) to platforms, increasing the passenger handling capacity of the station by around 40%. Other projects and investment then in turn work to build on and with the improvements to rail services and East Croydon Station. The ‘Connected Croydon’ programme to improve public realm within the Croydon metropolitan centre will begin with a focus at and around East Croydon funded in part through the TfL ‘Major Schemes’ LIP funding programme (see Objective 7(c) above). The investment and improvement will be in:

- George Street, the main pedestrian thoroughfare to the station; and
- Billinton Hill (on the east side of East Croydon Station) where a new public space will be created, taxi ranking and passenger pick and drop-off will be rationalised, and a new high quality and high capacity cycle park will be created (the latter supported by considerable ‘Biking Borough funding from TfL).

Away from the Croydon Metropolitan Centre, Croydon Council plans to employ a significant proportion of LIP ‘Corridor, Neighbourhood and Support Measures’ funding to make a significant improvement in the public in district centre high streets. The high streets planned for such improvement during to three year life of the LIP Delivery Plan are Purley, Addiscombe and South Croydon. It intends to supplement this programme with a bid for major scheme funding to enhance New Addington high street, with scheme design and development beginning towards the end of the life of the 3 year delivery plan.
3.10 Additional future Major Schemes

The Programme of Investment includes only two ‘Major Schemes’ for which
the Council intends to submit funding bids to TfL during the period of this
Delivery Plan. In priority order these are:

- The ‘Connected Croydon’ Major Scheme focussed around East
  Croydon Station; and
- The New Addington centre ‘Better Streets’ Major Scheme

When the Delivery Plan is revised towards the end of its three year life, new
Major Scheme proposals will be added to the above list.
4 Performance monitoring plan

4.1 Overview
To gauge performance against a number of the Transport Strategy Goals, TfL has set a series of indicators for local authority LIPs. TfL has asked each London local authority to set its own targets for these indicators, as part of a performance monitoring framework for their LIP.

4.2 Target setting
The following section indicates how the targets were established and the intended action to keep the indicator on track. The section includes:

- justification for each target;
- actions influencing target achievement by us and our partners; and
- likely risks to achieving of the targets.

Table 4-1: Croydon LIP indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus service reliability</td>
<td>Excess wait time for all high-frequency services in Croydon</td>
</tr>
<tr>
<td>Asset (highway) condition</td>
<td>The proportion of Principal Road carriageway ‘in poor overall condition’</td>
</tr>
<tr>
<td>Road traffic casualties</td>
<td>The number of killed and seriously injured casualties, and the total number of casualties</td>
</tr>
<tr>
<td>Mode share</td>
<td>Mode share based on trips originating in Croydon, namely percentage of trips by walking and percentage of trips by cycling</td>
</tr>
<tr>
<td>CO2 emissions</td>
<td>Tonnes of CO2 from ground based transport</td>
</tr>
</tbody>
</table>

For each of the indicators above a short-term (interim) target and a long-term target has been set. The long-term targets reflect a future end date when the impact of sustained investment will have had the chance to take effect, and should be considered as indicative and subject to future revision.

Progress against these indicators will be monitored on an annual basis and on a triennial basis the Council will produce a “Three-Year Impact Report” setting out what the LIP has achieved over the preceding three year period. This will provide us with the opportunity to set new interim targets and to revise the long-term targets if necessary, for instance if it is considered that we are over- or under-achieving on a particular indicator.
4.3 Bus reliability

The bus service reliability indicator relates to high frequency services (i.e. five or more scheduled buses per hour) running through Croydon. The indicator is expressed in terms of excess wait time (EWT) (i.e. waiting time experienced by passengers over and above what might be expected of a service that is always on time).

