

London Borough of Barnet Local Implementation Plan

Draft v2.4

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Introduction

Plan development

This is the Barnet's Local Implementation Plan (LIP), produced in response to the Mayor's Transport Strategy (MTS) published in May 2010.

A LIP is a statutory document, prepared under section 145 of the Greater London Authority Act 1999 (GLA Act) and sets out how a London borough proposes to implement the MTS in its area. It has been produced in accordance with statutory guidance issued alongside the MTS that allows boroughs to present transport plans that will contribute to the Mayor's stated goals, challenges and outcomes, as well as other locally and sub-regionally important goals.

Each new borough LIP must be submitted to the Mayor for approval, which he may only give if he considers that it is consistent with the MTS and contains proposals and a timetable adequate for implementing the MTS in its area.

The plan draws on issues and objectives identified through development of the boroughs Local Development Framework Core Strategy, and developed through additional assessment of the applicability of the Mayoral Goals and Challenges to Barnet, public satisfaction data and statutory consultation.

Strategic Environmental Assessment

Strategic Environmental Assessment (SEA) is a tool to ensure that the environmental effects of a plan are assessed and taken into consideration during its development. The SEA of the LIP has considered the likely significant environmental effects of the LIP in relation to a number of environmental issues: Air, Climate, Population and Human Health, Biodiversity, Cultural Heritage, Soil and water, Landscape and Townscape, Material Assets. It considered the effect of the different LIP objectives and possible alternatives and options to deliver these, the possible scale of these impacts and their cumulative impact.

The Environmental Report for the LIP, published alongside the consultation draft LIP identified the most significant environmental effects of the draft plan as the effect of increased traffic on air and climate (and consequently on human health and biodiversity) and on the built environment, the effect on use of material resources from infrastructure proposals in the plan, and in particular the emphasis on improving road and footpath condition, the opportunities to improve townscape and heritage environments, and potential impacts on specific heritage assets and habitats especially in relation to proposals on open land (eg parks, major regeneration proposals).

It proposed mitigation through ensuring increased road capacity is targeted at locations of need, maximising reuse and recycling of road construction materials, ensuring conservation and heritage input to town centre proposals through town centre frameworks and appropriate input to proposals in parks and open spaces in particular to avoid potential negative impacts on biodiversity and sites of local importance for nature, while maximising benefits in terms of improved access.

It also identified that increased walking and cycling improvements could provide greater environmental benefits for affected journeys. Walking and cycling

improvements and town centre proposals with greater conservation and heritage input are now included in the LIP.

Equalities impact assessment

An equalities impact assessment of the consultation draft LIP objectives identified that the provision of cycle facilities may be a higher priority for minority ethnic groups in the borough than for the population as a whole, based on satisfaction survey responses. The scale of the difference would be sufficient to afford cycle facilities a priority similar to improving highway condition and congestion reduction among this group. Cycling levels are low in general in Barnet but lower among minority ethnic groups (in aggregate)

This was already mitigated to some extent in the consultation draft as, although a specific local objective in relation to cycling was not included, the provision of new and improved transport facilities in the regeneration areas is expected to include the delivery of improved cycle networks in these areas, in several of which minority ethnic groups are strongly represented. This expectation was been made explicit in the consultation draft LIP. Poorly maintained roads have a big impact on cyclists, and the emphasis on improving the condition of local roads through the LIP would also provide greater opportunities for all residents to cycle on the boroughs roads.

Following consultation the cycling provision in the LIP has been extended.

Work to tackle the school run will clearly impact most on children and their carers, inconveniencing some but providing benefits to others. If not applied sensitively and effectively managed it may have a greater adverse impact on pupils at faith schools who are likely to be travelling longer distances and/or on parents/pupils with disabilities who need to drive and park near the school. Assessment of the equalities impact of the detailed proposals and any mitigation measures will be required prior to implementation. Following consultation there have been revisions to the delivery proposals in the LIP but the need for detailed assessment of proposals as they develop remains.

Consultation

In preparing the LIP the borough is required under the GLA Act to consult Transport for London (TfL), the Metropolitan Police, affected London Boroughs and, if the borough considers it appropriate, organisations that represent disabled persons. Also as a consequence of the SEA regulations it must consult certain environmental organisations.

The consultation draft LIP was provided to TfL on 14 February 2011 for comment and was subsequently published together with the Environmental Report and Equalities Impact Assessment on the borough's consultation hub web-site from 20 May 2011 to 1 July 2011. The organisations below, plus individuals who had previously expressed an interest were specifically notified.

English Heritage, Natural England, Environment Agency
London Cycling Campaign
Hertfordshire County Council
All five adjoining London Boroughs
Disability Action in the Borough of Barnet (DAbB)
Metropolitan Police

The borough received feedback on the consultation draft LIP from:
Transport for London
Age UK Barnet

A London Borough of Brent Councillor
Barnet Cyclists
London Borough of Camden
The Environment Agency
English Heritage
Hertfordshire County Council
Natural England

In response to feedback the LIP now contains:

- extra contextual information especially with regard to the local application of the Mayor's Transport Strategy Goals and Challenges. This has resulted in significant additional text and reordering of parts of the document
- an addition objective under the heading more environmentally friendly transport networks: Making cycling and walking more attractive for leisure, health and short trips
- Changes to delivery plan actions including additional proposals to support cycling in particular, and removal of non-specific road improvement programmes.
- Increased targets for cycling and an increased long term target for total casualty reduction.

Borough Transport Objectives

Local context and geographic characteristics

Introduction

Barnet is the fourth largest London borough by area (86.7 sq km) and home to a growing and diverse population. About 38% of the borough is undeveloped, 28% is green belt and 8% is metropolitan open land (which includes around 200 parks, allotments, playing fields and agricultural land). The rest of the borough is made up of suburban areas with a population density of 3,863 people per square kilometre. This is lower than for London as a whole (4,812 people p/sq km) but nearly ten times the figure for England (394 people p/sq km).

We expect significant growth in Barnet's population and economy over the next twenty years. There are currently five major redevelopment sites within Barnet and as well as the new Town Centre project at Brent Cross Cricklewood. When complete in 2026, these combined projects will provide an additional **28,500 homes** within the borough and the new town centre at Brent Cross Cricklewood will create of over **7,000 new jobs**. The Opportunity Areas (Brent Cross - Cricklewood and Colindale – Burnt Oak) and Area of Intensification (Mill Hill East) are identified in the London Plan.

Indices of Multiple Deprivation scores 2010, by LSOA

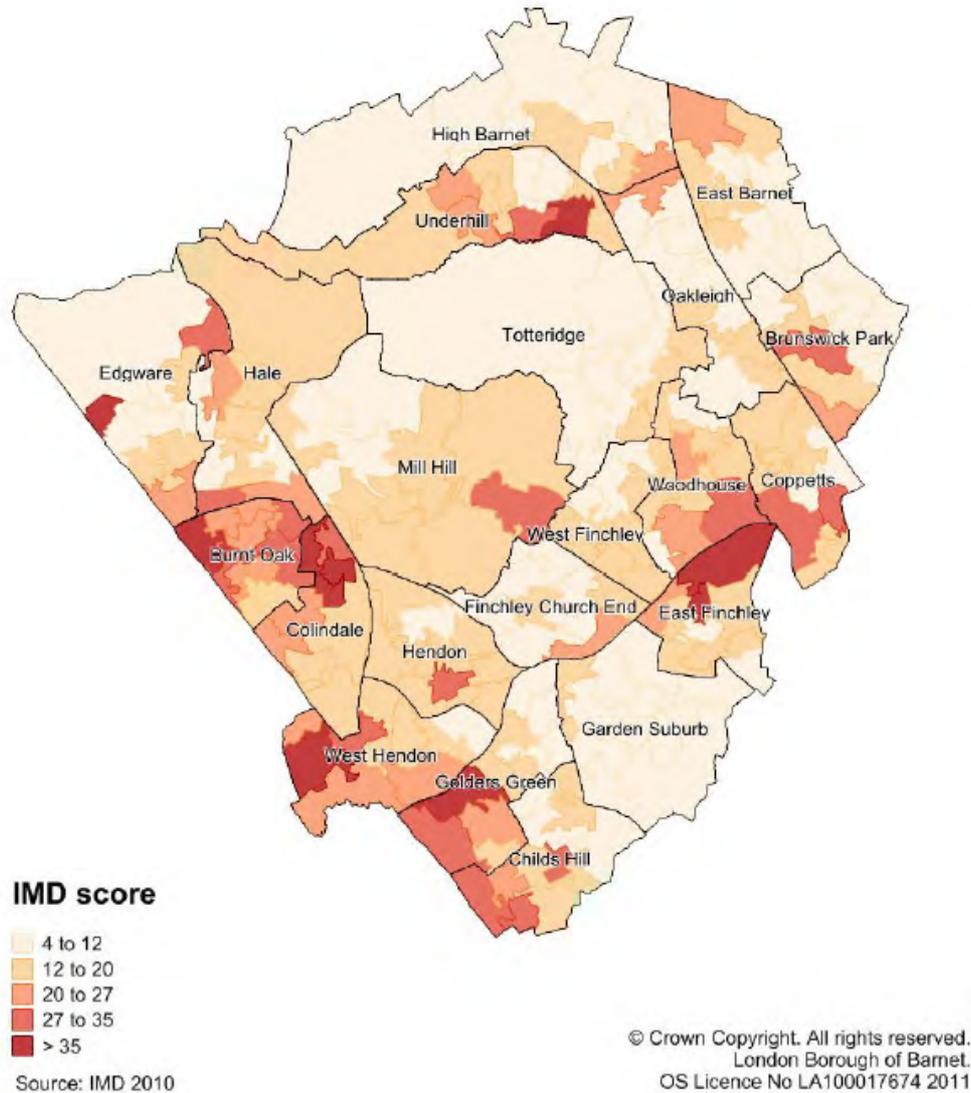


Figure 2 - Indices of multiple deprivation

The third release of the English Indices of Deprivation (ID2010) shows that Barnet is less deprived than it was three years ago. Barnet is a particularly varied borough however, and although the Barnet is averagely relatively deprived, there is a wide variance between different domains (types of deprivation) and different areas. No Lower Level Super Output Areas (LSOAs) in Barnet fall within the ten per cent most deprived nationally, whereas six did so in 2007. However, 35 of 210 rank in the lowest ten per cent on at least one domain. The borough’s major development areas are chiefly located within the most deprived areas of the borough.

Major Development Areas

Much of the expected growth in Barnet’s population and economy is concentrated in the borough’s major regeneration areas. Further information on the transport aspects of these development areas is included at Appendix A

Colindale Area Action Plan (AAP)

The Colindale AAP was approved in 2010 and sets out a vision for the area in 2021 with the creation of a new neighbourhood centre and high quality sustainable development within four 'corridors of change', delivering 10,000 new homes and creating 1,000 new jobs. The AAP covers several major development sites including Beaufort Park (2,800 new residential units), Grahame Park (3,000 new units), the Peel Centre currently occupied by the Metropolitan Police (expected to be up to 3,000 new units) and the former Colindale Hospital site (up to 1100 new units). Beaufort Park is currently being occupied with the final phases being built now. The first 319 units comprising phase 1A of Grahame Park have just been completed. Construction is also underway at the Colindale Hospital site.

Brent Cross Cricklewood (BXC)

The BXC scheme is one of the most ambitious and challenging developments proposed in the UK at the present time. Once started, it will take approximately 20 years to build out the scheme. Outline Planning Consent was issued by the Local Planning Authority in October 2010. The planning conditions require that implementation should commence no later than seven years from grant of consent and is expected to start by 2015.

The scheme includes the expansion of the existing shopping centre on the north side of the A406 as well as a new town centre on the southern side. 7,500 new residential units are proposed together with significant new offices, with around 27,000 new jobs expected to be created. New and improved community facilities, together with new rail served freight and waste handling facilities and a new combined heat and power plant are all planned.

West Hendon Regeneration scheme

Located between the A5 and the Welsh Harp Reservoir the West Hendon Estate is a product of the 1960s. The existing 680 homes will be replaced by a new mixed tenure neighbourhood of up to 2,200 new homes, a net increase of 1,500 homes. It is estimated that the scheme will be completed before 2026, and includes removal of the Perryfield Way gyratory system. The redevelopment of West Hendon is being taken forward in parallel, but independently of the regeneration of Brent Cross – Cricklewood and received its latest outline planning permission in 2008. The first phases have commenced on site.

Dollis Valley priority estate

This estate has been identified for regeneration and the council is currently in the process of selecting a preferred development partner.

Mill Hill East Action plan (AAP)

The Mill Hill East AAP was adopted early in 2009 and set the context for a major new suburban development of some 2,200 residential units and mixed uses, including a new primary school, aiming to create about 500 jobs. The outline planning application for this area of intensification as identified in the London Plan was approved by the council in April 2011 and the section 106 legal agreement is currently being finalised, with the development expected to roll-out over the next 15 years.

Stonegrove priority estate

Stonegrove and Spur Road are two post war interconnected housing estates in Edgware which are being redeveloped as one. Regeneration will create a new neighbourhood linked to its surroundings on the edge of London's Green Belt. Nearly 1,000 new homes will be provided to replace 600 existing ones, a net increase of 400. This programme is well under way and 120 new homes were completed in 2010. The scheme is expected to be completed before 2021.

Transport context

Geography

Barnet has good transport links with the North Circular Road (A 406) running through the Borough, the M1 beginning in Barnet and the M25 just outside the Borough boundaries. Both branches of the Northern Line serve Barnet, and there are also two major suburban rail routes that pass through the Borough.

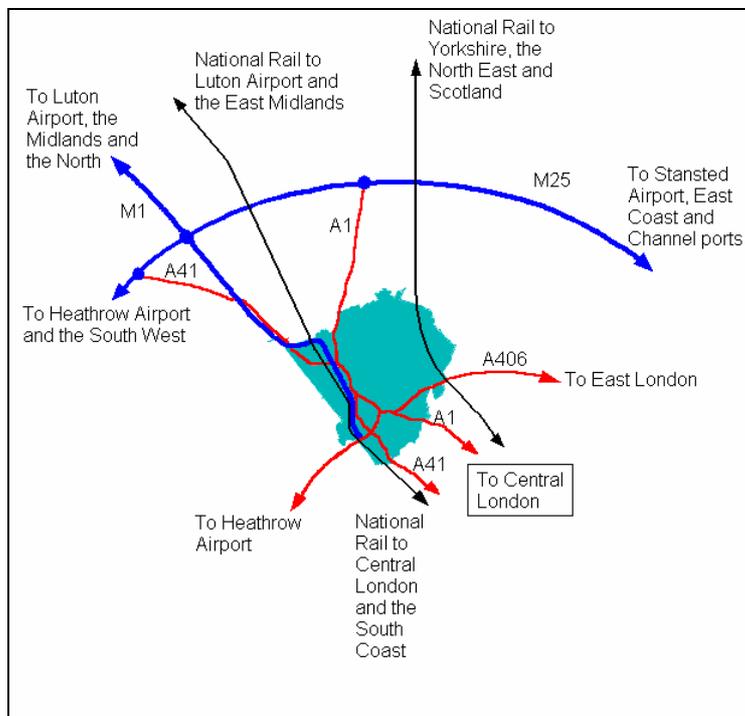


Figure 3 – National and International links

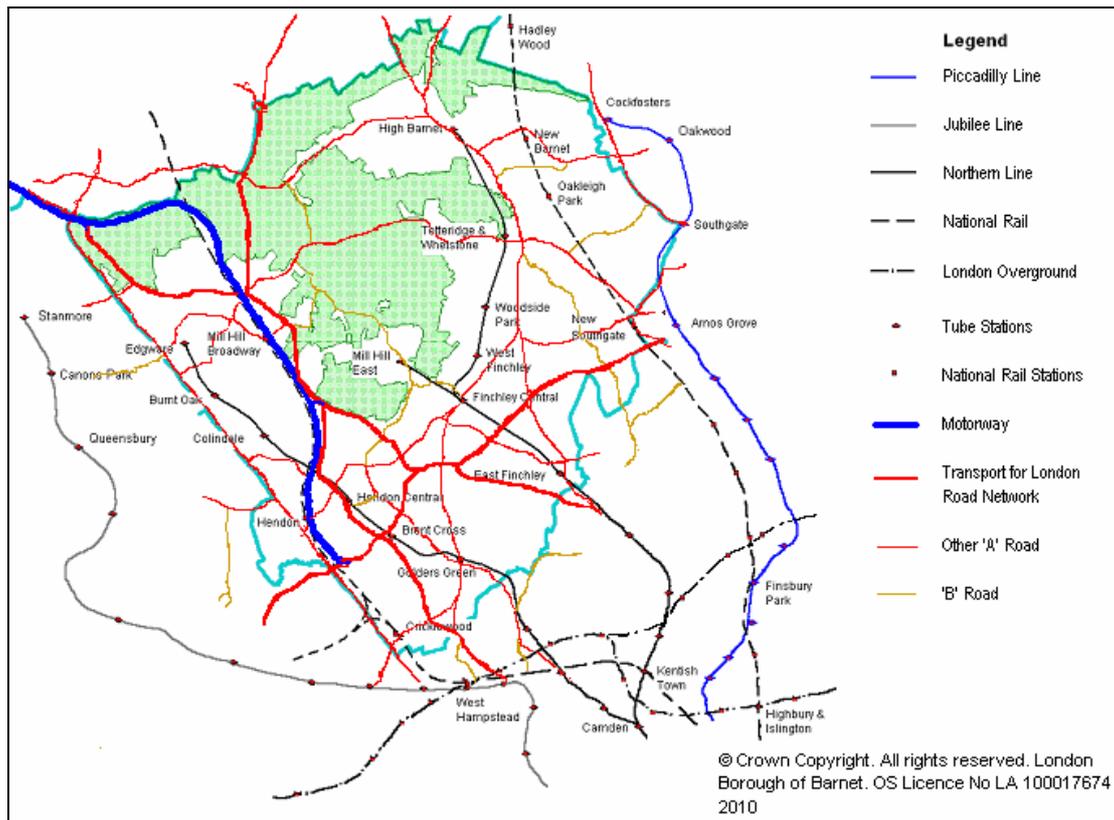


Figure 4 – transport links in Barnet

The borough has the second highest length of public roads in London (after Bromley), and the second highest total traffic (after Hillingdon). Table 1 summarises key locations, transport corridors and interchanges in the borough.

Table 1 – Key locations, transport corridors and interchanges

	Key origin or destination	Multi-modal transport corridors and modal services	Access to corridors and networks
International trips to and from London	-	-	<p>International airports Luton Airport – accessed by road – M1 and rail – Thameslink</p> <p>International rail & coach stations St Pancras International – Thameslink, Great Northern Golders Green Coach station routes to Stansted</p>
National and inter-regional trips to and from London	<p>Growth areas - London Luton Bedford Corridor</p>	<p>Inter-regional and national strategic transport corridors Road - M1, A1(M) Rail – East Coast, Great Northern, Midland Mainline, Thameslink</p> <p>Long distance passenger and freight services</p>	<p>National rail stations</p> <p>Major motorway junctions - M1(junct 1)/A406 /A5 Staples Corner - M1(junct 2)/A1/A41 (Fiveways Corner) - M1 (junct 4) / A41</p> <p>Major coach stations</p>

		- East Coast Main Line	- Golders Green Major road and rail freight hubs - Cricklewood sidings
London-wide	<p>Strategic outer London Development Centres - Cricklewood/Brent Cross</p> <p>Opportunity areas - Cricklewood/Brent Cross - Colindale/Burnt Oak</p> <p>Areas for intensification - Mill Hill East</p>	<p>London-wide strategic transport corridors - A1, A41, A406, A5</p>	<p>Major rail stations - Cricklewood - Hendon - Mill Hill Broadway - New Barnet - New Southgate - Oakleigh Park - West Hendon</p> <p>Major tube stations - Brent Cross - Burnt Oak - Colindale - East Finchley - Edgware - Finchley Central - Golders Green - Hendon Central - High Barnet - Mill Hill East - Totteridge & Whetstone - West Finchley - Woodside Park</p> <p>Major bus and coach interchanges - Golders Green bus station - Edgware bus station - North Finchley bus station</p> <p>Major road junctions - A1/A406 (Henlys Corner) - A1/A41 Apex Corner - A41/A406 Brent Cross</p>
Sub-regional (Barnet, Enfield, Haringey, Waltham Forest)	<p>Metropolitan town centres - Brent Cross Shopping Centre</p> <p>Major shopping centres - Brent Cross Shopping Centre - Broadwalk Shopping Centre, Edgware</p> <p>Key sub-regional services - Barnet Hospital - Edgware Hospital - Royal National Orthopaedic Hospital - National Institute for Medical Research - Middlesex University - Barnet College</p>	<p>Sub-regional strategic transport corridors Tube – Northern Line Local rail – FCC TLRN – A1, A41, A406 Strategic Route Network – A5, A1000, A598, A110, A410</p>	<p>Sub-regionally important interchanges Brent Cross station/bus interchange Colindale station/bus interchange Mill Hill Broadway station /bus interchange Golders Green station/bus station Brent Cross bus station, North Finchley bus station</p>

	<ul style="list-style-type: none"> - British Library, Colindale - RAF Museum - Artsdepot 		
Local	<p>Local town centres</p> <ul style="list-style-type: none"> - Spires Shopping Centre, Barnet - North Finchley - <p>Residential areas</p> <ul style="list-style-type: none"> - High Barnet - East Barnet <p>Major employers</p> <ul style="list-style-type: none"> - Central Public Health Laboratories - Barnet and Chase Farm NHS Trusts - Barnet College - Casio-Electronics - British Telecom - National Institute of Medical Research <p>Local services</p> <ul style="list-style-type: none"> - 154 schools in borough <p>Industrial estates</p> <ul style="list-style-type: none"> - Brunswick Industrial Estate - Mill Hill Industrial Estate - New Southgate Industrial Estate 	<p>Local strategic transport corridors and services</p> <p>Roads and streets – there is almost 763km of roads in Barnet including 12km of motorway, 34.5km of TLRN and 128km of principal roads.</p> <p>Bus routes – nearly 80 bus routes serve the borough.</p>	<p>Local rail stations -</p> <p>Bus stops – approx. 980 bus stops in the borough.</p>

Transport use

Overall car ownership is higher than the London or Outer London average; 73% of households have access to a car compared with 70% for outer London¹. However resident car use is slightly below the outer London average, with public transport (especially the tube for access to central London) and walking both playing significant roles. The bus is the only realistic public transport option for orbital journeys, but these movements are less well served than routes into London, and private transport used more. Barnet residents make, on average, 3.1 trips per day² – the fifth highest level in London.

