

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. This version includes the 2013 refresh.

Table 1 - Delivering the LIP objectives

LIP Objectives	Means of Delivery
(1) Ensuring more efficient use of the local road network;	
(a) 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 routes 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
(b) 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
(c) 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 routes in residential areas • Bus network improvements delivered through major development schemes (see separate regeneration

LIP Objectives	Means of Delivery
	area objective) <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 specific programme of schemes
(d) Make travel safer and more attractive	<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
(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	<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
(b) Reduce pupil parking near schools	<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
(3) Delivery of high quality transport systems in regeneration areas	(Further information on the transport aspects of these development areas follows)
(a) Comprehensive transport solutions in major development areas	<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
(b) Public transport enhancements (with partners)	<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
(c) Pursue major improvements to the strategic road network	<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 Cricklewood (BXC) development

LIP Objectives	Means of Delivery
	<ul style="list-style-type: none"> • Edgware Road (A5) Corridor Study and A5 junction improvements through BXC, West Hendon, Colindale and Edgware developments, and secured from other funding. • Continue to lobby for future improvements to A406/Golders Green Junction and long term major improvement on A406 at Henlys Corner. • Develop proposals and continue to seek improvements to address other future infrastructure delivery requirements to support growth in the borough including at the A41/ Hendon Central junction and A1000 / Whetstone Town Centre crossroad.
(d) 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 key interchanges and public realm within town centres delivered through town centre frameworks and local improvement programmes. • Interim improvements delivered through corridor and neighbourhood based proposals • Proposals developed through Mayors Outer London Fund, Major Schemes and/or Mayor's Great Spaces, • Air quality improvement project at North Finchley
(4) More environmentally friendly transport networks	
(a) 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.
(b) 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
(c) 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 of cycling strategy and programme of improvements to support Mayors Cycling Vision.

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 (CAAP) area

Improved transport and access is a cornerstone of the CAAP, including the delivery of a new public piazza and improved 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 supporting travel plan measures and incentives to help residents to make best use of the available travel options.

Recent delivery actions and actions expected in 2013/14 – 2016/17 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. *The new Piazza is now complete.*
- A second new square in Grahame Park at the southern end of the re-aligned Lanacre Avenue as part of phase 1 of the Grahame Park estate regeneration, which is due to start construction during 2013/14.
- New and improved bus stops, including outside the tube station which has now been completed, and a new bus route (Colindale – Finchley Central, or as otherwise agreed with TfL)
- Improvements to local pedestrian and cycle routes to provide a network of safe routes and better connections with other key development and regeneration areas;
- Junction Improvements at Watford Way (A41) / Aerodrome Road, Colindale Avenue / Edgware Road (A5), Montrose Avenue / Edgware Road, Grahame Park Way / Lanacre Avenue (including provision for the future diversion of Aerodrome Road to connect at this point, and removal of the associated roundabout at Colindale Avenue) and Bunns Lane / Grahame Park Way; 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. The pelican crossing has now been completed and work is ongoing to consider the delivery of further transport improvements and an enhanced public realm along Colindale Avenue in conjunction with upcoming developments of the Peel Centre and former British Newspaper Lending Library sites
- Travel Plan related initiatives such as subsidised Oyster cards, cycle purchase discounts, car clubs and free cycle maintenance.
- Significant investment in improved public realm on street and footpath / cycle linkages through local parks to stitch together the new development and deliver improved connectivity, reduce vehicular travel and encourage healthier lifestyles.

Cricklewood, Brent Cross and West Hendon Development Framework

Brent Cross Cricklewood

Transport investment includes plans for a new fully accessible Thameslink railway station and public transport interchange on the Midland Mainline, as well as accessibility and interchange improvements at Cricklewood (Thameslink) and Brent Cross (Northern Line) stations.

It also includes 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 has been scoped and a comprehensive corridor study looking at all modes of transport along the A5 and its environs is underway.

A section 73 application proposing a re-configured Brent Cross Shopping Centre and a new non-vehicular 'Living' bridge is due to be considered by the Council's Planning & Environment Committee by the end of the year. The Council is also working towards the appointment of a new development partner for the southern area. Development north of the A406, but also including infrastructure to facilitate the southern build-out, is expected to commence around 2016.