EWT has been reduced in Croydon to the point where it was amongst the lowest in London, with EWT in 2009/10 at 1.0 minute in compared with 1.4 minutes in 2003/4. No London borough had EWT below 1.0 minute during 2009/10. There are however a number of reasons for TfL and Croydon Council to continue programmes to introduce and refine bus lanes and other bus priority measures, not least of which is improving journey times. Croydon however is perhaps reaching the point where it is difficult to reduce EWT further. TfL’s Business Plan (covering 2009/10 – 2017/18) envisages EWT across London rising from an average of 1.1 minutes to 1.2 minutes and then stabilising. The London wide increase in EWT is predicted to arise partly from changes to bus operating contracts and the level of subsidy provided. In the light of where EWT currently stands in Croydon, the changing subsidy levels and the predicted London wide average EWT, a target of maintaining EWT at 1.1 minute is set for the LIP. This is felt to be challenging in the light of TfL’s predictions for EWT London-wide. However, continued investment in bus priority measures will go some way to help keep on target.

Figure 4-1: Bus service reliability – Recent EWT in Croydon and the TfL Business Plan London average projection
### Table 4-2: Indicator: Bus Service Reliability (EWT on high frequency routes)

<table>
<thead>
<tr>
<th>Baseline</th>
<th>1.0 minutes (2009/10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term (interim) target</td>
<td>1.1 minutes (2013/14)</td>
</tr>
<tr>
<td>Long-term target</td>
<td>1.1 minutes (2017/18)</td>
</tr>
</tbody>
</table>

Data source: iBus

![Bus Excess Waiting Time Target Trajectory](image)

**Target trajectory and baseline**

- **Target justification**: EWT has been brought down by just under a third since 2003/4. There will always be some slight variation in running times, and keeping EWT below one minute would be difficult to achieve. TfL envisions London-wide EWT increasing then stabilising at 1.2 minutes, as a result of reducing bus subsidy levels. Consequently, maintaining EWT at 1.1 minutes within Croydon is seen as challenging, but achievable with continued investment in bus priority.

**Key actions for the Council**

- To continue its programme of bus priority proposals, reviewing bus lane hours of operation and bus stop accessibility improvement.
- Working with TfL to understand the bus operation implications of growth in the Croydon Opportunity Area and jointly planning mitigation to aid bus service reliability.

**Key actions for local partners**

- TfL to continue to manage reliability via the bus route tendering / contracting process, and to continue its own programme of bus priority measures.

**Principal risks and how they will be managed**

- The principal risk is that the level of subsidy to London’s bus routes may be reduced further than envisaged when TfL prepared its Business Plan. Croydon Council will continue to engage with TfL, working together to understand the causes of any worsening in bus service reliability. Each partner should continue to deliver bus priority proposals to both improve bus / passenger journey times and to counter other factors that might otherwise cause an increase in EWT.
4.4 Asset (highway) condition

The LIP related funding which TfL provides to London local authorities, includes funds to maintain Principal Roads. TfL has set the condition of these Principal Roads as one of the indicators with which to measure LIP performance. Each London local authority has to bid to TfL for Principal Road maintenance funding. TfL considers those bids and provides funding to each authority based on the bid and the relative lengths of Principle Road in each borough in poor condition.

The performance indicator is derived from DVI (detailed visual inspection) data. These data are considered more comprehensive and therefore more applicable to London than SCANNER (Surface Condition Assessment for the National Network of Roads) data used for the purpose of National Indicator 168 (Principal Roads where maintenance should be considered).

Based on the DVI data, Croydon has been performing well, reducing the proportion of its principal road network (PRN) in ‘poor overall condition’ from 10.34% in 2003/4 to 3.30% in 2009/10. This puts Croydon the 5th best performing borough in London. However, if the condition of Croydon’s PRN improves further relative to that of other London boroughs, TfL is likely to prioritise other boroughs in greater need for Principal Road maintenance funding. Also, TfL’s Business Plan (covering 2009/10 – 2017/18) anticipates worsening asset condition across London. In the light of these factors a target is set to keep the level of Croydon PRN in poor overall condition at or below 3.3% by 2017/18.