Cycling levels are about average for Outer London but are typically higher and car usage typically lower among residents in the south of the borough – cycling to work in the 2001 census varied at ward level between 0.4% and 1.6% of residents around an average of 0.9% for the borough. The North Circular road and the M1 and Midland Mainline Railway present a barriers to cycling, particularly in the west of the borough.

Levels of walking are above average for Outer London boroughs and close to the Greater London average.

¹ LTDS 2006-9

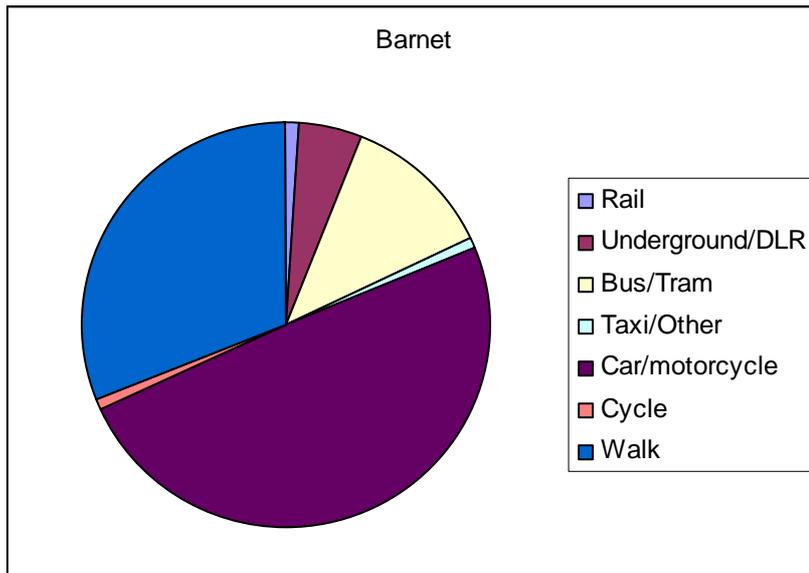
² Travel in London, Key trends and developments, Report Number 2, Transport for London (Table C.5, page 367)

Londoners' trips by borough of origin, trips per day and shares by main mode, average day (seven-day week) 2007/08 to 2009/10.

	Rail	Underground/DLR	Bus/Tram	Taxi/Other	Car/motorcycle	Cycle	Walk
Barnet	1%	5%	12%	1%	49%	1%	31%
Outer London	3%	4%	13%	1%	50%	1%	28%
Greater London	4%	7%	15%	1%	38%	2%	32%

Table 2 - Mode share of London residents journeys based on origin of trip

Figure 5 - Mode share of trips by Londoners originating in Barnet³



	Rail	Underground/DLR	Bus/Tram	Taxi/Other	Car/motorcycle	Cycle	Walk
Barnet	2%	7%	11%	1%	50%	1%	29%

Table 3 - Resident mode share 2006/07 to 2008/9

Freight in Barnet may be generated in the borough or passing through to access other locations, usually on major road corridors or rail lines. Freight serving and based in Barnet's 20 industrial estates, many town centres and retail locations including Brent Cross shopping centre is largely road based however rail freight also operates from Cricklewood. Due to associated transport requirements, transport, storage and distribution land uses are encouraged adjacent to main transport routes and rail freight facilities where possible.

The M1 and A406 North Circular Road both carry high levels of freight (over 3000 HGVs per day and about 5% of vehicles). HGV flows on borough A roads average around 2% of motor traffic but on some particularly the A5 flows approach 1000 HGVs per day and may exceed 3% of traffic. HGV flows on some parts of the A1 and A41 exceed this, but in other areas are lower and are similar to borough roads. Many borough roads, including A roads are protected from the impacts of through freight traffic by commercial vehicle restrictions.

³ Trips by Londoners originating in Barnet by main mode, average day (seven-day week) 2007/08 to 2009/10. (LTDS – from Travel in London Report 3)

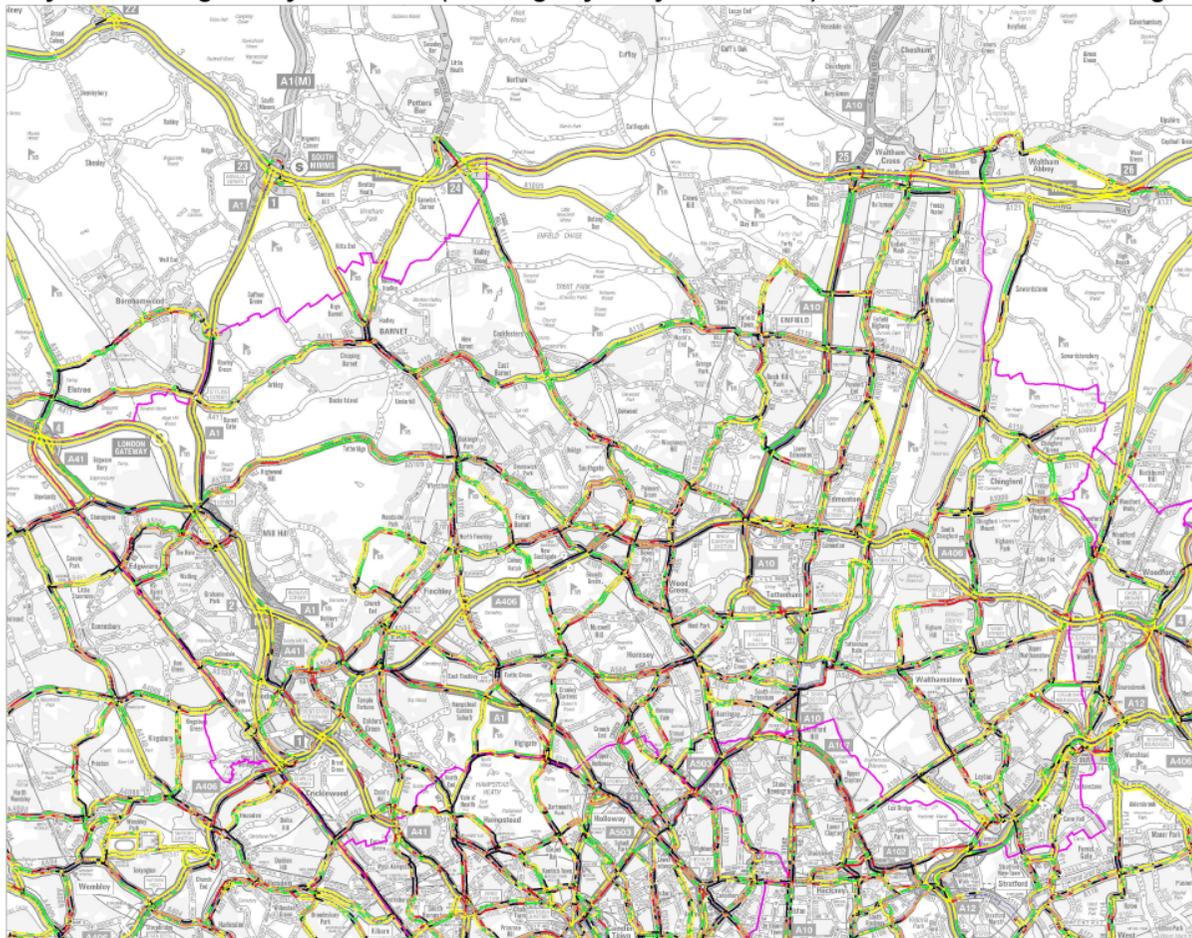
Vehicle delay on main roads recorded in 2005 in Barnet⁴ at 5.1 mins/km was well above average for outer London (4.1 mins/km), and more typical of Inner London boroughs. Figure 6 illustrates delay across north London and high levels of delay are evident on the A5, at various junctions on the Transport for London Road Network in Barnet (A1, A41, A406) including at Henlys Corner and at Edgware, Chipping Barnet, Whetstone, Hendon, Cricklewood and Friern Barnet and to some extent at North and East Finchley and Finchley Church End and at Golders Green.

⁴ Estimated total annual vehicle delay (million vehicle minutes) on TfL's 'Network of Interest' Travel in London, Key trends and developments, Report Number 1, Transport for London (Table 4.3, page 82)

Figure 6 - Average link delay in minutes per kilometre for the morning peak period derived from Trafficmaster data obtained from vehicles fitted with GPS devices, May 2009

May 2009 Average Delay - AM Peak (Working days only - Mon to Fri)

North Sub Region



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Road Network Performance and Research

- Note:**
- Network shown is OS ITN links on Network of Interest.
 - AM Peak is 7am to 10am.
 - Delay measurement is peak speed compared to night speed (10pm to 6am - free flow) in mins/km
 - Links with 2 or more observations are shown
 - Both directions are shown
 - Processed as per DfT instructions issued in Apr 09



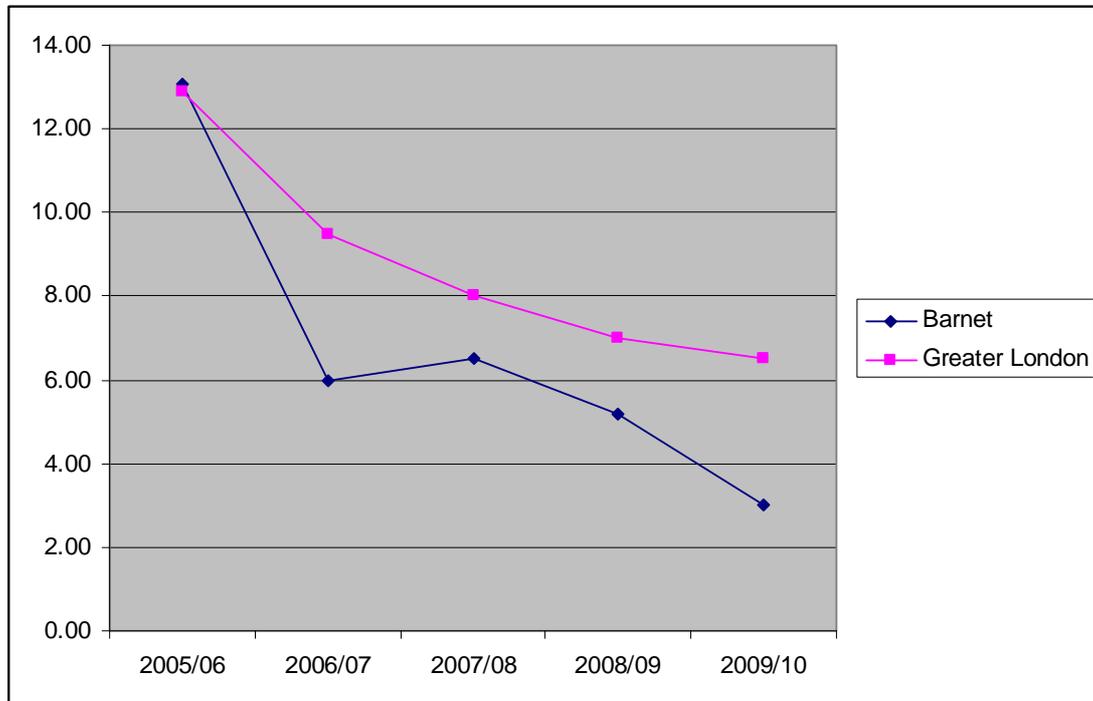
Information derived from data provided by TrafficMaster obtained from vehicles fitted with GPS devices

- Delay Measurement (mins per km)**
- Greater than 1.5
 - 1 to 1.5
 - 0.5 to 1
 - 0.25 to 0.5
 - Less than 0.25
 - No Data

Road condition

Road condition on principal and non-principal classified roads is within the top quartile in London. However many important local roads and all residential streets are not included in the survey data.

Figure 7 - percentage of Principal Roads in poor condition



NHT Public Satisfaction Survey 2010

Results from the NHT Public Satisfaction Survey indicate that the condition of roads and pavements, traffic congestion and road safety are the most significant concerns for Barnet residents, being afforded high importance by residents but achieving low satisfaction scores.

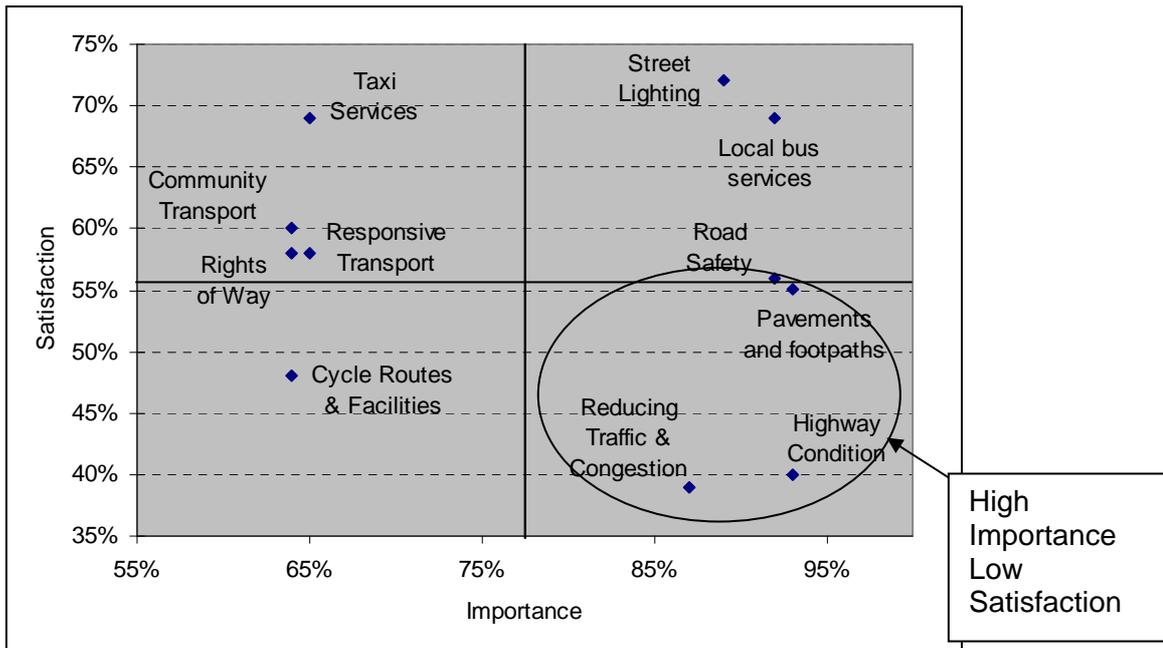


Figure 8 - Satisfaction versus Importance for aspects of Highway and Transportation

The Survey also identified residents' views about the main causes of traffic queues which are identified in the graph below. The three top responses relate to School Run Traffic, Roadworks and Commuter Traffic.

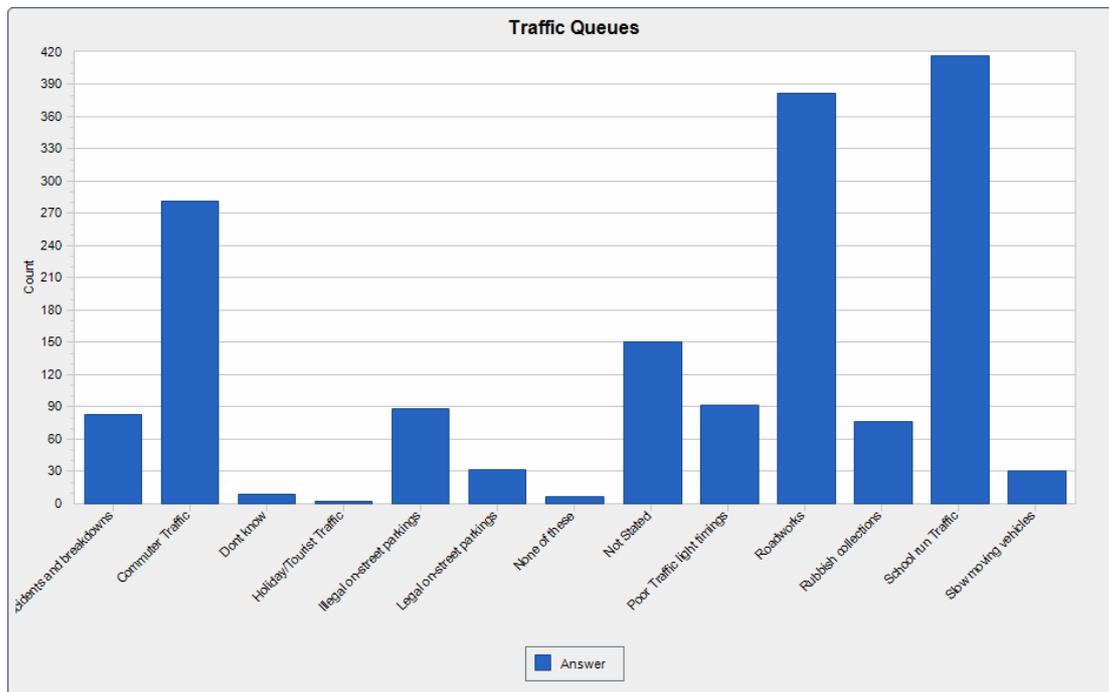


Figure 9 - Resident perception of causes of traffic queues

Measures that would reduce car use were dominated by bus service improvements. The top four items being: more convenient bus services, quicker bus journeys, more reliable buses and cheaper bus fares.

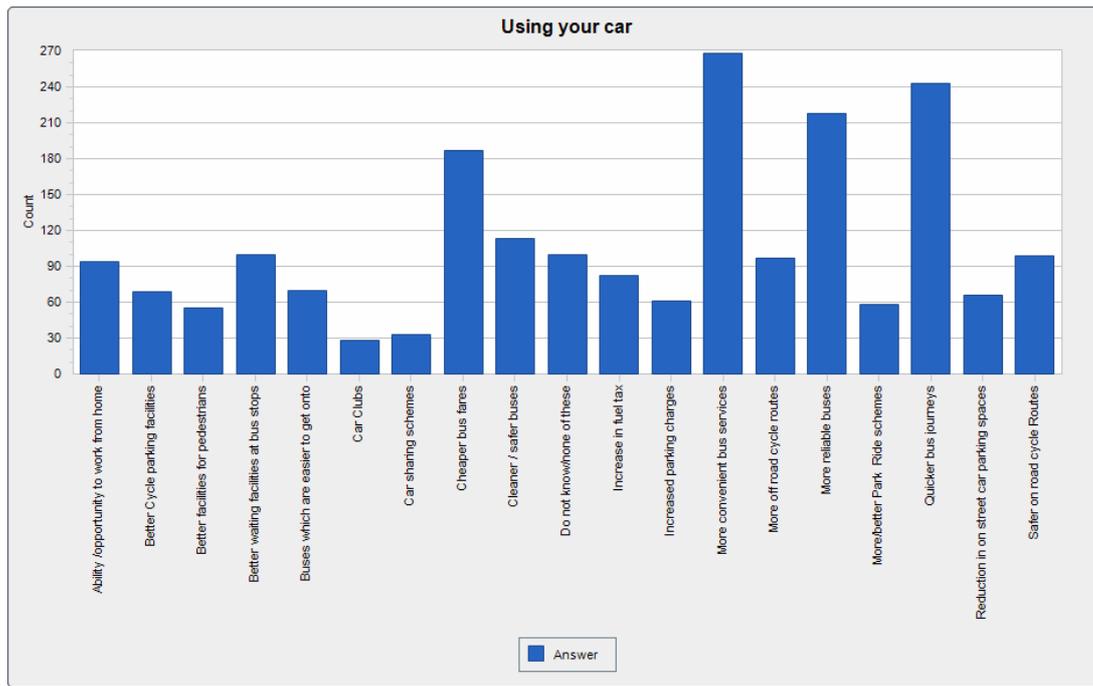


Figure 10 - Resident views on measures that would reduce car use

One Barnet - A Sustainable Community Strategy for Barnet 2010-2020

The One Barnet plan sets out the priority objectives for the Council and our partners over the next ten years. They reflect what our residents and organisations we work with have told us are the most important issues for them, and they are the most relevant priorities to achieving our vision for the borough in 2020.