West Hendon Regeneration

The first phases have commenced on site, with the recent completion of phase 2A 'Lakeside'. Following a review of the Masterplan, a new outline scheme was approved in July for some 1,500 new units (net increase) which includes the provision of a lower residential parking ratio, traffic management measures to reduce local rat-running and an A5 upgrade including better facilities for pedestrians. The existing Perryfield Way gyratory system will be removed, congestion will be addressed and although the bus lanes are proposed to be removed, overall traffic flow is predicted to be smoother, including for buses. The recent approval also includes the detail for the next phase of 358 units which will be progressed during 2014.

Phases 3A/B/C of the scheme are due to be implemented in the years leading up to 2017, and will include interim transport improvements which are subject to reserved matters applications, upgrading the pedestrian route to Hendon (Thameslink) station is a key priority. A new pedestrian and cycle bridge alongside the existing road bridge on Cool Oak Lane is also planned to be delivered as part of phase 3 to ensure pedestrian safety in crossing the bridge to access green spaces around the Welsh Harp Reservoir.

Dollis Valley priority estate

This scheme for 616 new homes was approved by the Council's Planning & Environment Committee in June 2013 and includes improvements to the local bus service (route 326) with new bus stops and better penetration of the estate helping to increase the site Public Transport Accessibility Level. Local pedestrian improvements, including enhancements to the Dollis Valley Green Walk for pedestrians and cyclists, better access to and from the estate and a travel plan and travel plan incentives are also planned.

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 supporting measures and incentives, a car club and various other transport mitigation measures and improvements in the surrounding area are also planned.

Delivery actions ongoing and expected in 2013/14 – 2016/17 that will deliver transport and urban realm improvements to support the development are:

- Strategic East-West distributor road and cycle link 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 the east-west distributor road 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. The east-west road/Frith Lane and Engel Park/Bittacy Hill junctions have been completed. All junction improvements include or will 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 the east-west cycle route referred to above providing a connection between Pursley Road and Finchley via a largely off-road connections 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 for 937 new homes 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 delivered or planned. The penultimate reserved matters application was approved in April, and included provision for the installation of electric vehicle charging points.

Town Centre proposals are being pursued through town centre planning frameworks. Complementary applications for improvements have been and continue to be 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.

With the support of the Mayor's Outer London Fund progress on improving

North Finchley is now being made by the Council and the North Finchley Town Team which was established in April 2013. The Fund will be partly used to establish a "Cultural Quarter" in the southern end of the town centre around the artsdepot and Tally Ho Corner providing for a range of community activities. New signage, lighting and landscaping including tree planting and decluttering are proposed as well as enhancements to buildings and shopfronts.

Improvements to are also planned through the North Finchley Cleaner Air Project. North Finchley is at the junction of four main roads and has been identified as an air quality focus area. Recent traffic counts indicate 30,000 vehicles AADT and there is a large bus station on the junction with six bus routes serving it. There is a large ten-storey apartment block on the junction and it is in the middle of a residential area with approximately 15,000 residents. An automatic monitoring station is in place measuring NO₂ and PM₁₀: the annual mean concentration for NO₂ was 63ug/m³ in 2012.

The North Finchley Cleaner Air Project, funded mainly from the Mayor's Air Quality Fund and LIP funding aims to provide, green infrastructure, electric vehicle charging and additional cycle parking/facilities and environmental education and campaigning initiatives.

The Outer London fund scheme also includes re-examining traffic movements around Tally Ho corner and the Arts Depot and Bus Station with a view to a developing a remodelled road layout reducing the dominance of motor traffic and transform the space for pedestrians and cyclists, for future implementation

Chipping Barnet. The Town Centre Strategy for Chipping Barnet was adopted in June 2013. The Strategy provides a framework to protect what is best about Chipping Barnet, setting parameters for high quality expansion of the town centre. It helps to guide and manage future development and change, promote improvements to ensure the town centre's long term vitality and viability and is a material planning consideration in the determination of future planning applications within the town centre.