Table 4-3: % of PRN in poor overall condition in 2009/10 in outer London boroughs

<table>
<thead>
<tr>
<th>Borough</th>
<th>% PRN in poor overall condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingston</td>
<td>1.4</td>
</tr>
<tr>
<td>Barnet</td>
<td>1.9</td>
</tr>
<tr>
<td>Harington</td>
<td>2.0</td>
</tr>
<tr>
<td>Croydon</td>
<td>3.3</td>
</tr>
<tr>
<td>Redbridge</td>
<td>3.4</td>
</tr>
<tr>
<td>Hillingdon</td>
<td>3.6</td>
</tr>
<tr>
<td>Ealing &amp; Dagenham</td>
<td>4.1</td>
</tr>
<tr>
<td>Rotherham</td>
<td>5.0</td>
</tr>
<tr>
<td>Bromley</td>
<td>5.2</td>
</tr>
<tr>
<td>Bexley</td>
<td>5.6</td>
</tr>
<tr>
<td>Hounslow</td>
<td>7.5</td>
</tr>
<tr>
<td>Sutton</td>
<td>11.9</td>
</tr>
<tr>
<td>Wallington Park</td>
<td>13.9</td>
</tr>
<tr>
<td>Harrow</td>
<td>15.1</td>
</tr>
<tr>
<td>Brent</td>
<td>20.2</td>
</tr>
<tr>
<td>Enfield</td>
<td>24.0</td>
</tr>
<tr>
<td>Merton</td>
<td>24.0</td>
</tr>
<tr>
<td>Ealing</td>
<td>24.0</td>
</tr>
<tr>
<td>Richmond</td>
<td>24.0</td>
</tr>
</tbody>
</table>

0 2 4 6 8 10 12 14 16
Figure 4-2: % of PRN in poor overall condition in Croydon

Figure 4-3: Asset condition prediction in the TfL Business Plan
Figure 4-4: Indicator: Asset (highway) condition (% of PRN in poor overall condition)

<table>
<thead>
<tr>
<th>Baseline</th>
<th>3.3% of PRN in poor overall condition in 2009/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term (interim) target</td>
<td>3.3% (2013/14)</td>
</tr>
<tr>
<td>Long term target</td>
<td>3.3% (2017/18)</td>
</tr>
<tr>
<td>Data source</td>
<td>Detailed Visual Inspection (DVI) data</td>
</tr>
</tbody>
</table>

Target trajectory and baseline

Croydon is currently amongst the top 5 performing boroughs with only 3.3% of its PRN in poor overall condition. Based on current funding for this year and next we predict reducing the proportion of PRN in poor overall condition to 1%. However, if the condition of Croydon’s PRN improves further relative to other boroughs, TfL is likely to increasingly prioritise authorities in greater need for principal road maintenance funding. Also poor winter conditions is likely to worsen carriageway condition. Thus keeping the level of PRN in poor overall condition at or below 3.3% is likely to prove challenging, but the Council is keen to ensure that its assets are kept in a good state or repair.

To continue to bid to TfL for funding with which to maintain principle roads.

Target justification

Key actions for the Council

To incorporate elements of maintenance within major public realm improvement projects and other neighbourhoods and corridors projects, where feasible

Key actions for partners

TfL to continue to support borough principal road maintenance

Principal risks and how they will be managed

The main risks are:

- severe weather (principally snow/extreme cold) causing widespread and rapid carriageway deterioration; and
- TfL prioritising other local authorities for principal road maintenance funding.
4.5 Road traffic casualties

The number of people killed or seriously injured on roads in Croydon has been cut by 41% between 1994-98 and 2006-08, achieving the target previously set by the London Mayor. Croydon Council takes a data led approach to prioritising and programming ‘hard measures’ introduced on-street to address casualties. However, this means that action has been taken at past locations of high casualties. The remaining casualties are more difficult to address. Reducing casualty numbers in the future is also going to be more challenging due to the predicted growth in population and workforce. The number of people living in Croydon is likely to grow by 38,230 between 2009 and 2031. The number of people working in Croydon is predicted to increase by 6000 by 2031.