A Successful London Suburb

- Delivering sustainable housing growth•
- Keep Barnet Moving•
- People have the right skills to access employment opportunities•
- Environmentally Responsible•
- Supporting Enterprise (including Town Centres)•
- A clean and green suburb.•

Strong Safe Communities for everyone

- Reduce crime and anti-social behaviour and residents feel safe•
- Strong and cohesive communities.•

Investing in Children Young people and their Families

- Safety of children and young people•
- Narrow gap through targeting support at young people at risk of not fulfilling their potential•
- Prevent ill health and unhealthy lifestyles.•

Healthy and Independent Living

- Better health and healthy lives for all•
- Better access to local health services•
- Promote choice and maximise independence of those needing greatest support.

Corporate Plan

Our Corporate Plan priorities are:

- Better services with less money
- Sharing opportunities and sharing responsibilities
- A successful London suburb

Local Development Framework

The Local Development Framework identifies a series of core objectives⁵ in order to deliver a successful London Suburb. These are:

- To manage housing growth to meet housing aspirations
- To meet social infrastructure needs
- To promote Barnet as a place of economic growth and prosperity
- To provide effective and efficient travel
- To promote strong and cohesive communities
- To promote healthy living and well-being
- To protect and enhance the suburbs
- To ensure efficient use of land and natural resources
- To enhance and protect our green and natural open spaces

Through development of the Local Development Framework Core Strategy the borough has identified four inter-related and complementary transport priorities to provide effective and efficient travel in Barnet, which also support the other objectives.

1. Ensuring more efficient use of the local road network;
2. Taking a comprehensive approach to tackling the school run;
3. Delivery of high quality transport systems in regeneration areas
4. More environmentally friendly transport networks

These form the basis of the boroughs transport objectives

The LDF Core Strategy also sets out the approach to our town centres. In order to create the right environment to enable and facilitate private sector investment and growth in Barnet's town centres we produced a Suburban Town Centre Strategy in April 2008. This identified centres where more detailed planning frameworks will support the potential for future growth and manage anticipated change. These are:

- Chipping Barnet
- Edgware
- North Finchley
- Finchley Church End

A number of these centres are also located at significant public transport nodes and it is vital that plans and proposals for these centres are taken forward in partnership with Transport for London. The town centre frameworks will focus on main town centre uses – retail, leisure, entertainment (cinemas and theatres), offices, museums and hotels and create a strategy, which promotes and maximises existing and future movement opportunities including public transport and pedestrian and cycle connections.

⁵ Publication draft 25/08/2010

Mayor's Transport Strategy

The Mayor's Transport Strategy sets out goals and identifies a series of challenges for transport in London.

MTS Goals

Support economic development and population growth

Enhance the quality of life for all Londoners

Improve the safety and security of all Londoners

Improve transport opportunities for all Londoners

Reduce transport's contribution to climate change, and improve its resilience

Support delivery of the London 2012 Olympic and Paralympic Games and its legacy

Challenges

Supporting sustainable population and employment growth

Improving transport connectivity

Delivering an efficient and effective transport system for people and goods

Improving journey experience

Enhancing the built and natural environment

Improving air quality

Improving noise impacts

Improving health impacts

Reducing crime, fear of crime and antisocial behaviour

Improving road safety

Improving public transport safety

Improving accessibility

Supporting regeneration and tackling deprivation

Reducing CO2 emissions

Adapting for climate change

Developing and implementing a viable and sustainable legacy for the 2012 Games

North London Sub-regional transport plan

Sub-regional challenges were identified in the "Interim Report on the Challenges and Opportunities" document published in February 2010 in development of the North London Sub-regional transport plan (SRTP).

Sub-regional challenges are:

- Facilitating and responding to growth, particularly in Brent Cross/ Cricklewood and the Upper Lee Valley
- Relieving crowding on the public transport network
- Managing highway congestion and making more efficient use of the road network
- Enhancing connectivity and the attractiveness of orbital public transport
- Improving access to key locations and to jobs and services

Subsequently in November 2010 the SRTP for 2011-2031 was published and the North London sub-regional Panel established to oversee its delivery and review. The Plan sets out an extensive implementation plan demonstrating how the Mayor's vision will be implemented in the sub-region.

Key projects within the plan include:

- Improvements at Brent Cross Cricklewood (BXC) Opportunity Area, including the new mainline railway station at Brent Cross;
- Provision of suitable bus infrastructure to support development;
- Additional cycle parking;
- Urban realm improvements in town centres;
- A406 Henly's Corner junction improvements;
- Further highway enhancements and / or changes to the local road network – such as at BXC;
- Achievement of good state of repair of road infrastructure; and
- Increased use of Travel Plans.

There are also other projects in the Implementation Plan which are fundamental to help keeping Barnet moving, most of which rely on partners to deliver including Thameslink Phases One and Two, improved Rail Freight Terminals as one is proposed at BXC, the Northern Line Upgrade Phases One and Two and Bus Network Development.

Although Barnet is formally in the North London sub-region the key borough growth and regeneration corridor is in the west of Barnet, particularly along the A5 corridor, which is part of the strategic London – Luton corridor. Moving forward Barnet is keen to work more closely and collaboratively with our West London neighbouring boroughs which is facilitated by intentionally “fuzzy” sub-regional boundaries.

LIP Transport Objectives

Borough Transport Objectives

We have identified borough transport objectives taking into account sub-regional challenges and opportunities and sustainable community strategy objectives and the borough's local development framework and local application of the MTS goals and challenges.

The borough local transport objectives and sub-objectives identified are set out below. Linkages with LDF priorities, taking into account sub-regional challenges and opportunities and Mayoral goals are summarised in Table 7 on page 44. These objectives are for fulfilment by 2031 in line with the Mayor's Transport Strategy.

- 1. Ensuring more efficient use of the local road network**
 - a. Reduce congestion
 - b. Improve the condition of roads and footpaths
 - c. Improve the bus network (with TfL)
 - d. Make travel safer and more attractive
- 2. Taking a comprehensive approach to tackling the school run**
 - a. Reduce car based journeys and increase levels of walking and cycling to and from school
 - b. Reduce pupil parking near schools
- 3. Delivery of high quality transport systems in regeneration areas**
 - a. Comprehensive transport solutions in major development areas
 - b. Public transport enhancements (with partners)
 - c. Pursue major improvements to the strategic road network
 - d. Town centre enhancement to improve the public realm, public transport services, short-trip making by walking, parking and servicing controls and accessibility improvements
- 4. More environmentally friendly transport networks**
 - a. Support the use of low emission vehicles including electric cars
 - b. Encourage mixed use development that will help to reduce the distances people need to travel
 - c. Making cycling and walking more attractive for leisure, health and short trips

Transport Challenges in Barnet

This section expands on how the Mayor's Transport Strategy goals and challenges apply locally in Barnet, and the borough transport objectives, and other sub-regional and local actions that address these

MTS Goal: Support economic development and population growth

- **Supporting sustainable population and employment growth**

Growth in Barnet's population and economy will place increased demands on the transport network. TfL's North London Highway Model (which takes account of benefits from current improvements on the North Circular Road at Henlys Corner and Bounds Green) predicts increased congestion on the road network by 2016 without additional measures to manage this.

	Base 2008	Ref Case 2016	Ref Case 2031	am peak
Total travel Distance (pcu*-kms)	321,557	327,893	355,466	*pcu = passenger car unit. A weighting applies to non-car vehicles
Average speed (km/hr)	27.4	27.0	25.0	

Table 4 - Anticipated changes in traffic volumes and speed 2008-2031

Rail modelling indicates that planned upgrades of the Northern Line and the Thameslink Enhancement Programme will be vital to help facilitate growth in Barnet by providing more capacity to satisfy increasing demand for commuting into Central London. Both of the proposed upgrades will be needed to offset growth bringing underground crowding in 2031 back to a similar level to that experienced today. National rail passenger crowding levels are expected to reduce due to the Thameslink upgrade and the growth strategy for Barnet focuses on making use of existing spare capacity where practical, for example much of the demand associated with the Brent Cross Cricklewood development is expected to be in the contra-peak direction.

The borough's regeneration and development areas will also deliver increased public transport capacity through developer contributions to support new or enhanced bus routes and improved rail and underground services and facilities. These include:

Mill Hill East – Area Action Plan

- Bus route changes to serve development area
- Improved interchange at Mill Hill East station.

Colindale Area Action Plan area

- Station Square transport interchange
- Potential new bus route(s)
- Tube station booking hall improvements (with TfL)

Cricklewood, Brent Cross and West Hendon Development Framework

- Underground Station (interchange and station improvements) with TfL
- Bus station (interchange improvements) with TfL
- Bus subsidies through development transport fund supporting new and enhanced provision
- New mainline rail station and interchange
- Bus lanes and bus only streets

Further information on the transport aspects of these development areas is included at Appendix A

These developments are being developed as mixed use areas, reducing the need for the new residents to travel and will be supported by travel plans that identify and provide the infrastructure, services and support that travellers and the new occupiers will need to make best use of the transport options available.

The expected level of growth also places additional demands on the rest of the borough's transport network and action to address congestion, increase movement capacity and/or develop other transport options will also be needed.

Borough transport objectives addressing the challenge

- Reduce congestion
- Reduce car based journeys and increase levels of walking and cycling to and from school
- Improve the bus network (with TfL)
- Comprehensive transport solutions in major development areas
- Public transport enhancements (with partners)
- Pursue major improvements to the strategic road network
- Encourage mixed use development that will help to reduce the distances people need to travel

Relevant SRTP challenges

- Facilitating and responding to growth, particularly in Brent Cross/ Cricklewood and the Upper Lee Valley
- Relieving crowding on the public transport network
- Managing highway congestion and making more efficient use of the road network
- Improving access to key locations and to jobs and services

One Barnet Plan – related objectives

- **A Successful London Suburb**
 - Delivering sustainable housing growth
 - Keep Barnet Moving

Other activities addressing the challenge

- Thameslink Phases One and Two,
- Northern Line Upgrade Phases One and Two
- Bus Network Development

• **Improving transport connectivity**

Barnet is well served by public transport into Central London but accessibility of locations within the borough is more mixed. Access to services such as schools, health care and food shopping is below average for London and broadly average for Outer London although access to secondary schools is low (although this indicator may not reflect all provision).

Table 5 – Access to services in Barnet – rank within London

Access to services - % of Zones with ATOS score A or B for service type:					
Rank within London (1 = best access)					
Primary Schools	Secondary Schools	Further Education Colleges	GPs	Food Shopping	Open Spaces
25	28	22	21	24	16

Public transport accessibility of much of the borough is low, although Edgware and Golders Green that are served by the northern line and major bus stations have high Public Transport Accessibility Levels (PTAL).

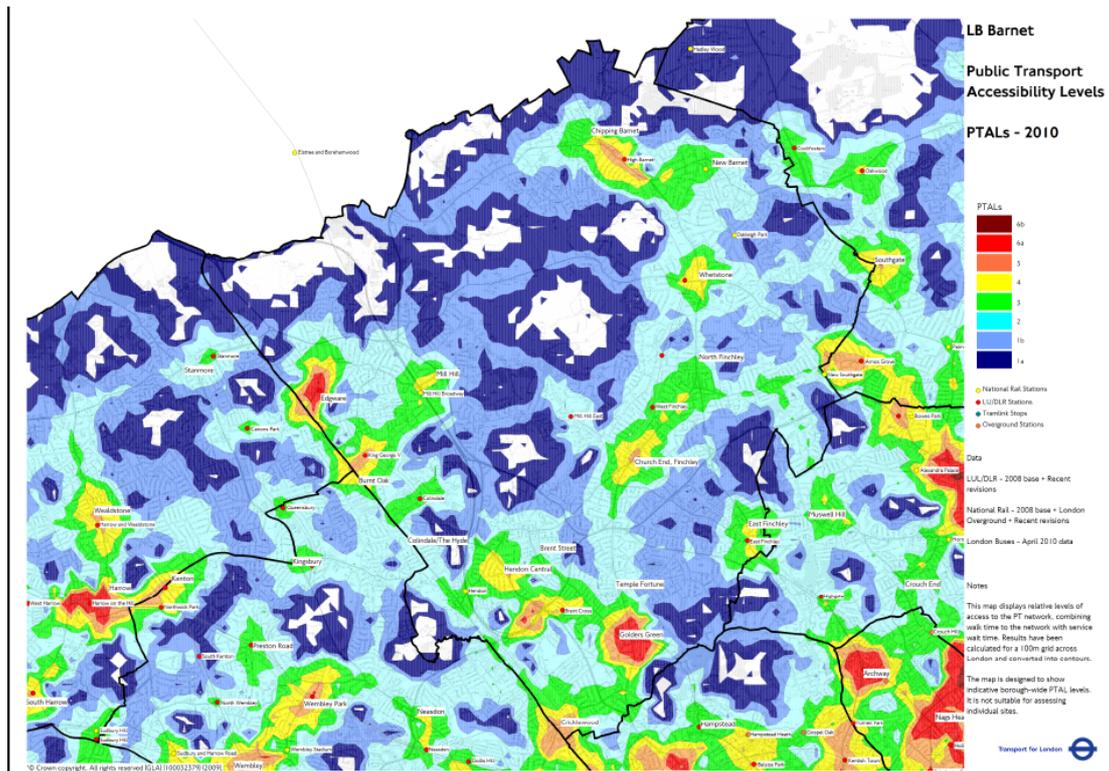


Figure 11 – Map of Public Transport Accessibility Levels in Barnet

Access to Central London for employment plays an important role in Barnet. At the 2001 census 34 per cent of working residents travelled to central London for work (41% lived and worked in Barnet with the rest commuting elsewhere).

The major developments areas will deliver new jobs especially in the new town centre at Brent Cross Cricklewood but growth in population in Barnet will outstrip growth in jobs and a large proportion of the population will continue to work in Central London or elsewhere.

Transport improvements associated with development in Barnet will also increase the accessibility of these areas for all transport users. As well as improving access to local services and new job opportunities the increased accessibility delivered by the regeneration areas will improve access for the population as a whole to transport routes into Central London.

Bus services have an important role in providing for journeys not served by the other public transport options, particularly for orbital trips and bus service enhancements delivered by the developments will improve accessibility to new employment opportunities and local services.

Increased public transport accessibility is being planned for and delivered in Colindale, Brent Cross Cricklewood, Dollis Valley and Mill Hill East in particular. And in addition to public transport improvements the developments deliver:

Mill Hill East – Area Action Plan

- New pedestrian and cycle routes through AAP area
- New east west link through development area
- Improved access to Mill Hill East station (Northern Line)

Colindale AAP area

- Junction improvements
- Improved access to Colindale Station (Northern Line)

Cricklewood, Brent Cross and West Hendon Development Framework

- Major strategic road junction improvements
- Comprehensive pedestrian and cycle networks
- New road and pedestrian bridges reducing severance by major roads and railways in the area
- Edgware Road (A5) Corridor Study

Proposals to be delivered through the development of Brent Cross Cricklewood also include provision for rail freight to and from the borough through provision of a Rail Freight facility and rail served waste handling facility, together with road improvements providing access to these and train stabling facilities.

Further information on the transport aspects of these development areas is included at Appendix A

Borough transport objectives addressing the challenge

- Comprehensive transport solutions in major development areas
- Public transport enhancements (with partners)
- Pursue major improvements to the strategic road network
- Encourage mixed use development that will help to reduce the distances people need to travel
- Making cycling and walking more attractive for leisure, health and short trips

Relevant SRTP challenges

- Facilitating and responding to growth, particularly in Brent Cross/ Cricklewood and the Upper Lee Valley
- Relieving crowding on the public transport network
- Managing highway congestion and making more efficient use of the road network
- Enhancing connectivity and the attractiveness of orbital public transport
- Improving access to key locations and to jobs and services

One Barnet Plan – related objectives

- **A Successful London Suburb**
 - Delivering sustainable housing growth
 - Keep Barnet Moving
 - People have the right skills to access employment opportunities
 - Supporting Enterprise (including Town Centres)
- **Healthy and Independent Living**
 - Better access to local health services

Other activities addressing the challenge

- Thameslink Phases One and Two,
- Northern Line Upgrade Phases One and Two
- Bus Network Development

• **Delivering an efficient and effective transport system for people and goods**

Despite surveyed condition scores for principal and non-principal classified roads in the top quartile for London boroughs, with just 3% of the principal road network assessed as being in poor overall condition in 2008/09, road condition remains the

issue of highest importance to borough residents and satisfaction levels remain low (see Figure 8) and among the lowest of the London boroughs surveyed by NHT. Many key local roads and residential streets are particularly important for local journeys, but are not included within the usual condition surveys. Typically road condition is less good in these roads than in those surveyed. This has undoubtedly been exacerbated by the impact of recent hard winter weather on the condition of local roads in particular.

This priority is also reflected in the borough's 2011 resident perception survey. As a borough it is important that we concentrate limited resources on issues that are of greatest concern to citizens and consequently maintaining and improving the condition of our roads and pavements is a key objective of the LIP. The high expectations of residents in this regard, and the importance of non-classified roads to day-to-day journeys make this an overarching priority for the borough which is reflected in the high priority given in the LIP to maintaining and improving the condition of roads and footpaths.

Traffic levels and congestion are also issues of high importance and low satisfaction among residents. Vehicle delay on main roads recorded in 2005 in Barnet⁶ at 5.1 mins/km was well above average for outer London (4.1 mins/km), and more typical of Inner London boroughs. NHT survey participants highlight school run traffic, roadworks and commuter traffic as the most significant causes of congestion.

The Traffic Management Act 2004 introduced a network management duty on authorities to expedite the movement of traffic (including pedestrians) on their own and other authorities' roads.

- **Network Management Duty** – The Council's responsibility to expedite the movement of traffic on its own and other authorities' networks. This will be addressed through:

Coordination of our own and utility work on the road network including liaison with other local authorities, TfL, Highways Agency, Police and utilities to minimise conflict between different work or events on the road network.

Using the **London permit scheme** to impose conditions on work to minimise traffic impact where appropriate.

Congestion reduction schemes to address congestion hot-spots and review traffic management features and methods of control.

Demand management through land use planning and travel planning

Growth in Barnet's population and economy will place increased demands on the transport network. Much of this growth is concentrated in the borough's regeneration areas, and provision for this is significantly addressed by the development proposals themselves.

⁶ Estimated total annual vehicle delay (million vehicle minutes) on TfL's 'Network of Interest' Travel in London, Key trends and developments, Report Number 1, Transport for London (Table 4.3, page 82)

However incremental growth elsewhere will be a continued pressure and without the expectation of large scale capital investment in new capacity we have to make better use of the existing road network, whilst examining where key network constraints can be addressed. Consequently reducing congestion is a priority for the borough.

Virtually all schools in Barnet now have a school travel plan, and these have delivered reductions in car travel to school of some 12% on average. Nevertheless the proportion of pupils travelling to school by car remains the highest in London⁷. Some school travel plans are only partly adhered to, and we will continue to work with schools to help and support them, their students and parents to take ownership of these.

The availability of parking in residential areas around schools contributes to congestion and safety concerns in the immediate vicinity of the school, frustrating local residents and undermining the efforts of schools and many families to make responsible travel choices. In implementing improvements to complement school travel plans we will consider action to prevent pupil parking in the neighbourhoods around our schools.

Borough transport objectives addressing the challenge

- Improve the condition of roads and footpaths
- Reduce congestion
- Reduce car based journeys and increase levels of walking and cycling to and from school
- Reduce pupil parking near schools
- Comprehensive transport solutions in major development areas
- Public transport enhancements (with partners)
- Pursue major improvements to the strategic road network
- Encourage mixed use development that will help to reduce the distances people need to travel
- Making cycling and walking more attractive for leisure, health and short trips

Relevant SRTP challenges

- Relieving crowding on the public transport network
- Managing highway congestion and making more efficient use of the road network
- Enhancing connectivity and the attractiveness of orbital public transport

One Barnet Plan – related objectives

- **A Successful London Suburb**
 - Keep Barnet Moving

Other actions addressing the challenge

- TLRN improvements
- Borough and other Highway authorities Network management duty
-

⁷ NI 198 2009/10 Usual mode of travel to school pupils aged 5-15: by car=36%

MTS Goal: Enhance the quality of life for all Londoners

• Improving journey experience

Mayoral outcomes associated with this challenge relate to improving public transport customer satisfaction and public transport crowding and improving road user satisfaction for drivers, pedestrians and cyclists. The public transport aspects will be addressed chiefly by London Transport and Rail Providers own activities. However provision made in the regeneration areas will also deliver public transport improvements. Reduced congestion and improved street environment will also contribute.

Improved bus services are recognised as essential to deliver the borough's aspirations in transport terms, as they provide a realistic alternative to car use for significant numbers of people if appropriate services are available. Bus services within the borough recorded high satisfaction from residents in the NHT survey and when residents were asked about changes that would make them less likely to use a car the top factors overwhelmingly related to improved bus services in terms of convenience, speed, reliability and price.

Improvements to the bus network through new routes and better interchange facilities are being sought through the development of the borough's regeneration areas but at the same time the borough aims to work with TfL to improve the bus network to help ensure services are convenient, fast and reliable for residents, closely and efficiently matching demand and capacity. It seeks to ensure that buses use appropriate roads that are reasonably direct avoiding the use of residential streets that are unable to accommodate them, or introducing improvements to manage the impacts.

As identified in the NHT 2010 survey the lowest levels of satisfaction affecting Barnet residents' journeys are recorded in relation to reducing traffic and congestion and highway condition and are consequently areas of high priority for the borough. Low satisfaction is also recorded in relation to cycle routes and facilities although these were considered of lower importance by residents. The borough has a number of road routes through parks and open spaces that have been enhanced and extended recently, and there is scope to expand this provision. There are also large numbers of minor roads in Barnet, such as those highlighted in the London Cycle guides as routes on quieter roads recommended by cyclists, which provide a significant resource for cycling. Improving the condition of these coupled with improved directional signing, and work to raise their profile would complement the off-road provision and the networks planned in development areas. Cycle parking provision in Barnet's many town centres is patchy and expanding this both in centres with very limited provision and in better served locations where demand is high could also improve satisfaction.

Borough transport objectives addressing the challenge

- Improve the condition of roads and footpaths
- Reduce congestion
- Reduce car based journeys and increase levels of walking and cycling to and from school
- Comprehensive transport solutions in major development areas
- Public transport enhancements (with partners)

Relevant SRTP challenges

- Relieving crowding on the public transport network

- Managing highway congestion and making more efficient use of the road network
- Enhancing connectivity and the attractiveness of orbital public transport
- Improving access to key locations and to jobs and services

One Barnet Plan – related objectives

- **A Successful London Suburb**
 - Keep Barnet Moving
- **Strong Safe Communities for everyone**
 - Reduce crime and anti-social behaviour and residents feel safe

- **Enhancing the built and natural environment**

There are 18 conservation areas and over 1,300 nationally listed buildings in Barnet, as well as many locally listed buildings, English Heritage’s “heritage at risk” register currently identifies 13 Listed Buildings, 2 Conservation Areas and one Scheduled Monument as being at risk within the Borough including Golders Green Town Centre. 2,466 hectares of green belt and 690 hectares of metropolitan open land lie mainly in the northern and central part of the borough but this is augmented by a network of metropolitan, district and local parks.

Traffic dominance in town centres can have a negative effect on perceptions of the centre and air pollution has a negative impact on buildings as well as on human health and biodiversity, and reducing traffic and congestion would provide benefits.

The Mayor of London has promoted the Better Streets concept that aims to develop well designed streets sensitive to location and context. Suggested interventions range from tidying up and de-cluttering through relocating and merging street functions to re-thinking traffic management options or totally remodelling the street. The frameworks for a number of Barnet town centres provide a basis to take forward this type of approach through development related funding, the Outer London Fund, major scheme proposals and other funding opportunities. Work in town centres in particular and road and footway improvements in general in Barnet already aim to tidy and de-clutter streets as a matter of course.

Improvements associated with major developments, off road cycle routes and major road improvements help provide or improve green spaces and planting in urban areas and increase access to the boroughs open space.

Borough transport objectives addressing the challenge

- Reduce congestion
- Improve the condition of roads and footpaths
- Make travel safer and more attractive
- Reduce pupil parking near schools
- Pursue major improvements to the strategic road network
- Town centre enhancement to improve the public realm, public transport services, short-trip making by walking, parking and servicing controls and accessibility improvements
- Making cycling and walking more attractive for leisure, health and short trips

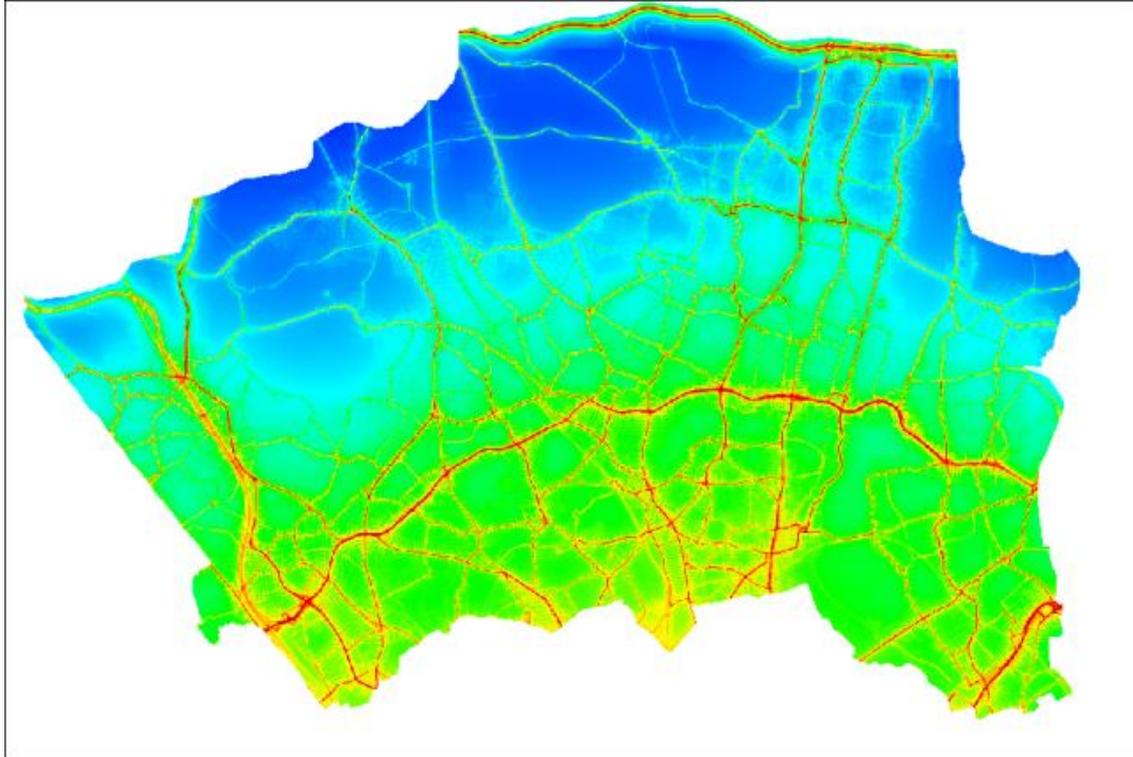
One Barnet Plan – related objectives

- **A Successful London Suburb**
 - Environmentally Responsible
 - Supporting Enterprise (including Town Centres)
 - A clean and green suburb.

- **Improving air quality**

Traffic is a significant contributor to poor air quality in Barnet with the highest levels of oxides of nitrogen and particulates concentrated around major roads and junctions.

Figure 12 - NO₂ annual mean concentrations (µg/m³) for north London, 2006



The whole of Barnet is a designated Air Quality Management Area for both Nitrogen Dioxide and Particles. Projected improvements in vehicle technology have still not resulted in predicted improvements in resultant air quality.

The borough's Air Quality Action Plan agreed in 2003 includes a range of actions, many related to transport, aimed at reducing emissions.

Air Quality Action Plan

- 1 Carry out vehicles emissions testing
- 2 Introduce penalties for stationary vehicles with idling engines
- 3 Make the Borough a Low Emission Zone (LEZ) for certain categories of vehicles by including the Borough in a London-wide LEZ
- 4 Improve traffic flow in town centres by improved coordination of traffic lights
- 5 Improve traffic flow in general
- 6 Introduce Controlled Parking Zone (CPZ)
- 7 Promote alternative forms of transport for businesses/ commercial properties
- 8 Promote alternative forms of transport and fuels in the Council and other public services
- 9 Promote alternative forms of transport in schools
- 10 Promote public Transport
- 11 Promote design that reduces the need for travel
- 12 Improve quality of freight transport
- 13 Promote alternative forms of fuel for vehicles
- 14 Encourage cleaner energy sources for buildings
- 15 Encourage more efficient energy generation and use
- 16 Promote good design and location of new development
- 17 Encourage composting in the community

18	Control air pollution from industrial / commercial and residential sources
19	Monitor air quality

The car is, and is projected to remain, the dominant form of travel in Outer London, and motor vehicle travel is projected to increase in Barnet with the growing population.

Increased use of electric vehicles presents an opportunity to reduce emissions harmful to health in the local area. For electric vehicles to become more popular, infrastructure will be required to allow such vehicles to be conveniently recharged. Barnet is well placed for residents to take action in this regard themselves, and some have already done so. We are keen to encourage greater numbers of electric vehicles to help keep Barnet moving while minimising emissions and provision for active and passive off-street electric vehicle charging points is being made in line with the London Plan in all major development areas.

- Borough transport objectives addressing the challenge**
- Reduce congestion
 - Improve the bus network (with TfL)
 - Reduce car based journeys and increase levels of walking and cycling to and from school
 - Comprehensive transport solutions in major development areas
 - Public transport enhancements (with partners)
 - Support the use of low emission vehicles including electric cars
 - Encourage mixed use development that will help to reduce the distances people need to travel
 - Making cycling and walking more attractive for leisure, health and short trips

- SRTP challenges**
- Managing highway congestion and making more efficient use of the road network

- One Barnet Plan – related objectives**
- **A Successful London Suburb**
 - Environmentally Responsible•
 - A clean and green suburb.•
 - **Investing in Children Young people and their Families**
 - Prevent ill health and unhealthy lifestyles
 - **Healthy and Independent Living**
 - Better health and healthy lives for all

- Other activities addressing the challenge**
- Air quality action plan actions
 - Borough fleet improvements
 - Reduced resident parking permit charges for alternatively fuelled vehicles (including electric vehicles, petrol/electric hybrids and LPG fuelled vehicles)

- **Improving noise impacts**
Noise impacts are also closely associated with major roads in Barnet. The noise action plan for the London agglomeration identifies that there are approximately 650 dwellings in London Borough of Barnet equating to some 1400 people that fall within the 1% of the population affected by the highest noise levels from road traffic in the agglomeration. Fewer than 50 dwellings (less than 100 population) fall in the equivalent category for railways.

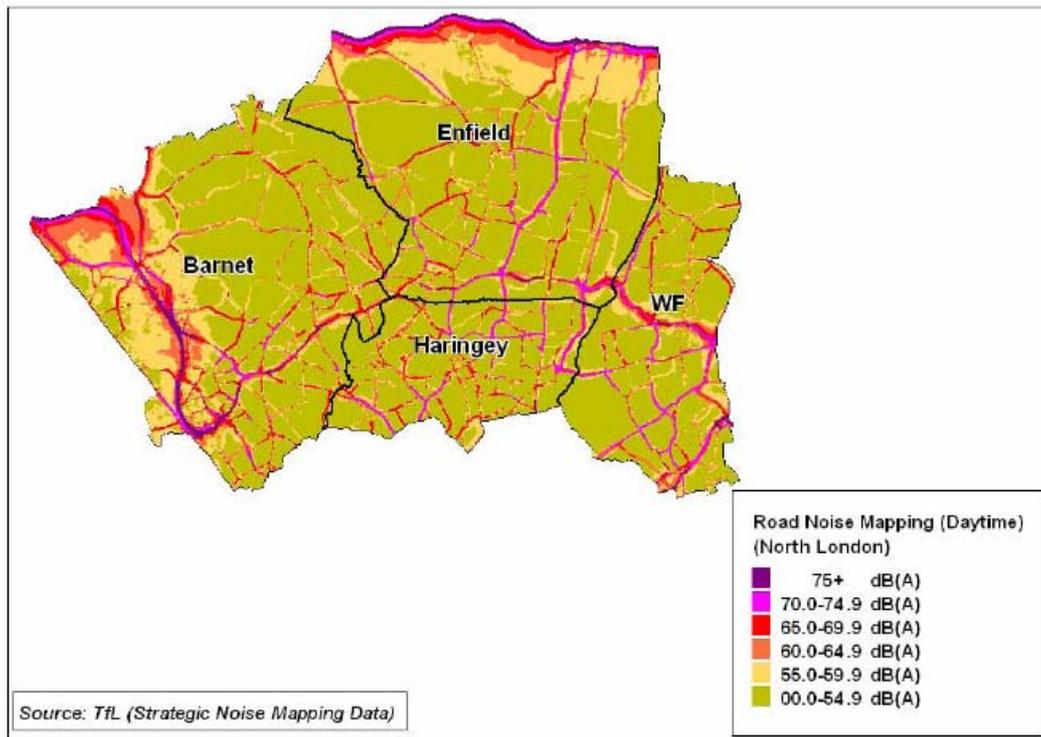


Figure 13 - Road noise mapping

First priority locations, where noise levels are above 76dB⁸ relate to some 100 dwellings and 200 people and are wholly associated with the Transport for London Road network and the Motorway within Barnet.

The major development projects in the borough, notably Brent Cross Cricklewood, are situated in locations where traffic noise is high and significant mitigation will be required. Some of this will also benefit existing locations and major road improvements include potential low-noise road re-surfacing during the project, in conjunction with TfL. Mitigation in relation to major road improvements associated with the developments or separately should also deliver benefits.

Actions to make local travel on foot and cycle more attractive so minimising growth in road traffic, to reduce congestion and make use of quieter vehicles and to improve road surfaces and ensure traffic uses suitable routes will all contribute to reduced noise impacts.

Borough transport objectives addressing the challenge

- Reduce congestion
- Improve the condition of roads and footpaths
- Improve the bus network (with TfL)
- Reduce car based journeys and increase levels of walking and cycling to and from school
- Comprehensive transport solutions in major development areas
- Pursue major improvements to the strategic road network
- Support the use of low emission vehicles including electric cars
- Encourage mixed use development that will help to reduce the distances people need to travel

⁸ LA_{10,18h} is at least 76 dB

- Making cycling and walking more attractive for leisure, health and short trips

SRTP challenges

- Managing highway congestion and making more efficient use of the road network

One Barnet Plan – related objectives

- **A Successful London Suburb**
 - Keep Barnet Moving•
 - Environmentally Responsible•
- **Investing in Children Young people and their Families**
 - Prevent ill health and unhealthy lifestyles
- **Healthy and Independent Living**
 - Better health and healthy lives for all

Other actions addressing the challenge

- Action by TfL to address first priority noise locations

- **Improving health impacts**

Barnet residents enjoy better than average health and higher than average life expectancy. However, this experience is not universal across the borough and there is a seven year difference in life expectancy between the most deprived and most affluent areas.

Reductions in smoking and improved treatments for heart attack and stroke mean that death rates from cardio-vascular disease (CVD) have improved in recent years and prevalence is lower in Barnet than nationally. However increasing obesity and the growth in Barnet's middle aged population mean that we can expect more people to be at risk of CVD than before. Without active steps to help people to reduce lifestyle risks then the downward trend in death rates is likely to reverse.

People who are obese are at greater risk of premature death and are more likely to suffer from conditions such as diabetes, heart disease, hypertension, stroke, cancers, musculoskeletal diseases, infertility and respiratory disorders. In 2008, almost a quarter of adults (24% of men and 25% of women aged 16 or over) in England were classified as obese⁹. Almost 25,000 Barnet residents aged 16 plus are registered as obese. This represents a lower prevalence than nationally (6.8 per cent versus 10.5 per cent)¹⁰. Among the younger population 17.7 per cent of Barnet Year 6 children were considered obese in 2009/10 and 10.7 per cent of Reception classes. Tackling obesity is an important step towards slowing the rising prevalence of diabetes locally.

Poor air quality also aggravates cardio-vascular and respiratory conditions and can contribute to premature deaths. Estimates produced for the Mayors Air Quality Strategy suggest that fine particles may have an impact on mortality equivalent to 200 additional deaths per year in Barnet¹¹.

⁹

http://www.ic.nhs.uk/webfiles/publications/opad10/Statistics_on_Obesity_Physical_Activity_and_Diet_England_2010.pdf

¹⁰ Quality and Outcomes Framework (QOF) for April 2009 - March 2010, England

¹¹ Institute of Occupational Medicine, Report on estimation of mortality impacts of particulate air pollution in London, 2010 (Appendix C: Estimates of Attributable Deaths. Total of deaths for Barnet Wards = 201)

Transport improvements to support more healthy lifestyles concentrate on steps to encourage walking and cycling as a mode of travel particularly to school, while enhancing and extending the range of off-road leisure routes for walking and cycling and ensuring that the boroughs roads, pavements and town centres are in a good state of repair and invite walking and cycling.

The borough's development areas will deliver improved walking and cycling routes significantly in the more deprived areas of the borough, where health deprivation also tends to be most severe. Major road improvements to the strategic road network associated with major development and separately provide opportunities to reduce or eliminate the severance for pedestrians and cyclists associated with these routes.

Actions to improve air quality can also be expected to improve health impacts.

Borough transport objectives addressing the challenge

- Make travel safer and more attractive
- Reduce car based journeys and increase levels of walking and cycling to and from school
- Comprehensive transport solutions in major development areas
- Pursue major improvements to the strategic road network
- Town centre enhancement to improve the public realm, public transport services, short-trip making by walking, parking and servicing controls and accessibility improvements
- Support the use of low emission vehicles including electric cars
- Making cycling and walking more attractive for leisure, health and short trips

One Barnet Plan – related objectives

- **A Successful London Suburb**
 - A clean and green suburb.
- **Investing in Children Young people and their Families**
 - Safety of children and young people
 - Prevent ill health and unhealthy lifestyles.
- **Healthy and Independent Living**
 - Better health and healthy lives for all

Other actions addressing the challenge

- 'Joint Strategic Needs Assessment' recommendations to tackle the obesity epidemic by promoting the benefits of healthy lifestyles, including physical activity and healthy eating

MTS Goal: Improve the safety and security of all Londoners

- **Reducing crime, fear of crime and antisocial behaviour**

Concerns about safety and security can act as a deterrent to efficient travel choices and by making travel safer and more attractive we aim to enhance the ability of residents to access services locally. Crime has consistently been identified as one of the highest priority concerns for residents of the borough, despite actual crime figures showing Barnet to be one of the safest boroughs in London.

Levels of crime and anti-social behaviour on the public transport network are low in Barnet compared with other boroughs, but residents' perceptions of safety while travelling are also low¹². The Barnet Crime & Community Safety Survey 2011 indicated that overall respondents' fear of being a victim of crime in the last 12 months have either gone up (46%) or remained the same (48%). The crime feared most was domestic burglary with 70% of respondents very or fairly worried. However over half of respondents gave the name of a particular place or transport route where they felt unsafe. The most common reoccurring locations were tube/train station and bus routes.

There is also a strong connection between transport hubs and the locations in Barnet for Anti Social Behaviour (ASB) related calls to Police. Edgware Tube station and surrounds; Finchley Central tube station and surrounds; Golders Green coach/Tube station and surrounds; Cricklewood station and surrounds; West Hendon Broadway station and surrounds; Mill Hill Broadway station and surrounds; Burnt Oak station and surrounds all appear in the list of priority ASB locations in Barnet.

However residents feeling safe during the day and at night have increased in recent years. The large rise in residents feeling safe at night may reflect the roll out of improved street lighting across the borough. The proportions feeling safe/unsafe at night in Barnet are very similar to results from the National Citizenship survey 10/11.

	Barnet residents survey 07/08	Barnet Place Survey 08/09	Barnet residents perceptions survey 10/11
% residents feeling safe/unsafe in their local area during the day	87% / 5%	88% / 4%	95% / 4%
% residents feeling safe/unsafe in their local area at night	44% / 35%	49% / 31%	76% / 19%

Table 6 - Residents feeling safe and unsafe during the day and at night

CCTV cameras have also been installed in parks and town centres across the borough to reduce crime, fear of crime and anti-social behaviour. In managing our streets, town centres and transport hubs in general and in new developments in particular we aim to provide secure and attractive surroundings that will invite residents and visitors to use local facilities

Borough transport objectives addressing the challenge

- Improve the condition of roads and footpaths
- Improve the bus network (with TfL)
- **Make travel safer and more attractive**
- Comprehensive transport solutions in major development areas

¹² North London Developing a Sub-regional Transport Plan - Interim report on challenges & opportunities s2C pp75-77

- Public transport enhancements (with partners)
- Town centre enhancement to improve the public realm, public transport services, short-trip making by walking, parking and servicing controls and accessibility improvements
- Making cycling and walking more attractive for leisure, health and short trips

- Relevant SRTP challenges**
- Improving access to key locations and to jobs and services

- One Barnet Plan – related objectives**
- **Strong Safe Communities for everyone**
 - Reduce crime and anti-social behaviour and residents feel safe
 - Strong and cohesive communities

• **Improving road safety**

Road traffic casualties are high in absolute terms with casualty numbers among the highest in London, but lower when the size of the borough and traffic volumes are taken into account, with car and goods vehicle occupants making up a higher proportion of casualties than is typical for London. Recent increases have been seen in numbers of slightly injured casualties, although those killed or seriously injured continue to fall.