Matters are complicated due to the casualty data relating to all roads in Croydon, including those managed by TfL. Many of the remaining casualties occurring in Croydon are focussed along the busy roads and in particular the TLRN. Reducing the number and severity of casualties in Croydon requires action by TfL as well as Croydon Council. TfL, within its Business Plan is predicting killed and seriously injured casualties to fall by 14.1% by 2013/14 compared with average levels in 2004-08. This perhaps is shaped by TfL’s own predicted action on the TLRN. In the light of the above factors, targets are set for reducing killed and seriously injured (KSI) casualties (from a later and hence lower 2006 - 08 baseline) by 8% in 2010 -12, 18% in 2017-19 and 25% 2027-30. The targets set for all casualties (KSI plus slight injured casualties) are reducing casualties from 2006 – 08 levels by 5% in 2010 -12, 12% in 2017-19 and 18% 2027-30.

Figure 4-5: Number of killed and seriously injured

![Figure 4-5: Number of killed and seriously injured](image-url)
Figure 4-6: Indicator: Road traffic casualties (KSI casualties and all casualties)

<table>
<thead>
<tr>
<th></th>
<th>Killed plus Seriously Injured</th>
<th>Total casualties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>146 (2006-08)</td>
<td>1162 (2006-08)</td>
</tr>
<tr>
<td>Short-term (interim) target</td>
<td>134 (2011-13)</td>
<td>1104 (2011-13)</td>
</tr>
<tr>
<td>Long-term target</td>
<td>110 (2028-30)</td>
<td>953 (2028-30)</td>
</tr>
</tbody>
</table>

Data source: London Road Safety Unit

Target justification: Croydon Council, with its partners has already significantly reduced the number of casualties on the borough’s streets. The more readily addressed concentrations of casualties have been tackled. Further progress is likely to be more challenging. The targets established reflect this level of challenge. Now that the clear concentrations or clusters of casualties have been addressed, the remaining more dispersed casualties are less readily addressed through traffic engineering and street design solutions. Traffic engineering will continue to be a key tool, but rates of return (casualty savings relative to infrastructure cost) are likely to be somewhat lower than in the past. Consequently there will be an increased emphasis on road user education, training and publicity in order to reduce casualties across the borough.

An additional challenge in further reducing casualty numbers will arise from the predicted increase in residential and employment populations.
**Key actions for the Council**

To continue its programmes of ‘hard’ measures introduced on-street to address the number and severity of casualties; and ‘soft’ education, training and publicity activities aimed at encouraging better road user behaviour and improving road safety.

**Key actions for partners**

TfL to continue its own programme of casualty reduction measures along the TLRN. Our Met Police partners to continue to enforce against excessive speeding and other dangerous driving.

**Principal risks and how they will be managed**

A key risk is that many of the casualties are occurring along the TLRN. We cannot achieve the targets by ourself. Action has to be taken by TfL. We will continue to liaise with TfL and continue to encourage its action to tackle casualties.

Some of the London Mayor’s objectives and those of the Croydon LIP, may work against that of reducing casualties. In particular, increasing the number of people cycling may potentially lead to an increase in the number of cycling casualties. Consequently there needs to be continued programmes of training for those considering cycling to ensure safer cycling; and the introduction of measures on-street and elsewhere to create ensure a network of routes for safer cycling.
4.6 Mode share target

Figure 4-7: Modal share (main mode of trip) by borough of residence (% of residents' trip by main mode)

Figure 4-8: Indicator: % of journeys originating in Croydon made by cycling and walking

Baseline | Cycling | Walking
---------|---------|---------
1.0% (2006/07-2008/09) | 24.1% (2006/07-2008/09)