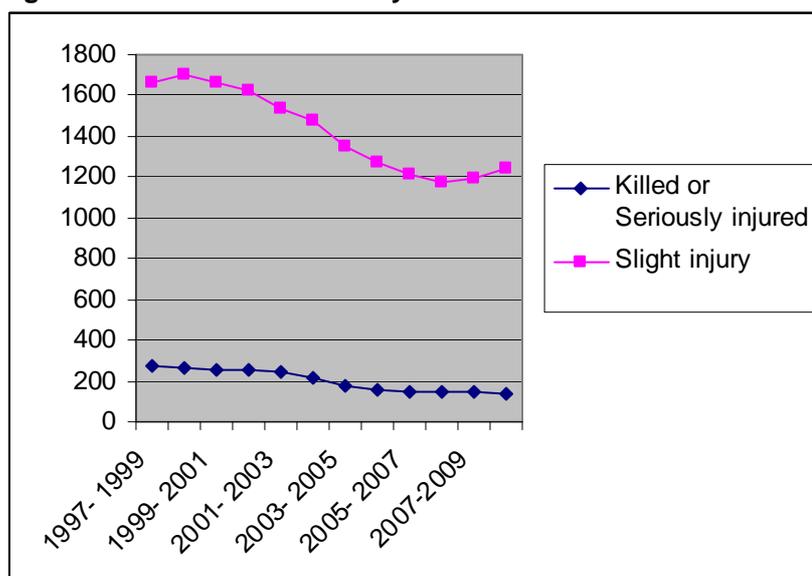
	Casualties in 2007 - 2009, per 100,000 population*	Rank in London out of 33 boroughs (1 = lowest casualties)	London-wide Quartile Position
Killed or Seriously injured	43	17	Median
Total casualties	396	22	Third quartile

* 2009 ONS Mid-year estimate

	Casualties in 2007-2009, per billion veh-kms*	Rank in London out of 33 boroughs (1 = lowest casualties)	London-wide Quartile Position
Killed or Seriously injured	85	8	Top Quartile
Total casualties	789	12	2nd Quartile

* DfT traffic flow estimates for local authorities – all motor vehicles 2009

Figure 14 - Road traffic casualty trends in Barnet



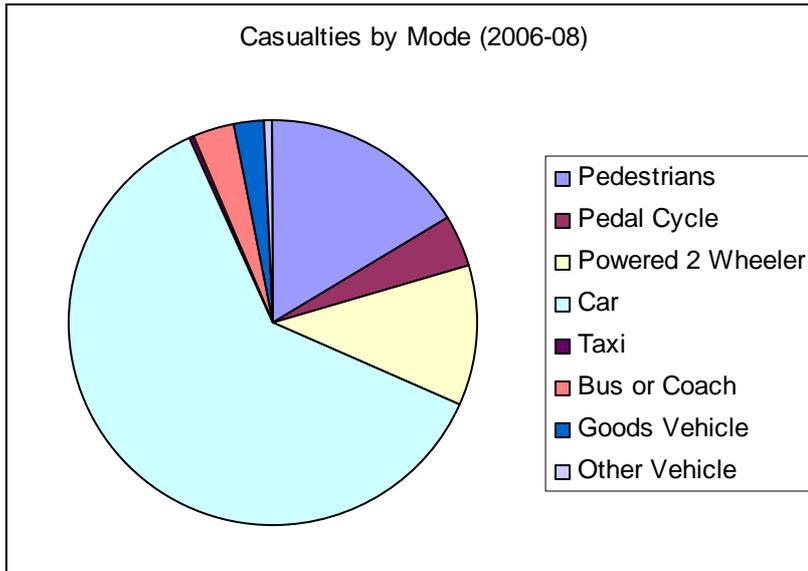


Figure 15 - Casualties by mode in Barnet

Safety on the road network in Barnet has improved dramatically since 2000, in common with London as a whole (136 people were killed or seriously injured in road traffic accidents in the borough in 2008 compared with 261 in 2000¹³) however casualty levels in the borough have been falling more slowly since 2005, and 2009 saw a large increase in overall casualties although those killed or seriously injured (KSI) remained virtually static and the long term rate of accident reduction has been broadly average.

Respondents to the NHT survey rated Road Safety as highly important but mid-range in terms of satisfaction, performing rather better in this regard than our other priorities.

We will continue to monitor the levels and types of accident on the borough's roads and develop local road safety solutions to target particular safety issues and locations with high numbers of personal injury accidents and educational initiatives to support road safety among children and vulnerable groups.

All new roads and junctions constructed in Barnet will be designed and built according to latest standards and with full consideration of road safety, and as such road safety audits will be carried out at each appropriate stage.

Borough transport objectives addressing the challenge

- Reduce congestion
- **Make travel safer and more attractive**
- Comprehensive transport solutions in major development areas
- Pursue major improvements to the strategic road network
- Encourage mixed use development that will help to reduce the distances people need to travel

One Barnet Plan – related objectives

- **Strong Safe Communities for everyone**
 - Reduce crime and anti-social behaviour and residents feel safe
- **Investing in Children Young people and their Families**
 - Safety of children and young people•
 - Prevent ill health and unhealthy lifestyles.•

¹³ TfL Road Safety Unit, from data reported to the police in accordance with the Stats 19 national reporting system

- **Healthy and Independent Living**
 - Better health and healthy lives for all•

- **Improving public transport safety**

Reducing casualties on public transport networks is a matter that will be addressed chiefly by London Transport and public transport operators own activities. However good design in conjunction with public transport provision made in the development areas in the borough and town centre improvements will also contribute in this regard. Bus and coach occupant casualties in the borough have fallen from an average of 73 in the period 1994-98 to 44 in 2010 (a 40% reduction) and will continue to be monitored alongside other traffic casualty statistics.

Borough transport objectives addressing the challenge

- Improve the bus network (with TfL)
- Make travel safer and more attractive
- Delivery of high quality transport systems in regeneration areas
- Comprehensive transport solutions in major development areas
- Public transport enhancements (with partners)

Relevant SRTP challenges

- Relieving crowding on the public transport network

One Barnet Plan – related objectives

- **Strong Safe Communities for everyone**
 - Reduce crime and anti-social behaviour and residents feel safe•
- **Investing in Children Young people and their Families**
 - Safety of children and young people•
- **Healthy and Independent Living**
 - Better health and healthy lives for all

MTS Goal: Improve transport opportunities for all Londoners

• Improving accessibility

The issues discussed in regard to the MTS goal of “improving transport connectivity” generally also apply to improving access to services. Access to services in Barnet is generally below average for London and broadly average for Outer London.

Public transport accessibility of much of the borough is low, although Edgware and Golders Green that are served by the northern line and major bus stations have high Public Transport Accessibility Levels (PTAL). Access to Central London for employment plays an important role in Barnet.

The developments areas will deliver new jobs and services that will improve accessibility and transport improvements associated with development in Barnet will also increase the accessibility of these areas and access to Central London for all transport users.

The physical accessibility of the transport system will be improved through new and replacement infrastructure provided in regeneration and town centre enhancement schemes and through general carriageway, footway, traffic management and bus network improvements as older arrangements that do not meet the levels of provision, especially for disabled people, expected today are replaced.

Step free station access is being pursued at a number of locations in association with major development schemes. These include Brent Cross, Colindale and potentially Mill Hill East underground stations and existing and new stations on the Midland mainline are also planned to have step free access through the Brent Cross Cricklewood development.

A high proportion of bus stops in Barnet are currently recorded as not accessible because they do not provide the full range of features identified by Transport for London. Barnet endeavours to ensure that kerb heights are suitable for deployment of bus stop ramps when carrying out any footway relay or traffic management work at relevant locations but places a lower priority on providing formal bus stop clearways to enforce no stopping arrangements, particularly where other arrangements appropriate to local circumstances already operate effectively.

Borough transport objectives addressing the challenge

- Improve the bus network (with TfL)
- Comprehensive transport solutions in major development areas
- Public transport enhancements (with partners)
- Pursue major improvements to the strategic road network
- Town centre enhancement to improve the public realm, public transport services, short-trip making by walking, parking and servicing controls and accessibility improvements
- Encourage mixed use development that will help to reduce the distances people need to travel

Relevant SRTP challenges

- Improving access to key locations and to jobs and services

One Barnet Plan – related objectives

- **A Successful London Suburb**

- Delivering sustainable housing growth•
- People have the right skills to access employment opportunities•
- Supporting Enterprise (including Town Centres)•
- **Healthy and Independent Living**
 - Better access to local health services•
 - Promote choice and maximise independence of those needing greatest support.

- **Supporting regeneration and tackling deprivation**

As shown in Figure 1 and Figure 2 the borough's major development areas are situated chiefly within the most deprived areas of the borough. Development brings with it opportunities to improve accessibility to services through their location and through transport improvements delivered in conjunction with the development and supporting these forms a key part of the LIP.

Borough transport objectives addressing the challenge

- Reduce congestion
- Improve the condition of roads and footpaths
- Improve the bus network (with TfL)
- Comprehensive transport solutions in major development areas
- Public transport enhancements (with partners)
- Pursue major improvements to the strategic road network
- Encourage mixed use development that will help to reduce the distances people need to travel
- Making cycling and walking more attractive for leisure, health and short trips

SRTP challenges

- Facilitating and responding to growth, particularly in Brent Cross/ Cricklewood and the Upper Lee Valley
- Relieving crowding on the public transport network
- Managing highway congestion and making more efficient use of the road network
- Enhancing connectivity and the attractiveness of orbital public transport
- Improving access to key locations and to jobs and services

One Barnet Plan – related objectives

- **A Successful London Suburb**
 - Delivering sustainable housing growth
 - Keep Barnet Moving
 - People have the right skills to access employment opportunities
 - Supporting Enterprise (including Town Centres)
- **Strong Safe Communities for everyone**
 - Strong and cohesive communities.
- **Healthy and Independent Living**
 - Better access to local health services

MTS Goal: Reduce transport’s contribution to climate change, and improve its resilience

• Reducing CO2 emissions

Transport contributes some 24% of Carbon Dioxide emissions in the borough and in Barnet the contribution of traffic generated by our growing population will be mitigated through support for mixed use developments and improved transport infrastructure particularly in our regeneration areas, and by comprehensively tackling the school run. However the car is, and is projected to remain, the dominant form of travel in Outer London so the most effective way of tackling this will be in making the way in which they are powered more efficient, using fuels which are less polluting, particularly in terms of carbon emissions.

Electric vehicles currently produce lower than average carbon emissions overall and provide the opportunity for these to reduce further where reduced emissions from electricity generation are achieved. For electric vehicles to become more popular, infrastructure will be required to allow such vehicles to be recharged. Barnet is well placed for residents to take action in this regard themselves, and some have already done so. We are keen to encourage greater numbers of electric vehicles to help keep Barnet moving while minimising emissions. There will inevitably remain residents without access to off-street parking at home and a demand from visitors for public charging points as the use of electric cars increases.

The major development areas in the borough are being developed as concentrated mixed use areas with residential development being located in close proximity to everyday services and facilities that will help reduce the need to travel longer distances allowing more journeys to be achievable on foot. Provision for charging of electric vehicles is being required by the borough in new developments in line with the Mayor’s London Plan and travel planning associated with major phased developments also has a role in providing a management regime to ensure the facilities are provided and phases of development can only come forward if the targets are being met.

The borough aims to reduce CO₂ emissions through reducing the need to travel longer distances, by encouraging mixed use developments, by minimising congestion and stop-start driving conditions and through supporting the use of low emission vehicles including electric cars.

- | |
|--|
| <p>Borough transport objectives addressing the challenge</p> <ul style="list-style-type: none">• Reduce congestion• Improve the bus network (with TfL)• Reduce car based journeys and increase levels of walking and cycling to and from school• Comprehensive transport solutions in major development areas• Public transport enhancements (with partners)• Support the use of low emission vehicles including electric cars• Encourage mixed use development that will help to reduce the distances people need to travel• Making cycling and walking more attractive for leisure, health and short trips |
|--|

- | |
|---|
| <p>One Barnet Plan – related objectives</p> <ul style="list-style-type: none">• A Successful London Suburb<ul style="list-style-type: none">• Environmentally Responsible |
|---|

- **Investing in Children Young people and their Families**
 - Prevent ill health and unhealthy lifestyles
- **Healthy and Independent Living**
 - Better health and healthy lives for all

- **Adapting for climate change**

Changes in London's climate as a result of increasing concentrations of greenhouse gases in the earth's atmosphere are expected to result in more 'extreme' weather conditions including heatwaves and droughts but also more intense rainfall.

Barnet is already well provided with trees that provide shade and cooling in summer, and take up water, and continues to identify opportunities to increase this..

The Flood Risk Regulations 2009 and the Flood and Water Management Acts 2010 place additional duties on local authorities. As Lead Local Flood Authority the borough coordinates management of flooding from different sources and preparation of flood risk assessments and management plans. Areas of flood risk in Barnet are low compared with other boroughs.

Borough transport objectives addressing the challenge

- Improve the condition of roads and footpaths

One Barnet Plan – related objectives

- **A Successful London Suburb**
 - Keep Barnet Moving

Other actions addressing the challenge

- Development of Local Flood Risk Management Strategy

MTS Goal: Support delivery of the London 2012 Olympic and Paralympic Games and its legacy

- **Developing and implementing a viable and sustainable legacy for the 2012 Games**

The borough is not directly affected by the London 2012 Olympic Games and has opted not to address this through the LIP.

Table 7 - Linkages between LIP Local Transport Objectives and other Plans and Strategies

LIP Local Transport Objectives	Community Strategy Themes				LDF Core Objectives									SRTS Challenges and Opportunities					MTS Goals*				
	A successful London Suburb	Strong, safe communities for everyone	Investing in children, young people and their families	Healthy and Independent Living	To manage housing growth to meet housing aspirations	To meet social infrastructure needs	To promote Barnet as a place of economic growth and prosperity	Provide effective and efficient travel in Barnet	To promote strong and cohesive communities	To promote healthy living and well-being	To protect and enhance the suburbs	To ensure efficient use of land and natural resources	To enhance and protect our green and natural open spaces	Facilitating and responding to growth, particularly in BXC and the Upper Lee Valley	Relieving crowding on the public transport network	Managing highway congestion and making more efficient use of the road network	Enhancing connectivity and the attractiveness of orbital public transport	Improving access to key locations and to jobs and services	Support economic development and population growth	Enhance the quality of life for all Londoners	Improve the safety and security of all Londoners	Improve transport opportunities for all Londoners	Reduce transport's contribution to climate change, and improve its resilience
1. Ensuring more efficient use of the local road network																							
a. Reduce congestion	✓						✓	✓			✓	✓		✓		✓		✓	✓		✓		
b. Improve the condition of roads and footpaths	✓						✓			✓									✓		✓		
c. Improve the bus network (with TfL)	✓						✓						✓			✓	✓	✓	✓		✓		
d. Make travel safer and more attractive	✓	✓					✓												✓	✓			
2. Taking a comprehensive approach to tackling the school run																							
a. Reduce car based journeys and increase levels of walking and cycling to and from school	✓	✓	✓	✓			✓		✓						✓				✓	✓			✓
b. Reduce pupil parking near schools		✓	✓				✓			✓					✓				✓	✓			
3. Delivery of high quality transport systems in regeneration areas																							
a. Comprehensive transport solutions in major development areas	✓			✓	✓		✓	✓	✓	✓	✓		✓				✓	✓					
b. Public transport enhancements (with partners)							✓						✓	✓		✓	✓	✓			✓		

LIP Local Transport Objectives	Community Strategy Themes				LDF Core Objectives								SRTS Challenges and Opportunities					MTS Goals*					
	A successful London Suburb	Strong, safe communities for everyone	Investing in children, young people and their families	Healthy and Independent Living	To manage housing growth to meet housing aspirations	To meet social infrastructure needs	To promote Barnet as a place of economic growth and prosperity	Provide effective and efficient travel in Barnet	To promote strong and cohesive communities	To promote healthy living and well-being	To protect and enhance the suburbs	To ensure efficient use of land and natural resources	To enhance and protect our green and natural open spaces	Facilitating and responding to growth, particularly in BXC and the Upper Lee Valley	Relieving crowding on the public transport network	Managing highway congestion and making more efficient use of the road network	Enhancing connectivity and the attractiveness of orbital public transport	Improving access to key locations and to jobs and services	Support economic development and population growth	Enhance the quality of life for all Londoners	Improve the safety and security of all Londoners	Improve transport opportunities for all Londoners	Reduce transport's contribution to climate change, and improve its resilience
c. Pursue major improvements to the strategic road network	✓						✓	✓	✓					✓		✓		✓	✓	✓	✓	✓	
d. Town centre enhancement to improve the public realm, public transport services, short-trip making by walking, parking and servicing controls and accessibility improvements	✓			✓			✓	✓	✓	✓	✓			✓		✓		✓	✓	✓			✓
4. More environmentally friendly transport networks																							
a. Support the use of low emission vehicles including electric cars							✓																✓
b. Encourage mixed use development that will help to reduce the distances people need to travel	✓						✓			✓	✓								✓				✓
c. Making cycling and walking more attractive for leisure, health and short trips				✓			✓		✓			✓							✓				✓

Delivery Plan

Delivering the Borough Transport objectives

The delivery plan includes activities that will deliver the Borough Transport Objectives. The table below identifies proposals for delivering the objectives over the life of the Mayors Transport Strategy (ie to 2031). At a minimum the delivery plan will be refreshed every three years.

Table 8 - Delivering the LIP objectives

LIP Objectives	Means of Delivery
Ensuring more efficient use of the local road network;	
Reduce congestion	<ul style="list-style-type: none"> • Congestion reduction schemes introduced through wider corridor and area based proposals on main road corridors, at specific hotspots and on secondary and local distributor roads • Series of network management reviews of the operation of features or types of control affecting operation of the road network including traffic signals • Programme of small scale traffic management and road safety improvements • Coordination of road and street works including through the London Permit scheme • Review of bus services in residential areas • Major improvements associated with development areas and strategic roads including Henlys Corner improvement scheme • Demand management through land use planning, travel planning and information provision • School travel initiatives (see separate objective) • Parking controls under continuous review • Footway parking provision at appropriate locations • Development of off road and quiet road cycle route improvements • Pedestrian and cycle networks in and serving major development areas • Travel Plan monitoring and support
Improve the condition of roads and footpaths	<ul style="list-style-type: none"> • Principal Road renewal - Targeted road maintenance based on carriageway condition on Principal Roads • Borough funded carriageway and footway improvement programme and planned maintenance • Bridge Assessment and strengthening – in locations prioritised at London wide level • Developing Highway Asset Management Plan to better manage the condition of the road network • Improvements delivered through wider corridor and area based proposals • Improvements to town centre footpaths/alleyways • Localised improvements in and near developments
Improve the bus network (with TfL)	<ul style="list-style-type: none"> • Congestion reduction proposals on bus routes (see separate congestion objective) • Review of bus services in residential areas • Bus network improvements delivered through major development schemes (see separate regeneration

LIP Objectives	Means of Delivery
	<p>area objective)</p> <ul style="list-style-type: none"> • Bus stop accessibility improvements delivered through wider corridor and area based improvements, town centre enhancement schemes, footway improvements and programme of small scale access and accessibility improvements
<p>Make travel safer and more attractive</p>	<ul style="list-style-type: none"> • Accident reduction schemes introduced through wider corridor and area based proposals on main and distributor road corridors • Road layout and junction improvements in conjunction with development proposals • Programme of small scale traffic management and road safety improvements • Pedestrian, cyclist and road safety training • Improvements to town centre footpaths/alleyways • Public Transport and Town Centre enhancements (see separate objectives) • Improvement works in vicinity of stations • Continue to provide high quality street lighting and CCTV coverage of key locations
<p>Taking a comprehensive approach to tackling the school run;</p>	
<p>Reduce car based journeys and increase levels of walking and cycling to and from school</p>	<ul style="list-style-type: none"> • Provide access to School Travel Plan resources • Improvements in the vicinity of schools to support travel plans • School based pedestrian, cycle and road safety training
<p>Reduce pupil parking near schools</p>	<ul style="list-style-type: none"> • Rigorous enforcement of parking restrictions in the vicinity of schools • Consider new and amended parking restrictions to support reduced pupil parking around schools
<p>Delivery of high quality transport systems in regeneration areas</p>	<p>(Further information on the transport aspects of these development areas is included at Appendix A)</p>
<p>Comprehensive transport solutions in major development areas</p>	<ul style="list-style-type: none"> • New and improved road, cycle and pedestrian networks, improved station and bus network access delivered through: <ul style="list-style-type: none"> ○ Mill Hill East – Area Action Plan ○ Colindale Area Action Plan ○ Regeneration of Stonegrove and Dollis Valley priority estates ○ Cricklewood, Brent Cross and West Hendon Development Framework
<p>Public transport enhancements (with partners)</p>	<ul style="list-style-type: none"> • Bus route enhancements, improved public transport interchanges and new Cricklewood Station delivered through: <ul style="list-style-type: none"> ○ Mill Hill East – Area Action Plan ○ Colindale Area Action Plan ○ Regeneration of Stonegrove and Dollis Valley priority estates ○ Cricklewood, Brent Cross and West Hendon Development Framework
<p>Pursue major improvements to the strategic road network</p>	<ul style="list-style-type: none"> • Henlys Corner (interim) improvement scheme (TfL current) • Major junction improvements at M1/A5/A406, Staples Corner and A406/A41 through Brent Cross

LIP Objectives	Means of Delivery
	Cricklewood (BXC) development <ul style="list-style-type: none"> • Edgware Road (A5) Corridor Study and A5 junction improvements through BXC, West Hendon, Colindale and Stonegrove developments • Continue to lobby for future improvements to A406/Golders Green Junction and long term major improvement at Henlys Corner
Town centre enhancement to improve the public realm, public transport services, short-trip making by walking, parking and servicing controls and accessibility improvements	<ul style="list-style-type: none"> • Improvements to town centres delivered through town centre frameworks • Interim improvements delivered through corridor and neighbourhood based proposals • Proposals developed through Mayors Outer London Fund, potential Major Schemes and/or Mayor's great spaces
More environmentally friendly transport networks	
Support the use of low emission vehicles including electric cars	<ul style="list-style-type: none"> • Incorporation of electric vehicle charging points within developments and consider future roll out in car-parks and on street • Continue to facilitate at-home charging of electric vehicles by arrangements to permit and manage parking on small forecourts.
Encourage mixed use development that will help to reduce the distances people need to travel	<ul style="list-style-type: none"> • Encouraging mixed use development that will help to reduce the distances people need to travel • Pedestrian and cycle networks in and serving major development areas • Travel Plan monitoring and support
Making cycling and walking more attractive for leisure, health and short trips	<ul style="list-style-type: none"> • Development of area frameworks through the All London Green Grid incorporating proposals for off-road walking and cycling routes and other links • Off road and quiet road cycle route improvements • Pedestrian and cycle networks in and serving major development areas • Major improvements associated with development areas and strategic roads reducing barriers for pedestrians and cyclists (particularly at BXC and through the Henlys Corner improvement scheme)

Development area and Town Centre plans

The various major developments are or will be supported by Area Action Plans, development frameworks and planning and highway conditions, agreements and delivery plans that will result in comprehensive transport facilities in these areas for public and private transport, cycling and walking to meet the needs of existing and future residents.

Colindale Area Action Plan area

Improved transport and access is a cornerstone of the AAP, including the delivery of a new public piazza and transport interchange at Colindale tube station in partnership with key stakeholders, including TfL, bus service improvements, a new network of cycle and pedestrian routes and travel plan support to enable residents to make best use of the available travel options.

Delivery actions expected in 2011/12 – 2015/16 that will deliver transport and urban realm improvements to support the development are:

- Creation of a new Station Square – Colindale station Piazza and transport interchange, as well as improvements to the tube station including (later in the development) step free access;
- A second new square in Grahame Park at the southern end of the re-aligned Lanacre Avenue;
- New and improved bus stops and a new bus route (Colindale – Finchley Central)
- Improvements to local pedestrian and cycle routes;
- Junction Improvements at Watford Way (A41) / Aerodrome Road , Colindale Avenue / Edgware Road (A5), Montrose Ave /Edgware Road, Grahme Park Way / Lanacre Avenue (including provision for the future diversion of Aerodrome Road to connect at this point) all including appropriate pedestrian crossing facilities;
- Colindale Avenue Improvements including the replacement of the existing zebra crossing by the tube station with a pelican crossing which will help address existing congestion and promote smoother traffic flows.
- Travel Plan related initiatives such as subsidised Oyster cards, cycle purchase discounts, car clubs and free cycle maintenance.

Cricklewood, Brent Cross and West Hendon Development Framework

Brent Cross Cricklewood

Transport investment includes plans for a new fully accessible railway station and public transport interchange on the Midland Mainline, accessibility and interchange improvements at Cricklewood and Brent Cross stations, a new bus station at the shopping centre, a ‘rapid transit’ bus service linking the key public transport interchanges and some 21 bus service enhancements (new, extended and diverted services as well as those with capacity and frequency improvements), subject to detailed discussions with TfL and other authorities. Bus priority lanes and bus only streets are also proposed, together with new and improved bus stops and a comprehensive network of facilities for pedestrians and cyclists within the application area.

A network of new roads will be provided including a new link to the A5 over the Midland Mainline improving accessibility to and from the west, remodelled major road junctions including facilities for buses, pedestrians and cyclists as appropriate. A further study of pedestrian and cycle links from the development to connect with adjacent communities and a comprehensive corridor study looking at all modes of transport along the A5 and its environs is committed. Development is expected to commence around 2016.

West Hendon Regeneration

The first phases have commenced on site, although the scheme is now under review, including potentially the provision of a lower residential parking ratio. The A5 is proposed to be upgraded as part of the scheme including better facilities for pedestrians, cyclists and bus users. Traffic will be diverted off local roads and the existing Perryfield Way gyratory system will be removed. Congestion will be addressed and traffic flow is expected to be smoother.

Dollis Valley priority estate

Details are yet to be finalised but in common with other regeneration schemes the scheme is anticipated to include improved bus services to increase the low Public Transport Accessibility of the site, potentially including a recasting

of the local bus area bus services, pedestrian improvements, better access to and from the estate and a travel plan.

Mill Hill East - Mill Hill Area Action Plan area

A series of public transport improvements have been identified in liaison with TfL to improve the Public Transport Accessibility Level of the area, which include creation of a new east-west distributor road through the development facilitating bus service extensions and diversions and new and improved bus stopping, layover and turning facilities. Urban realm improvements, new pedestrian and cycle routes and facilities, travel plan support, a car club and improvements in the surrounding area are also planned.

Delivery actions expected in 2011/12 – 2015/16 that will deliver transport and urban realm improvements to support the development are:

- Strategic East-West distributor road through the AAP site including new bus stops and providing for the extension of the 382 bus service to improve public transport accessibility (Diversion of the 240 bus service later in the development will also be facilitated by the distributor road and a new north – south route, including a bus-only street to allow a direct connection to the tube station);
- Improvements to various key junctions including east-west route with Bittacy Hill and Frith Lane, Holders Hill Circus and Frith Lane / Bittacy Hill and the highway link in between, and the junctions at both ends of Engel Park with Pursley Road and Bittacy Hill. All junction improvements include appropriate safe pedestrian crossing facilities;
- Improved tube station forecourt including public realm improvements, cycle parking facilities and better bus stopping arrangements, together with (subject to viability) plans for step free access provision at the station later in the development;
- Various traffic management measures on local roads to promote smoother flows of traffic, and a review of parking controls to prevent any overspill parking;
- Improvements to local bus stops and pedestrian and cycle routes, including plans for an east-west cycle route providing a connection between Pursley Road and Finchley via a largely off – road route via Sanders Lane, alongside the east-west distributor road and then via Lovers Walk.

Stonegrove priority estate

This estate regeneration scheme received outline planning permission in 2008 and involves intensified use of the site together with various highway improvements including the creation of a new access point on the A5 to better distribute estate traffic and reduce pressure on the A41 and Canons Corner (A5/A410) junctions. Bus stop improvements and better facilities for pedestrians are also planned

Town Centre proposals are being pursued through town centre planning frameworks. Complementary applications for improvements through the Mayor's Outer London Fund are also being pursued.

North Finchley is Barnet's third largest district centre. The centre is focused along the High Road A1000 and is essentially linear in form. The centre has a variety of independent and well known chains and is generally vibrant – serving a large local catchment population. North Finchley is also home to the Arts Depot which, as a high quality performing and visual arts centre is a

key strategic, cultural and leisure facility in the borough. The Draft North Finchley Town Centre Strategy identifies the southern end of the town centre around Tally Ho Corner where the Arts Depot and bus station are located as a focus for cultural activity where the activities within the Arts Depot could be widened to enhance the economic base of the town centre and its wider vitality and viability.

It is intended to build on proposals to locate a new Landmark Library in the Arts Depot. To ensure that the enhanced cultural and educational facilities proposed for North Finchley attract the widest audience and bring maximum benefit to the wider town centre we plan to focus on upgrading the public realm around the Arts Depot and the visibility of the facility within the town centre and ensuring that the quality of the external environment complements the quality of the facilities within the building and provides an opportunity to show case what takes place within the building by bringing more activity onto the streets and making better use of public space. This will be accompanied by a coordinated approach to signage to ensure visibility and accessibility and a review of pedestrian access and crossing facilities to the building.

Finchley Church End is one of Barnet's 14 district centres and one of the most visited in the borough. It has a large and relatively affluent local catchment population who live within walking or cycling distance of the town centre. It is the most popular 'top-up' food destination in the borough but this is not fully reflected in the quality of the physical environment of the town centre.

The town centre is served by Finchley Central tube station on the Northern Line and a large number of bus routes, making it highly accessible from a wide area of central and north London. However, the location of the railway cuts the town centre in half and creates a disconnect between the northern and southern ends of the town centre exacerbated by the major junction of Ballards Lane and Nether Street which is heavily trafficked and creates a poor quality environment.

Plans for the area focus on opportunities to improve the connection between the northern and southern halves of the town centre and options to improve the pedestrian environment making the centre easy to access and move around for all users, while protecting the historic fabric, with the overall aim of improving the quality of the town centre environment for all.

Golders Green town centre and the area around the railway and bus / coach station is a designated Conservation Area. The shopping centre straddles the main roads of Finchley Road, Golders Green Road and North End Road. The junction of these roads is marked by a war memorial, which creates a notable centre for the area.

It is a major transport hub for London with access to the northern line and accommodating national express coaches and taxis as well as a large number of London transport buses which serve a wide geographical area and bring a great deal of activity to Golders Green.

The land taken by the bus station and the negative impact of traffic on the environment at the heart of Golders Green has a detrimental effect on the

quality of the town centre. Movement of buses in and out of the bus station relegate the war memorial to the status of a traffic island in the centre of a signalised gyratory. One challenge is to find a way to harness the footfall generated by the transport hub whilst minimising the negative impacts.

The quality of the public realm including paving, signage and street furniture, such as bins, lighting, telephone boxes and bus shelters could also be improved. Features are often varied, poorly sited and sometimes of inappropriate design.

Initial proposals include:

Review and implement improved pedestrian flows and routes around the centre and improvements to the public realm to encourage greater usage of the town centre.

Build on the strengths of the town centre by matching the quality of the public realm to the quality architecture that already exists

Measures to de-clutter the public realm, improve the quality and usability of the streetscape and improve pedestrian flows.

Identify the potential for improving the space in-front of Golders Green station to reduce the negative impact of the transport hub whilst harnessing its benefits for town centre vitality.

Funding

Anticipated funding available to deliver proposals in the initial 3 year delivery plan period is shown below

Funding source	Available funding by year £k			
	2011/12	2012/13	2013/14	Total
LIP allocation	4,641	4,783	4,247	13,671
TfL Business Plan	8,000	-	-	8,000
Outer London Fund	417	400	400	1,217
Developer	769	640	400	1,809
Council revenue	1,215	1,215	1,215	3,645
Council capital	3,500	2,000	2,000	7,500
Total	18,542	9,038	8,262	35,842

Table 9 - funding sources

Risk and Prioritisation

Funding sources included within the programme of investment can only be indicative. Developer funding in particular will be subject to the economic climate and progress of the relevant developments. The proposed Council funding shown in the Programme of Investment reflects the Council's budget plans at 1st March 2011. Following approval the budgets may be subject to in-year changes.

The delivery plan aims to address the boroughs transport objectives giving priority to proposals that address other transport objectives in ways that also improve the condition of roads and pavements or reduce the maintenance requirement and/or reduce congestion and/or improve safety.

Where funding is not available at the levels indicated in the delivery plan, implementation will be prioritised based on the scope for delivering carriageway improvements and congestion reduction (the highest priorities for our resident) and footway improvements and improved safety (the next highest priorities).

Priorities will also be influenced by funding available from other funding sources, value for money in delivering outcomes, statutory requirements, and deliverability.

Delivery Plan risks

Table 10 - Principal delivery risks

Probability 1=rare, 2=Unlikely, 3=Possible, 4=Likely, 5=Almost certain

Impact 1=Negligible, 2=Minor, 3=Moderate, 4=Major, 5=Catastrophic

Risk rating (Probability x Impact) 1-3 = low, 4-6 = moderate, 8-12=high, 15-25 = extreme

Risk	Probability	Impact	Risk Rating	Response / Mitigation
Significant reduction in funding levels available from TfL, the Council's own resources, or from third parties.	3	4	HIGH	Identify and pursue alternative funding sources for key proposals Reprioritise and/or extend delivery programme
Increases in programme or individual project cost	3	3	HIGH	Ensure effective monitoring and control of project costs. Reduce project scope, or extend delivery period if necessary to control costs. Reprioritise or substitute proposals if alternatives can deliver more effectively.
Major development schemes do not proceed at pace envisaged	3	3	HIGH	Reschedule proposals - slower pace of development likely to reduce need for associated proposals. Consider reprioritising where this is not the case.
Council is required to "implement" its LIP under s151 of the GLA Act without sufficient external funding support.	1	5	MOD-ERATE	Accept risk – keep under review.

Individual proposals do not receive sufficient public support / member approval to proceed	3	3	HIGH	Redesign to overcome objections. Substitute other proposals addressing similar objectives.
Insufficient staff resources to plan and deliver the LIP programme	3	4	HIGH	Engage short term project specific staff, reschedule work to deliver less staff intensive elements
Projects and programmes do not deliver expected outputs and outcomes	2	4	HIGH	Review impact on overall delivery. Review programme and/or reprioritise other proposals to support delivery of required outcomes.
Projects delayed by external or other factors	3	3	HIGH	Re-programme and/or substitute other proposals addressing similar objectives.

Programme of Investment

Activities delivering the borough transport objectives over the period 2011/12 – 2013/14 are included in the programme of investment below. A number of these items will be provided through direct delivery obligations imposed on the developer as part of the relevant section 106 legal agreement.

Table 11 - Programme of Investment

Programme of Investment													
Programme areas	Funding source	Ongoing scheme?	Funding (£,000s)				MTS goals				LIP objectives		
			2011/12	2012/13	2013/14	Total	Econ. devt and pop growth	Quality of life	Safety and security	Opportunities for all		Climate change	
Corridors, Neighbourhoods and supporting measures	A5100 corridor - Completion of ongoing work for this corridor including interim improvements Station Road/ Edgware Town Centre	LIP allocation	✓	450	0	0	450	✓	✓	✓	✓	1b 1d 3d	
	A1000 corridor - Completion of ongoing work for this corridor	LIP allocation	✓	310	50	0	360	✓	✓	✓	✓	1b 1d 3d	
		Developer		85									
		Outer London Fund		417			417						
	A110 - A411 corridor - Completion of ongoing work for this corridor	LIP allocation	✓	260	75	0	335	✓	✓	✓	✓	1a 1b 1d	
	A109-A5109 corridor - Completion of ongoing work for this corridor	LIP allocation	✓	260	50	0	310	✓	✓	✓	✓	1a 1b 1d	
	A1003-(A598)-A504 corridor - Completion of ongoing work for this corridor	LIP allocation	✓	175	300	100	575	✓	✓	✓	✓	1a 1b 1d 3d	
		Developer		34									
	Network management reviews series of reviews of the operation of features or types of control affecting operation of the road network including traffic signals	LIP allocation			200	318	518	✓		□	□	□	1a
	Traffic management and accident reduction (borough wide) Package of small scale traffic management and accident reduction schemes including traffic signal review.	LIP allocation	✓	300	300	300	900	✓		✓			1a 1d
	B550 Colney Hatch Lane - Completion of ongoing work for this corridor	LIP allocation	✓	210	0	0	210	✓		✓	✓		1a 1b 1d
		Developer		200									
	Off-road cycle routes 2012/13 Improvements to stretch of Dollis Valley Green Walk between Tillingham Way and Argyle Road to provide new/widened path shared by cyclists 2013/14 onwards Additional routes	LIP allocation			300	300	600	✓	✓	✓		✓	2a 4c
Quiet road cycle routes Signing and improvement along selected routes chiefly on "quiet roads recommended by cyclists" to assist way-finding between destinations and improvements to cycling conditions along	LIP allocation			200	200	400	✓	✓	✓	□	✓	2a 4c	

Programme of Investment												
Programme areas	Funding source	Ongoing scheme?	Funding (£,000s)				MTS goals				LIP objectives	
			2011/12	2012/13	2013/14	Total	Econ. devt and pop growth	Quality of life	Safety and security	Opportunities for all		Climate change
line of route. 2012/13 Cricklewood - Golders Green - Finchley (E, N, Central) 2013/14 Additional routes												
Secondary school cycle leaflets Extend range of leaflets providing advice on cycling routes to specific secondary schools. (5+ schools/year additional schools/updates/other routes)	LIP allocation			5	5	10	✓	✓	✓	☐	✓	2a 4c
Cycle parking where existing formal or informal provision is inadequate to meet current demand - say 50 stands £20k	LIP allocation			20	20	40	✓	✓	☐	☐	✓	4c
Urban footpath improvements (boroughwide) Improve condition, accessibility and attractiveness of urban footpaths and alleyways	LIP allocation	✓	100	100	100	300	✓	✓	✓	✓	✓	1b 1d 2d 4c
Improvement works in vicinity of LU and national rail stations.	LIP allocation	✓	500	650	500	1,650	✓	✓	✓	✓	✓	1a 1b 1d 2b 4c
Asset management development. Further development of asset management plans - extension of inventories, best life cycle plans and introduction of value management process	LIP allocation		100	150	100	350	✓					1b
School Travel schemes, Various locations boroughwide Measure in neighbourhoods around school to support school travel plans, tackling school run traffic and parking	LIP allocation	✓	300	225	250	775	✓	✓	✓	✓	✓	2a 2b
Local access and accessibility improvements. Various locations boroughwide Improvements to repond to localised access and accessibility issues identified through year	LIP allocation	✓	100	100	100	300	✓	✓	✓	✓	✓	1b 1d 4c
Disabled parking review - boroughwide	LIP allocation			100						✓	✓	1a 1d
Town Centre proposals · Golders Green Town Centre · North Finchley Town Centre · Finchley Church End · Cricklewood Town Centre	Outer London Fund			400	400	800	✓	✓	✓	✓	✓	1a 1b
	LIP allocation	✓	200	200	200	600						1d 3d 4c
Footway parking schemes	LIP allocation	✓	100	100	0	200	✓					1a 1b
Development of proposals/TfL liaison/Monitoring etc	LIP allocation		37	40	40	117	✓	✓	✓	✓	✓	
Improvements to bus routes in residential areas	LIP allocation	✓	110	200	300	610	✓			✓	✓	1c
Travel Planning - Monitoring developer plans and supporting voluntarily plans and action to reduce school run traffic and parking	LIP allocation	✓	264	260	260	784	✓	✓			✓	1a 2a
	Developer		40	40	40	120						2b 3a 4c

Programme of Investment												
Programme areas	Funding source	Ongoing scheme?	Funding (£,000s)				MTS goals				LIP objectives	
			2011/12	2012/13	2013/14	Total	Econ. devt and pop growth	Quality of life	Safety and security	Opportunities for all		Climate change
School based pedestrian, cycling and road safety training	LIP allocation		104	104	104	312	✓	✓	✓	✓	✓	1a 1d 2a 2b 4c
Colindale Regeneration Junction Improvements Watford Way (A41) / Aerodrome Road Junction Improvements Colindale Avenue / Edgware Road (A5) (& A5 Montrose Ave)	Developer		275	600	360	1,235	✓	✓	✓	✓	✓	3a
Mill Hill East – phase 1 Northern Access Road	Developer				tbc	tbc	✓					3a
Stonegrove - junction improvements	Developer		135				✓					3a
Henlys Corner improvements	TfL Business Plan		8,000				✓	✓	✓	✓		3c
Integrated transport total			13,066	4,769	3,997	21,832						
Maintenance	Principal Road renewal - prioritised locations	LIP allocation	653	954	950	2,557	✓					1b
	Bridge assessment and strengthening - Prioritised locations	LIP allocation	tbc	tbc	tbc	tbc	✓					1b
	Borough Road carriageway and footway improvements and planned maintenance (LTF + borough)	LIP allocation	100	100	100	300	✓					1b
		Council capital/ borrowing*	3,500	2,000	2,000	7,500						
	Council revenue*	370	370	370	1,110							
Borough Road responsive maintenance	Council revenue*		845	845	845	2,535	✓					1b
Maintenance total			5,468	4,269	4,265	14,002						

* The proposed Council funding reflects the Council's budget plans at 1st March 2011. Following approval the budgets may be subject to in-year changes..

Supporting the Mayor's High Profile Outputs

This section provides supporting information on how the LIP proposals will help to deliver the Mayor of London's identified high profile outputs:

Cycle Superhighway schemes

Two of the Mayor's Cycle Superhighway proposals were originally proposed to enter Barnet. Route 12 was originally planned to run from East Finchley to The City, but following initial feasibility a route from Muswell Hill/Hornsey has been adopted, which is due to open in October 2012.

Route 11 provisionally from West Hendon to Marble Arch (A5) is due to open by 2015. The preliminary route alignment ran along the A5 adjacent to the Brent Cross-Cricklewood and West Hendon Regeneration areas, but more recently a revised alignment using the A41 to the Barnet/Camden border has been developed. The borough is keen to ensure that proposals for this route complement the redevelopment of Brent Cross-Cricklewood in terms of routing, timing and physical features.