Short-term (interim) target | 1.8% (2011/12-2013/14) | 22.8% (2011/12-2013/14)

Long-term target | 3.5% (2023/24-2025/26) | 26% (2023/24-2025/26)

Data source | London Travel Demand Survey | London Travel Demand Survey

Target trajectory and baseline
Walk
In 1995 25% of trips by Londoners were made by bus and 25% by walking. In 2009, 33% of trips were made by bus, but only 24% were made by walking. Across London, the proportion of trips made by walking has remained stubbornly constant. In order to choose to walk, people have to have destinations, services, and activities within walking distance. The Council’s development plan seeks to collocate facilities and focus population and employment growth primarily within the Croydon Metropolitan Centre, with the aim of encouraging walking. However these changes will come about gradually. Hence, in the light of past trends, the target set for the proportion of trips made by walking challenging.

Cycle
Implementation of the Biking Borough Programme, continued Travel Planning with local schools and businesses, delivery of the Connect2 cycle route and the Greenway routes, action via the planning system to deliver improved facilities for cycling.

Key actions for the Council

Walk
Public realm and pedestrian environment improvement particularly within the CMC and District Centres. Improved Wayfinding, in particular ‘Legible London’ signs within the CMC. Co-location of facilities reducing distances needing to be travelled.

Key actions for partners

Cycle and Walking
Delivery by Network Rail of the pedestrian / cycle bridge at East Croydon Station, Network Rail working with the Council to deliver the cycle park at East Croydon Station, businesses developing and implementing Travel Plans.

Principal risks and how they will be managed

• Availability and competing demands for LIP Funding
• Changes in local and regional priorities
• The Mayor of London’s continuation of support of sustainable modes of transport
• Local objections to physical improvements

The performance monitoring annual and 3 year review provide best opportunity to analyse the progress and identify key areas of concern causing slower trajectory, possible options for mitigation could include reprioritising of the funding available and improving the method of communication to ensure that objectors understand the benefits of the programme.
<table>
<thead>
<tr>
<th>Additional Targets</th>
<th><strong>Cycle</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Council is considering setting an additional target for numbers of people cycling to the CMC. This however is dependent on the necessary cycle monitoring being put in place. The Council is currently discussing with TfL how this might be achieved via the Biking Borough initiative.</td>
</tr>
</tbody>
</table>
4.7 CO₂ emissions target

In his Transport Strategy, the Mayor of London anticipates that transport sector CO₂ emissions in the range of 5.3m to 4.6m tonnes (a reduction from the 9.7m tonnes in 2008 of between 45.4% and 52.6%) will be required by 2025 to meet his target of 60% overall reduction from a 1990 base. The Strategy provides a range to reflect the range in estimates of how the 60% overall reduction will pan out across the various sectors (transport, domestic, industrial and commercial etc). TfL has in turn ‘scaled’ the upper point of the range given in the Transport Strategy (i.e. 5.3m tonnes) to include CO₂ produced outside London for the generation of power via the National Grid which is used for transport inside London (principally to power electric trains) giving a target figure of 4.74m tonnes. This figure has been used by TfL to indicate the required trajectory if the target figure is to be reached. Based on total ground based transport 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. TfL has in turn indicated individual trajectories for each London borough. The Croydon trajectory is the one employed in Figure 4.2 below.

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<table>
<thead>
<tr>
<th></th>
<th>Ground Based Transport Emissions (kteCO₂/annum)</th>
<th>Reduction (kteCO₂/annum)</th>
<th>Reduction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline 2008</td>
<td>269</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-term (interim) target 2013</td>
<td>225.26</td>
<td>43.74</td>
<td>16.3%</td>
</tr>
<tr>
<td>Long-term target 2025</td>
<td>147.14</td>
<td>121.86</td>
<td>45.3%</td>
</tr>
</tbody>
</table>

Data source LEGGI data

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Figure 4-9: Indicator: CO₂ emissions from transport across Croydon (LEGGI data)

Target trajectory and baseline

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110
Target trajectory

Reduce CO₂ emissions from ground based transport across Croydon from 269 Ktonnes (2008 baseline) to 147.14 Ktonnes by 2025.