Development of the Brent Cross Cricklewood regeneration area will include a new network of roads and cycle routes that will complement this route and will also help overcome some of the barriers to cycling in the area (especially that posed at present by the A406 North Circular Road, as well as the A41 and the Midland Mainline railway) making the link to on and off road provision in the rest of the borough. The borough will continue to signpost residents and those studying and working in the borough to appropriate cycle training to help them develop the skills and confidence to access the routes.

Travel plan initiatives such as cycle purchase vouchers and free cycle maintenance are being implemented in many of the major development schemes in Barnet.

Cycle parking

Suitable cycle parking, generally in accordance with London Plan standards, will be incorporated into all new developments and included in the provision of corridor and neighbourhood schemes, and town centre improvements, especially where decluttering removes the opportunity for informal cycle parking and provided to cater for unmet demand. There is therefore expected to be a significant increase in cycle parking provision in Barnet over the coming years. For example, over 9,000 new spaces are proposed at BXC alone.

Provision of cycle parking or improved provision will continue to be encouraged at schools, with training to help ensure this can be used.

Table 12 -Anticipated delivery of cycle parking*

	2011/12	2012/13	2013/14
On street or other public place			
Short stay spaces on street	50	50	50
Other public provision	10	10	10
Off street			
School cycle parking programme	50	50	50
At home (inc new)	500	500	500

developments)			
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Electric vehicle charging points

The borough is awaiting passage of the London Local Authorities and Transport for London (No. 2) Bill into law that should make explicit the power for local authorities to install charging points and clarify responsibilities in relation to charging vehicles. In the meantime the borough continues to:

- Encourage or require provision for electric vehicles in new developments in line with the London Plan
- Require no minimum depth of forecourt when providing a vehicle crossover, (a legal agreement is required that the vehicle will not overhang which becomes a local land charge transferring the requirement to future owners of the property) making it easier for owners of electric vehicles (which are often smaller vehicles) to get their vehicle off the road to charge it.
- Ensure private sector provision of infrastructure where feasible.

Better Streets

De-cluttering of streets forms an integral part of many of the corridor and neighbourhood proposals, and proposals from the emerging town centre frameworks for the priority town centres and at Golders Green in conjunction with the Mayors Great Spaces initiative will incorporate Better Streets principals. Street layouts in regeneration areas and development areas will be developed to minimise street clutter and there is scope to incorporate Better Streets principals in the design of these areas.

Cleaner local authority fleets

Our Fleet Procurement with Maintenance Services contract requires the council's fleet provider to procure fuel efficient and more environmentally friendly vehicles with Euro 5 category engines. All refuse vehicles are currently to Euro 5 standards and smaller vehicles Euro 4.

The Council's fuel procurement is achieved via Office of Government Commerce (OGC) approved contractors. Committed to a cleaner and greener suburb, we use 3.5% bio diesel mix for fuel used in the council fleet on top of which we also apply fuel additive (ChemEcol) to reduce carbon emission and increase fuel efficiency. The contract requires innovation regarding alternative fuels.

Street trees

There are 36,000 street trees in Barnet, 7.5% of all street trees in London and the second highest number. All trees receive a regular health check and are pruned on a cyclical programme. Each tree is recorded on the council's tree management database listing, among other things, location, species, size and condition.

As part of the Mayor's street tree programme in 2009/10 87 new trees were planted in the A5 priority area in Barnet. In 2010/11 over 600 trees, mostly on street, are being planted. Future year planting may not reach this level, but the borough aims to sustainably manage its stock and achieve replacement for trees lost.

The delivery of major regeneration schemes and town centre improvements will provide additional planting and planting provided direct by TfL, and by the borough, in relation to the Henlys Corner scheme will also provide additional trees in or adjacent to streets.

Performance Monitoring Plan

Introduction

Monitoring of the LIP objectives and outcomes will be via monitoring of the locally specific targets set for the mandatory core LIP indicators by the Strategic Management Board for the Environment Planning and Regeneration directorate through the monthly monitoring summary for the directorate.

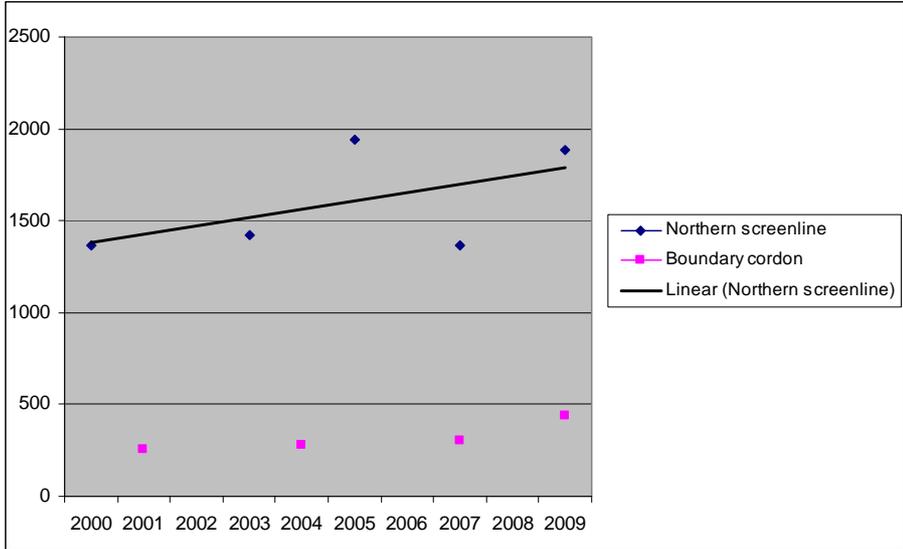
These are primarily annual indicators so supplementary use of other available indicators related to the LIP objectives, for which targets are not set, will also help to form a picture of progress in relation to the LIP objectives allowing future delivery plan actions to be adjusted to support particular areas as necessary.

A three year impact report will be produced reporting on achievements and outcomes relating to the implementation of the three-year Delivery Plan, and in conjunction with this the impact on the LIP objectives will be assessed.

Mandatory Indicators

<p>Mode share - % of travel by walking Proportion of trips by London residents where the trip origin is in Barnet that are made on foot</p>	
Long term target	32% of travel by walking by 2031
Target 2013/14	30% of travel by walking
Evidence that the target is realistic and ambitious	<p>The share of walking in Barnet measured by LTDS over the period 2005-2008 was 30%. The figure for the period 2006-2009 was 29% and from 2007-2010 was 31%.</p> <p>Barnet's network of town centres makes walking a convenient way for many residents to access services in the borough. Levels of walking are already at or above average for Outer London boroughs and close to the Greater London average of 30% in 2005-8, 31% in 2006-9 and 32% 2007-10).</p> <p>Maintaining and improving our town centres, footways and pedestrian facilities will help maintain and increase the levels of walking in the borough. The development of our regeneration areas as mixed use developments will help to make these convenient locations to walk to local services too, and for education and work trips, and all of these schemes include a range of improvements for pedestrians. However actions to encourage walking to school and as a mode of transport beneficial to health relate to small proportions of the overall population so significantly increased walking in these populations will not have as large an impact on overall mode share. (Mode shift in school travel will relate to particularly busy periods of the day).</p>
Key actions for the Council	<p>To achieve this target, we will:</p> <ul style="list-style-type: none"> • Encourage mixed use development that will help to reduce the distances people need to travel • Take a comprehensive approach to tackling the school run and continuing to train pupils to allow them to make their journey safely on foot. • Deliver of high quality transport systems in regeneration areas including safe provision of routes and facilities for pedestrians

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Long term target	32% of travel by walking by 2031																					
Target 2013/14	30% of travel by walking																					
	<ul style="list-style-type: none"> • Maintain decent footway conditions on our road network. • Improve off road paths in town centres and through parks • Undertake monitoring and support travel plans for residential developments, schools and workplaces. 																					
Key actions for local partners	Engagement by schools in STP process and encouraging walking Developments partners to bring forward development proposals as planned																					
Principal risks and how they will be managed	Developments do not proceed at pace expected. Monitoring progress towards the long term target and associated LIP objectives will provide the opportunity to revisit delivery actions and re-focus as necessary.																					
Target trajectory	<table border="1"> <caption>Target Trajectory Data</caption> <thead> <tr> <th>Year</th> <th>% Walking (origin)</th> <th>Trajectory</th> </tr> </thead> <tbody> <tr> <td>2005/6-2007/8</td> <td>30%</td> <td>-</td> </tr> <tr> <td>2009/10-2011/12</td> <td>28.8%</td> <td>-</td> </tr> <tr> <td>2013/14-2015/16</td> <td>31%</td> <td>30%</td> </tr> <tr> <td>2017/18-2019/20</td> <td>-</td> <td>30.5%</td> </tr> <tr> <td>2021/22-2023/24</td> <td>-</td> <td>31.5%</td> </tr> <tr> <td>2025/6-2027/8</td> <td>-</td> <td>32%</td> </tr> </tbody> </table>	Year	% Walking (origin)	Trajectory	2005/6-2007/8	30%	-	2009/10-2011/12	28.8%	-	2013/14-2015/16	31%	30%	2017/18-2019/20	-	30.5%	2021/22-2023/24	-	31.5%	2025/6-2027/8	-	32%
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2021/22-2023/24	-	31.5%																				
2025/6-2027/8	-	32%																				

Mode share - % of travel by cycling Proportion of trips by London residents where the trip origin is in Barnet that are made by cycling																																		
Long term target	% of travel by cycling 4.3% by 2026																																	
Target 2013/14	% of travel by cycling 1.4%																																	
Evidence that the target is realistic and ambitious	<p>The share of cycling in Barnet has been recorded as 1% (to the nearest % point) throughout the last decade (and before), and based on LATS 2001 data and more recent LTDS data has generally been in the region 0.6%-0.8% although the most recent survey shows a slightly higher figure. However classified annual counts at sites on the London “northern screenline” and “boundary cordon” that fall within Barnet indicate cycling, at least on these routes, may have increased by around 30% from 2000 to 2009.</p>  <table border="1"> <caption>Annual counts for Northern screenline and Boundary cordon (2000-2009)</caption> <thead> <tr> <th>Year</th> <th>Northern screenline</th> <th>Boundary cordon</th> </tr> </thead> <tbody> <tr><td>2000</td><td>1350</td><td>250</td></tr> <tr><td>2001</td><td>1400</td><td>250</td></tr> <tr><td>2002</td><td>1450</td><td>250</td></tr> <tr><td>2003</td><td>1500</td><td>250</td></tr> <tr><td>2004</td><td>1550</td><td>250</td></tr> <tr><td>2005</td><td>1600</td><td>250</td></tr> <tr><td>2006</td><td>1650</td><td>250</td></tr> <tr><td>2007</td><td>1700</td><td>250</td></tr> <tr><td>2008</td><td>1750</td><td>250</td></tr> <tr><td>2009</td><td>1800</td><td>250</td></tr> </tbody> </table> <p>The MTS aims to increase the mode share of cycling in London from 2% in 2006 to 5% in 2025; the 2006-09 baseline figure for Barnet is 0.7%; an indicative figure of 4.3% as a target for outer London by 2025 has been suggested by TfL.</p> <p>The borough does not expect residents to cycle unless that is their choice, but is keen to see cycling and walking become key modes for pupils travelling to school and for cycling to develop for recreation and health.</p> <p>Improved cycle facilities associated with regeneration area schemes and different living and working patterns in these areas in particular is likely to make cycling a realistic choice for more people. At BXC for example the Framework Travel Plan includes a target to double the amount of cycling by the time the development is complete. The introduction of cycle superhighways at the south edge of the borough will also be of benefit for some residents travelling into London and for travellers from the south accessing Brent Cross Cricklewood.</p> <p>Nevertheless these changes are likely to be limited in their geographical scope or to the populations that are likely to be directly affected. Improved public transport (especially buses) and walking are likely to be more attractive to most travellers making trips that might otherwise be cycled. This is reflected in the walking mode share target.</p>	Year	Northern screenline	Boundary cordon	2000	1350	250	2001	1400	250	2002	1450	250	2003	1500	250	2004	1550	250	2005	1600	250	2006	1650	250	2007	1700	250	2008	1750	250	2009	1800	250
Year	Northern screenline	Boundary cordon																																
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Long term target	% of travel by cycling 4.3% by 2026																																							
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Key actions for the Council	To achieve this target, we will: <ul style="list-style-type: none"> • Improve and extend the range of off road cycle routes in the borough • Take a comprehensive approach to tackling the school run • Continuing to train children to allow them to make their journey to school by cycle. • Delivery of high quality transport systems in regeneration areas including provision for cyclists • Improve routes via quiet roads between key destinations • Maintain decent carriageway conditions on our borough road network. 																																							
Key actions for local partners	Engagement by schools in STP process and encouraging cycling Cycle superhighway to Muswell Hill Cycle superhighway complementing proposals at Brent Cross Cricklewood Major developments proceeding as planned in the borough																																							
Principal risks and how they will be managed	The data from the LTDS survey is not likely to be statistically reliable to one decimal place and short term monitoring of trends cannot be relied upon. The numbers of cyclists recorded in crossing the northern screenline (and boundary cordon) within Barnet will also be monitored to help better understand the results although these are also likely to be variable. Developments do not proceed at pace expected.																																							
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Year	% cycling (origin)	Trajectory																																						
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Bus service reliability Excess wait time in mins (excess wait time for high frequency services serving Barnet)																																								
Long term target	Excess wait time in minutes not exceeding 1.2 minutes by 2017/18																																							
Target 2013/14	Excess wait time in minutes not exceeding 1.1 minutes																																							
Evidence that the target is realistic and ambitious	<p>The excess wait time (EWT) for high frequency bus services has reduced on bus routes serving Barnet from 2.1 in 1999/2000 (London 2.1) to 1.0 in 2008/09 (London 1.1) and 1.1 in 2009/10 (London 1.1), closely reflecting the London position.</p> <p>The MTS includes an aspiration of maintaining bus service reliability at 2006 levels (ie 1.1), however the TfL business plan projects an excess wait time of 1.1 for 2010/11 then 1.2 from 2011/12 to 2017/18.</p> <p>Major works at Henlys Corner in 2011/12 and subsequently in regeneration areas and an increasing population suggest that, despite works to minimise congestion in the borough, increased excess wait times in Barnet can be expected too, certainly in the period to 2017/18 before the infrastructure benefits of many of the regeneration schemes will be realised. During this period the challenge will be to keep EWT in the borough in line with the Londonwide figure. Consequently a long term target to 2017/18 of 1.2 reflecting the business plan projection is considered appropriate.</p>																																							
Key actions for the Council	<p>To achieve this target, we will:</p> <ul style="list-style-type: none"> • Tackle congestion through a range of schemes including reviewing the appropriateness of traffic signals at various locations • Review of bus services in residential areas • Bus service enhancements in regeneration areas • Support the introduction by TfL of improvements at Henlys Corner 																																							
Key actions for local partners	London buses improvements as programmed in business plan																																							
Principal risks and how they will be managed	<p>Within Barnet significant disruption to services during works at Henlys corner in 2011/12 is likely to increase EWT in the short term. However the longer term benefits of the scheme will help deliver improved bus running in subsequent years.</p> <p>The Olympics may have an impact on the EWT in 2012/13, but this is not likely to have long term effects in Barnet (either positive or negative).</p>																																							
Target trajectory	<table border="1"> <caption>Excess wait time in mins (Barnet routes) and Trajectory</caption> <thead> <tr> <th>Year</th> <th>Excess wait time in mins (Barnet routes)</th> <th>Trajectory</th> </tr> </thead> <tbody> <tr> <td>1999/2000</td> <td>2.1</td> <td>-</td> </tr> <tr> <td>2001/2002</td> <td>1.8</td> <td>-</td> </tr> <tr> <td>2003/04</td> <td>1.5</td> <td>-</td> </tr> <tr> <td>2005/06</td> <td>1.2</td> <td>-</td> </tr> <tr> <td>2007/08</td> <td>1.1</td> <td>-</td> </tr> <tr> <td>2009/10</td> <td>1.0</td> <td>-</td> </tr> <tr> <td>2010/11</td> <td>1.1</td> <td>1.1</td> </tr> <tr> <td>2011/12</td> <td>1.2</td> <td>1.2</td> </tr> <tr> <td>2013/14</td> <td>-</td> <td>1.2</td> </tr> <tr> <td>2015/16</td> <td>-</td> <td>1.2</td> </tr> <tr> <td>2017/18</td> <td>-</td> <td>1.2</td> </tr> <tr> <td>2019/20</td> <td>-</td> <td>1.2</td> </tr> </tbody> </table>	Year	Excess wait time in mins (Barnet routes)	Trajectory	1999/2000	2.1	-	2001/2002	1.8	-	2003/04	1.5	-	2005/06	1.2	-	2007/08	1.1	-	2009/10	1.0	-	2010/11	1.1	1.1	2011/12	1.2	1.2	2013/14	-	1.2	2015/16	-	1.2	2017/18	-	1.2	2019/20	-	1.2
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Asset condition - Percentage of the local authority's Principal Road Network where maintenance should be considered.	
Long term target	% principal road length in need of repair below 3%
Target 2013/14	% principal road in need of repair not exceeding 3%
Evidence that the target is realistic and ambitious	<p>The condition of Barnet's principal roads is currently in the top quartile in London (3rd in London in terms of DVI score) however the impact of severe winter weather over the last two years is a cause for significant concern. Although 2009/10 DVI scores continued to improve on previous years the condition as assessed by national indicator 168 deteriorated. Over £600k worth of additional maintenance has been carried out on principal roads and other major roads to address the consequences of the 2009/10 winter and despite this 2010/11 DVI scores are expected to be worse than previously.</p> <p>Over the three years to 2013/14 the borough expects to directly invest some £2M of LIP funding in Principal Road renewal and expects to see additional benefits as a consequence of other improvement work in relevant areas. Nevertheless the level of investment is not expected to match that in 2003/4 – 2004/5 when allocations of £3M per year for principal road renewal helped to deliver large reductions in the % of road in need of repair.</p> <p>The borough's first LIP set a target of 4% for a similar indicator because the level of investment required to maintain a better position in the face of annual deterioration (estimated at around 4%) was greater by an order of magnitude. This level of road condition has been met (and exceeded) and the challenge now is to maintain it.</p> <p>The borough's Asset Management approach to highway maintenance is not expected to take full effect until towards the end of the initial delivery plan period. This is expected to allow better maintenance decisions to be made through better information about the condition and likely rates of deterioration and more cost effective maintenance regimes.</p> <p>Ensuring the condition of principal roads is not worse than 3% in need of repair by 2013/14 is considered challenging in the circumstances</p>
Key actions for the Council	<p>To achieve this target, we will:</p> <ul style="list-style-type: none"> • continue to develop an asset management approach to highway maintenance to ensure that maintenance decisions are made on the basis of the best available data • carry out a programme of principal road renewal based on the condition and rate of deterioration of the roads • identify and secure third party contributions to road improvements wherever possible
Key actions for local partners	TfL maintaining LIP funding for Principal Road renewal at or above current levels
Principal risks and how they will be managed	The impact of recent severe winters on the condition of our roads may lead to faster than anticipated deterioration of roads. Urgent measures were put in place in 2010/11 to arrest localised deterioration across the principal road network. This issue will need to be addressed through the boroughs Highways Asset Management Plan

Asset condition - Percentage of the local authority's Principal Road Network where maintenance should be considered.																																																													
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Road traffic casualties – Total number of people killed or seriously injured.																																																																		
Long term target	33% reduction by 2020 against the 2004-08 average																																																																	
Target 2013/14	Average casualties in three years 2011-2013 not exceeding 128 (16% below 2004-08 average)																																																																	
Evidence that the target is realistic and ambitious	<p>Following rapid reductions in KSI casualties in the middle of the last decade casualty levels in the borough have been falling more slowly since 2005.</p> <p>The DfT have consulted on targets for 2020. Taking account of the levels of improvement that they believe may be achieved through current and potential measures their proposed target was for a 33% reduction in killed and seriously injured casualties. These would apply separately at national level but local monitoring would make use of combined KSI figures.</p> <p>Casualty reduction in London as a whole has been ahead of the national average, but in view of a significantly increasing population we anticipate, a target of 33% reduction in KSIs seems appropriate.</p>																																																																	
Key actions for the Council	<p>To achieve this target, we will:</p> <ul style="list-style-type: none"> • Carry out targeted road safety schemes at locations identified through accident hotspots and data analysis • Provide road safety education and training particularly to children • Ensure that development related improvements set a high standard of road safety 																																																																	
Key actions for local partners	<p>Continued enforcement activity by Metropolitan Police Service. Take-up of available road safety training by schools. TfL continue to address accidents on TLRN and carry out and support road safety activities pan London</p>																																																																	
Principal risks and how they will be managed	<p>Accident patterns and associated activities will be kept under review so delivery can be re-focussed if necessary.</p>																																																																	
Target trajectory	<table border="1"> <caption>Estimated data from the Target Trajectory graph</caption> <thead> <tr> <th>Time Period</th> <th>Actuals</th> <th>Trajectory</th> <th>2004-8 Average</th> <th>Target Level</th> </tr> </thead> <tbody> <tr><td>1997-1999</td><td>280</td><td>-</td><td>150</td><td>100</td></tr> <tr><td>1999-2001</td><td>270</td><td>-</td><td>150</td><td>100</td></tr> <tr><td>2001-2003</td><td>255</td><td>-</td><td>150</td><td>100</td></tr> <tr><td>2003-2005</td><td>255</td><td>-</td><td>150</td><td>100</td></tr> <tr><td>2005-2007</td><td>240</td><td>-</td><td>150</td><td>100</td></tr> <tr><td>2007-2009</td><td>180</td><td>-</td><td>150</td><td>100</td></tr> <tr><td>2009-2011</td><td>155</td><td>150</td><td>150</td><td>100</td></tr> <tr><td>2011-2013</td><td>150</td><td>145</td><td>150</td><td>100</td></tr> <tr><td>2013-15</td><td>145</td><td>140</td><td>150</td><td>100</td></tr> <tr><td>2015-17</td><td>140</td><td>135</td><td>150</td><td>100</td></tr> <tr><td>2017-19</td><td>135</td><td>130</td><td>150</td><td>100</td></tr> <tr><td>2019-21</td><td>130</td><td>125</td><td>150</td><td>100</td></tr> </tbody> </table>	Time Period	Actuals	Trajectory	2004-8 Average	Target Level	1997-1999	280	-	150	100	1999-2001	270	-	150	100	2001-2003	255	-	150	100	2003-2005	255	-	150	100	2005-2007	240	-	150	100	2007-2009	180	-	150	100	2009-2011	155	150	150	100	2011-2013	150	145	150	100	2013-15	145	140	150	100	2015-17	140	135	150	100	2017-19	135	130	150	100	2019-21	130	125	150	100
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Road traffic casualties – Total casualties																																																																									
Long term target	5% reduction by 2020 against the 2004-08 average																																																																								
Target 2013/14	Average casualties in three years 2011-2013 not exceeding 1377.4 (ie 2004-08 average)																																																																								
Evidence that the target is realistic and ambitious	<p>Following reductions in total casualties over the last decade possibly contributed by improvements in vehicle standards, casualty levels in the borough have been falling more slowly since 2005. 2009 and 2010 have seen big increases in slightly injured casualties, which form the majority of all casualties and consequently increases in total casualties.</p> <p>There is little guidance available on likely trends in slightly injured casualties – but given current casualty trends and in view of a significantly increasing population we anticipate in the borough a reversal of the current increase and a modest long term reduction would seem ambitious.</p>																																																																								
Key actions for the Council	<p>To achieve this target, we will:</p> <ul style="list-style-type: none"> • Carry out targeted road safety schemes at locations identified as part of corridor or neighbourhood based schemes or other locations identified through data analysis • Provide road safety education and training particularly to children • Ensure that development related improvements set a high standard of road safety 																																																																								
Key actions for local partners	<p>Continued enforcement activity by MPS. Take-up of available road safety training by schools. TfL continue to address accidents on TLRN and carry out and support road safety activities pan London</p>																																																																								
Principal risks and how they will be managed	<p>Accident patterns and associated activities will be kept under review so delivery can be re-focussed where necessary.</p>																																																																								
Target trajectory	<p>The graph illustrates the trend of total road traffic casualties. The 1994-98 average is the highest, at approximately 2050. The 2004-08 average is around 1377.4. Actual casualties show a downward trend from about 1900 in 2000 to a low of 1300 in 2008, followed by a slight increase to 1400 in 2010, and then a gradual decline towards the long-term target of approximately 1300 by 2022. The trajectory line shows a steady decline from 2010 onwards, crossing the long-term target around 2018.</p> <table border="1"> <caption>Estimated data from the Road Traffic Casualties graph</caption> <thead> <tr> <th>Year</th> <th>Actual</th> <th>2004-08 av</th> <th>1994-98 av</th> <th>long term target</th> <th>trajectory</th> </tr> </thead> <tbody> <tr><td>2000-2002</td><td>1900</td><td>1377.4</td><td>2050</td><td>1300</td><td>-</td></tr> <tr><td>2002-2004</td><td>1750</td><td>1377.4</td><td>2050</td><td>1300</td><td>-</td></tr> <tr><td>2004-2006</td><td>1550</td><td>1377.4</td><td>2050</td><td>1300</td><td>-</td></tr> <tr><td>2006-2008</td><td>1350</td><td>1377.4</td><td>2050</td><td>1300</td><td>-</td></tr> <tr><td>2008-2010</td><td>1400</td><td>1377.4</td><td>2050</td><td>1300</td><td>-</td></tr> <tr><td>2010-2012</td><td>1350</td><td>1377.4</td><td>2050</td><td>1300</td><td>1400</td></tr> <tr><td>2012-2014</td><td>1350</td><td>1377.4</td><td>2050</td><td>1300</td><td>1350</td></tr> <tr><td>2014-2016</td><td>1350</td><td>1377.4</td><td>2050</td><td>1300</td><td>1300</td></tr> <tr><td>2016-2018</td><td>1300</td><td>1377.4</td><td>2050</td><td>1300</td><td>1250</td></tr> <tr><td>2018-2020</td><td>1300</td><td>1377.4</td><td>2050</td><td>1300</td><td>1200</td></tr> <tr><td>2020-2022</td><td>1300</td><td>1377.4</td><td>2050</td><td>1300</td><td>1150</td></tr> </tbody> </table>	Year	Actual	2004-08 av	1994-98 av	long term target	trajectory	2000-2002	1900	1377.4	2050	1300	-	2002-2004	1750	1377.4	2050	1300	-	2004-2006	1550	1377.4	2050	1300	-	2006-2008	1350	1377.4	2050	1300	-	2008-2010	1400	1377.4	2050	1300	-	2010-2012	1350	1377.4	2050	1300	1400	2012-2014	1350	1377.4	2050	1300	1350	2014-2016	1350	1377.4	2050	1300	1300	2016-2018	1300	1377.4	2050	1300	1250	2018-2020	1300	1377.4	2050	1300	1200	2020-2022	1300	1377.4	2050	1300	1150
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CO² emissions CO ² emanating from ground-based transport																																																													
Long term target	CO² emissions 45.5% reduction against 2008 by 2025																																																												
Target 2013	CO² down to 371 kilotonnes pa (402 ktonnes in 2008)																																																												
Evidence that the target is realistic and ambitious	<p>Figure 62 of the MTS sets out the projected CO2 emissions over time that may be achieved to 2025 based on the MTS and government action which falls short of the Mayoral Target for emissions from transport by 2025. Barnet's 2025 target reflects the Mayoral target. The trajectory to reach this has been based on the profile of emissions shown in MTS fig 62, but has then been stretched so as to achieve the target level by 2025.</p> <p>Data for 2009 suggests that more rapid reductions have occurred very recently, but it is likely that this reflects the impact of the recession on travel and may be temporary effect.</p>																																																												
Key actions for the Council	<p>To achieve this target, we will:</p> <ul style="list-style-type: none"> • Support the use of low emission vehicles including electric cars • Encourage mixed use development that will help to reduce the distances people need to travel • Especially in our regeneration areas seek high quality transport facilities that will support reduced emissions • Encourage walking and cycling to school • Reduce congestion 																																																												
Key actions for local partners	<p>Timely provision of infrastructure improvements by development partners Public transport emissions improvements Engagement by schools in encouraging walking and cycling</p>																																																												
Principal risks and how they will be managed	<p>The impact of the recession on development in Barnet may delay some projects and the associated highway and transport improvements that will help deliver this target. However this is also likely to delay the increased traffic that the developments will generate, so the impact on achieving the target may be limited.</p> <p>The indicator will be monitored so that refreshed delivery plans can include additional measures if necessary to reflect progress towards the 2025 target.</p>																																																												
Target trajectory	<table border="1"> <caption>CO² Emissions Trajectory Data (ktonnes pa)</caption> <thead> <tr> <th>Year</th> <th>LEGGI ground based transport (Barnet)</th> <th>Trajectory based on fig 62 MTS</th> <th>Trajectory to meet 2025 target</th> <th>NI186 transport total</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>402</td> <td>-</td> <td>-</td> <td>370</td> </tr> <tr> <td>2007</td> <td>402</td> <td>-</td> <td>-</td> <td>365</td> </tr> <tr> <td>2009</td> <td>402</td> <td>-</td> <td>-</td> <td>360</td> </tr> <tr> <td>2011</td> <td>390</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>2013</td> <td>371</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>2015</td> <td>360</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>2017</td> <td>340</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>2019</td> <td>310</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>2021</td> <td>280</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>2023</td> <td>250</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>2025</td> <td>219</td> <td>219</td> <td>219</td> <td>-</td> </tr> </tbody> </table>	Year	LEGGI ground based transport (Barnet)	Trajectory based on fig 62 MTS	Trajectory to meet 2025 target	NI186 transport total	2005	402	-	-	370	2007	402	-	-	365	2009	402	-	-	360	2011	390	-	-	-	2013	371	-	-	-	2015	360	-	-	-	2017	340	-	-	-	2019	310	-	-	-	2021	280	-	-	-	2023	250	-	-	-	2025	219	219	219	-
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Locally specific targets for mandatory indicators

Borough: Barnet

Core indicator	Definition	Year type	Units	Base year	Base year value	Target year	Target year value	Trajectory data				Data source
								2010/11	2011/12	2012/13	2013/14	
Mode share of residents	% of trips by walking	Financial	%	2006/07-2008/09	28.8%	2013/14 (2011/12-2013/14 data)	30%	2010/11	2011/12	2012/13	2013/14	LTDS
								29.4%	29.6%	29.8%	30%	
Mode share of residents	% of trips by cycling / no of trips	Financial	%	2006/07-2008/09	0.7%	2013	1%	2010/11	2011/12	2012/13	2013/14	LTDS
								0.8%	0.9%	0.9%	1.0%	
Bus service reliability	Excess wait time in mins	Financial	Mins	2008/09	1.0	2013/14	1.1	2010/11	2011/12	2012/13	2013/14	QSI Indicators
								1.1	1.2	1.2	1.2	
Asset condition - principal roads	% length in need of repair	Financial	%	2009/10	3	2012/13	3	2009/10	2010/11	2011/12	2012/13	Detailed Visual Inspection (DVI) data supplied for each borough to TfL by LB Hammersmith and Fulham
								3	3	3	3	
Road traffic casualties	Total number of people killed or seriously injured	Calendar	Number	2006-2008 average	147	2013 (2011-13 average)	128	2010	2011	2012	2013	London Road Safety Unit
								140	136	132	128	
Road traffic casualties	Total casualties	Calendar	Number	2006-2008 average	1320.3	2013 (2011-13 average)	1377	2010	2011	2012	2013	London Road Safety Unit
								1382 (actual)	1397	1387	1377	
CO2 emissions	CO2 emissions	Calendar	Tonnes/year	2008	402,000	2013	371,000	2010	2011	2012	2013	GLA's London Energy and Greenhouse Gas Emissions Inventory (LEGGI)
								391,000	384,000	378,000	371,000	

Supplementary Indicators

A variety of indicators and data exist currently that relate to the LIP objectives and will form part of the picture of progress on meeting the objectives. The indicators used may change depending on availability or reliability.

Congestion Satisfaction surveys (eg NHT, Place survey, resident surveys)
DfT congestion indicator
NI 167/TfL congestion indicator
TfL Delay on network of interest
DfT traffic estimates

Road condition
Satisfaction surveys (eg NHT, Place survey, resident surveys)
Road condition surveys (various)
Footway condition surveys

Bus network Satisfaction surveys (eg NHT, Place survey, resident surveys)
Usage (LTDS)
Reliability data (QSI/iBus)

Safe and attractive travel
Satisfaction surveys (eg NHT, Place survey, resident surveys)
Casualty data for different groups
Crime statistics

School travel & parking
Travel to school indicators (NI 198, iTrace data, LTDS)
Parking data

Transport in regeneration areas and town centres
Development milestones
Travel plan monitoring for relevant sites

Environmentally friendly transport
CO₂ emissions data (NI 186, Leggi database)
Air quality monitoring data (NOx & Particulates)

Appendix A

Development area proposals

Colindale Area Action Plan (AAP)

The Colindale AAP was approved in 2010 and sets out a vision for the area in 2021 with the creation of a new neighbourhood centre and high quality sustainable development within four 'corridors of change', delivering 10,000 new homes and creating 1,000 new jobs. The AAP covers several major development sites including Beaufort Park (2,800 new residential units), Grahame Park (3,000 new units), the Peel Centre currently occupied by the Metropolitan Police (expected to be up to 3,000 new units) and the former Colindale Hospital site (up to 1100 new units). Beaufort Park is currently being occupied with the final phases being built out and the first 319 units comprising phase 1A of Grahame Park have just been completed. Colindale Hospital is also under construction. Improved transport and access is a cornerstone of the AAP, including the delivery of a new public piazza and transport interchange at Colindale tube station in partnership with key stakeholders, including TfL. Other key transport schemes and improvements being secured through section 106 agreements and planning conditions include the following:

- i. bus service improvements including the 324 service using Colindeep Lane and the 186 service diverted from the A41 to use Aerodrome Road before passing through Grahame Park;
- ii. conversion of the existing zebra crossing outside the tube station to a pelican crossing to help smooth traffic and reduce congestion and pollution;
- iii. a network of cycle and pedestrian routes across the AAP area, for example a new footbridge for walkers and cyclists between the former Colindale Hospital site and Montrose Park;
- iv. high quality de-cluttered public realm in the vicinity of all new developments;
- v. a new approach to parking provision that recognises that the parking ratio for residential development should be lower in locations which have a good PTAL ratios of around 0.7 are accordingly being agreed at various key sites, such as those close to the tube station;
- vi. cycle parking provision for new developments in line with the MTS;
- vii. proposed review and extension of CPZs, including a new CPZ in Grahame Park;
- viii. travel plan incentives such as subsidised Oyster cards, bicycle purchase vouchers and subsidised car club membership;
- ix. car clubs and subsidised cycle maintenance workshops as part of major residential developments;
- x. provision of active and passive electric vehicle charging points in developments to support the latest London Plan;
- xi. monitoring and enforcement of travel plans using a new dedicated borough staffing resource.

Brent Cross Cricklewood (BXC)

The BXC scheme is one of the most ambitious and challenging developments proposed in the UK at the present time. Once started, it will take approximately 20 years to build out the scheme. Outline Planning Consent was issued by the Local Planning Authority in October 2010. The planning conditions require that implementation should commence no later than seven years from grant of consent and is expected to start by 2016.

The scheme includes the expansion of the existing shopping centre on the north side of the A406 as well as a new town centre on the southern side. 7,500 new residential units are proposed together with significant new offices, with around 27,000 new jobs expected to be created. New and improved community facilities, together with new rail served freight and waste handling facilities and a new combined heat and power plant are all planned.

Transport investment has been costed at some £0.5 billion, including plans for a new fully accessible railway station and public transport interchange on the Midland Mainline, accessibility and interchange improvements at Cricklewood and Brent Cross stations, a new bus station at the shopping centre, a 'rapid transit' bus service linking the key public transport interchanges and some 21 bus service enhancements (new, extended and diverted services as well as those with capacity and frequency improvements), subject to detailed discussions with TfL and other authorities. Bus priority lanes and bus only streets are also proposed, together with new and improved bus stops and a comprehensive network of facilities for pedestrians and cyclists within the application area.

A network of new roads will be provided including a new link to the A5 over the Midland Mainline improving accessibility to and from the west, a complete remodelling of the M1 junction 1 and Staples Corner interchange and new or improved junctions on the A406, A41, A5 and A407, including facilities for buses, pedestrians and cyclists as appropriate. The proposed highway layout is designed to mitigate the impacts of the scheme and encourage sustainable development by managing growth in movement which favours use of non-car modes. A further study of pedestrian and cycle links from the development to connect with adjacent communities is committed through the section 106 legal agreement, as is a comprehensive corridor study looking at all modes of transport along the A5 and its environs.

On car parking there is a commitment to restraint through charging for parking, no further parking at all at the Brent Cross shopping centre, introduction of CPZs across the area, an evidence based reduction in residential car parking standards as the scheme progresses with a staged reduction of capped ratios at each phase, capped employment parking and London Plan compatible electric vehicle charging facilities. Over 9,000 cycle parking spaces are planned. The section 106 is £46m including £11.5m for bus service improvements and improved interchange and step-free access schemes at Cricklewood train and Brent Cross tube stations.

The approved Framework Travel Plan includes a target to change the mode split from 64% of trips by car and 22% by public transport at the start of the development to 34% by car and 48% by public transport when the scheme is complete. This is expected to be facilitated by the significant improvements in public transport, especially the new railway station, the above restraint measures and comprehensive travel planning including appointment of a Travel Plan Co-ordinator, car clubs, car sharing schemes, personalised travel planning, subsidised oyster cards and cycle purchase or maintenance vouchers for residential units, cycle hire club and various other schemes, incentives and promotional campaigns. Travel plans will be developed for residential areas, workplaces and schools.

There is a comprehensive framework of control on the roll-out of the development through the section 106 and planning conditions. In particular tests are required to be undertaken for each phase using a matrix of key benchmarks including floorspace, mode split and generated trips in order to demonstrate that the development at each stage is consistent with the outline permission. Transport Reports are required for each phase, and if necessary will need to include supplementary mitigation measures to ensure that the development achieves its target outcomes and results in mode shift. The roll-out of the development will be overseen by the council and TfL

continuing to work closely and collaboratively to realise the delivery of this London Plan Opportunity Area.

West Hendon Regeneration scheme

Located between the A5 and the Welsh Harp Reservoir the West Hendon Estate is a product of the 1960s. The existing 680 homes will be replaced by a new mixed tenure neighbourhood of up to 2,200 new homes, a net increase of 1,500 homes. It is estimated that the scheme will be completed before 2026, and includes removal of the Perryfield Way gyratory system. The redevelopment of West Hendon is being taken forward in parallel, but independently of the regeneration of Brent Cross – Cricklewood and received its latest outline planning permission in 2008. The first phases have commenced on site, although the scheme is now under review, including potentially the provision of a lower residential parking ratio. The A5 is proposed to be upgraded as part of the scheme including better facilities for pedestrians, cyclists and bus users.

Dollis Valley priority estate

This estate has been identified for regeneration and the council is currently in the process of selecting a preferred development partner. Details are therefore yet to be finalised but in common with other regeneration schemes it is anticipated to include improved bus services to increase the low PTAL of the site, potentially including a recasting of the local bus services, pedestrian improvements, better access to and from the estate and a travel plan.

Mill Hill East Area Action Plan (AAP)

The Mill Hill East AAP was adopted early in 2009 and set the context for a major new suburban development of some 2,200 residential units and mixed uses, including a new primary school, aiming to create about 500 jobs. The outline planning application for this area of intensification as identified in the London Plan was approved by the council in April 2011 and the section 106 legal agreement is currently being finalised, with the development expected to roll-out over the next 15 years.

A series of public transport improvements have been identified in liaison with TfL to improve the PTAL, which include the following:-

- facilitated by the creation of a new east-west distributor road through the development, the extension of the 382 bus service from the tube station to terminate adjacent to the new school, including provision of a bus layover and turning facility, together with bus driver facilities;
- the diversion of the 240 bus service using the new link road and then a new north – south road providing a direct connection to the tube station by way of a short bus-only street;
- improved bus stops in and around the site; and
- urban realm improvements including improved interchange and accessibility at the tube station, including a new forecourt area. Step free access may also be delivered later in the scheme subject to a viability assessment;

In addition to the above Travel Plans are proposed for residential, workplace and school land uses, together with a residential travel plans incentives fund to help implement the travel plan initiatives including subsidies for oyster cards and cycle vouchers. Site wide initiatives include the appointment of a Travel Plan Co-ordinator and a car club.

Parking provision includes over 2,500 cycle parking spaces and car parking standards that are compatible with both the London Plan and Barnet UDP, with a commitment to monitor and review the provision as phases come forward. The local CPZ will also be reviewed to ensure it continues to provide a satisfactory level of management and restraint. New and improved junctions have been designed to help mitigate the impact of the development and with the aim of minimising the number of new traffic signals thus contributing to smoothing traffic.

The development will provide a network of new pedestrian and cycle friendly routes including an east-west cycle route and some improved cycle facilities and zebra crossings on Bittacy Hill. Crossing facilities are also planned to be improved along Frith Lane and there are funds to improve off-site east-west cycle routes providing safe connections towards Finchley in the east and the Copthall area in the west.

Stonegrove priority estate

Stonegrove and Spur Road are two post war interconnected housing estates in Edgware which are being redeveloped as one. Regeneration will create a new neighbourhood linked to its surroundings on the edge of London's Green Belt. Nearly 1,000 new homes will be provided to replace 600 existing ones, a net increase of 400. This programme is well under way and 120 new homes were completed in 2010. The scheme is expected to be completed before 2021.

This estate regeneration scheme received outline planning permission in 2008 and involves intensified use of the site together with various highway improvements including the creation of a new access point on the A5 to better distribute estate traffic and reduce pressure on the A41 and Canons Corner junctions. Bus stop improvements and better facilities for pedestrians are also planned.