Target justification

The targets are based on:

a) the required / anticipated reduction in CO₂ emissions from transport indicated by the Mayor of London in his Transport Strategy to achieve his overall target of 60%; and

b) the trajectory indicated for each borough by TfL based on the level of reduction needed for London indicated in the Transport Strategy.

Key actions for the Council

- Working via ‘Source London’ and ‘Plugged-in Places’ to introduce electric vehicle charging on-street and in Council car parks.
- Encouraging/requiring the provision of electric vehicle charging points at new development via the development management process.
- Improving the conditions for cycling and walking.
- Expanding car-club provision.
- Working with partners to improve public transport
- Using the development management and planning process to collocate different land uses, reducing the need to travel.

Key actions for partners

TfL to:

- move to low carbon electricity for Tramlink and London Overground.
- move to biofuel or low/zero carbon fuel for bus fleet
- influence bus driver behaviour through training

Rail operators and Network Rail to

- move to low carbon electricity
- identify locations for EVCPs and car club parking bays.

Other partners to undertake travel planning (schools, businesses, hospital, college)

Principal risks and how they will be managed

The principal risk to achieving the MTS/TfL guidance indicated target arises from the fact that achievement is very largely dependent on increasing vehicle efficiency and shifts to low carbon fuel. These are factors most strongly influenced at the European and National levels and to a degree at the regional level. The target will be kept under regular review with TfL and if the wider required action is not being taken, the target adjusted. However, the Council will also continue to take action through the planning process to facilitate changes in travel patterns effective in the long term, along with other action to help modal shift and a shift to electric vehicles.
4.8 Local CO2 Emissions Target

At the same time the Mayor of London was preparing his Transport Strategy, the Environment and Climate Change Partnership (one of the theme partnerships within the Croydon Local Strategic Partnership) was preparing the Croydon Climate Change Mitigation Action Plan (published 2010). As part of the development of the Action Plan, the Partnership gave careful consideration to the target to be set for CO2 emissions in Croydon. That target is to reduce CO2 emissions by 34% from 2005 levels by 2025. The target is designed to be both a realistic and significant local contribution to the national target stemming from the 2008 Climate Change Act and the Mayor of London’s 60% reduction for London.

The target was set for CO2 emissions across all sectors (e.g. transport, domestic, industrial and commercial). In the ‘Challenges’ chapter of this LIP the target was applied to emissions from ground based transport in Croydon to provide a local target and trajectory for emission from transport for use in the LIP.

<table>
<thead>
<tr>
<th>Ground Based Transport Emissions (kteCO2/annum)</th>
<th>Reduction (kteCO2/annum)</th>
<th>Reduction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline 2005</td>
<td>350.00</td>
<td></td>
</tr>
<tr>
<td>Short-term (interim) target 2015</td>
<td>297.50</td>
<td>52.50</td>
</tr>
<tr>
<td>Medium-term (interim) target 2020</td>
<td>280.00</td>
<td>70.00</td>
</tr>
<tr>
<td>Long-term target 2025</td>
<td>231.00</td>
<td>119.00</td>
</tr>
</tbody>
</table>

Data source: NI186 Data – November 2009
Target trajectory and baseline

Reduced CO₂ emissions from ground based transport across Croydon from 350Ktonnes (2005 baseline) to 231Ktonnes by 2025.

Target justification

The Croydon Climate Change Mitigation Action Plan target was set as a realistic, and significant, local contribution to the national target stemming from the 2008 Climate Change Act of an 80% reduction by 2050, and the Mayor of London’s 60% reduction target by 2025, taking account of action required at the EU level, National level and what can be influenced locally.