The strategy includes for looking at options to provide the best flow of traffic, safety and ease of movement for pedestrians, and improved environmental quality and progressing improvements to the Wood Street/High Street junction and the setting of St John the Baptist Church and its relationship with the new Barnet and Southgate College building and public space fronting Wood Street.

A review of previous options for the Wood Street junction and examining options to ease congestion on the High Street south of the junction are included in the programme of investment.

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 in the longer term 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.

Feasibility work is being planned to look at a pedestrian bridge and an improved junction at Nether Street / Ballards Lane / Chaville Way, potentially in conjunction with any development proposals that TfL may wish to pursue in the vicinity of the tube station.

Edgware is Barnet's only major town centre and the new Development Framework was approved by the Council in June. The town centre has excellent integrated public transport services and facilities with the Northern Line tube and bus stations in close juxtaposition in the heart of the town centre, and right next to the Broadwalk shopping centre. There are opportunities to redevelop and expand the shopping centre in the next few years, and in the longer term to include other adjacent sites. Opportunities to introduce complementary improvements to the public transport facilities, particularly to deliver an improved bus station, are being actively explored with TfL and dialogue with the shopping centre developers is ongoing with regard to seeking improvements to the main shopping street, Station Road.

Sub-regional Transport Plans

Other committed and planned projects identified in the sub-regional Transport Plan that support LIP objectives (funded from the TfL business plan and elsewhere) include:

Scheme	Detail	LIP objectives addressed
London Overground capacity increase	An extra carriage on all London Overground lines (except Barking-Gospel Oak line), from 2014 completed by 2016, giving 25 per cent capacity increase.	Public transport enhancements (with partners)
Thameslink upgrade	Thameslink upgrade to provide longer trains and higher frequencies on Midland Mainline and Great Northern routes, 2018.	Public transport enhancements (with partners)
Northern line upgrades	Northern line upgrades, to increase capacity by a fifth and reduce journey times by 18 per cent, due for completion by 2014 and 2020	Public transport enhancements (with partners)
M25 Junctions 23-27	Hard shoulder running on junctions 23 – 27 of M25 due for completion by	Reduce congestion Pursue major improvements

	2015.	to the strategic road network
North London future opportunities / North sub-region priority work area	Promotion of public transport in north London, highlighting the opportunities provided by existing orbital bus routes and their connections with rail and Tube services / Enhancements at key radial/ orbital rail or bus interchanges Building on the issues identified in the key interchange audit in order to develop a programme of improvements.	Public transport enhancements (with partners) Improve the bus network (with TfL)
North sub-region priority work area	Responding to the findings and recommendations made by the Roads Task Force and the issues set out in the corridor studies.	Reduce congestion Pursue major improvements to the strategic road network
North sub-region priority work area	Taking forward the recommendations made in the north London cycling strategy and developing schemes in order to drive growth in cycling in the sub-region.	Making cycling and walking more attractive for leisure, health and short trips
Other London-wide projects	Wi-Fi provision at underground stations Pedestrian countdown at traffic signals Step-free access programme Contactless ticketing on all modes SCOOT roll out Introduction of electric vehicle charging points New bus for London Legible London expansion Investment in strategic and local roads Implementing the Mayor's Vision for Cycling in London	various

Roads Task Force

The programme of investment includes for taking forward recommendations of the Roads Task Force report, in the first instance by applying the roads task force typology to roads in the borough and identify the gaps between aspiration and existing conditions, and developing proposals to address these gaps.

As a rule a Roads Task Force typology has not been identified in relation to proposals in the proforma A accompanying this plan, in part because it would pre-empt a considered evaluation and in part because many work packages are programmes of work across many roads with potentially different typologies, or over an area including more than one typology.

Road Safety

The London-wide target for KSI casualty reduction in London included within Safe Streets for London: The Road Safety Action Plan for London 2020 is for a 40% reduction in KSI casualties by 2020 compared with the 2005-09 average. This is more stretching than the equivalent borough long-term target included in the LIP (33% reduction by 2020 against the 2004-08 average). As identified in the guidance the borough is not updating the long term target at this time. Nevertheless increased investment in this area is included within the programme of investment.

Cycling

Barnet is committed to delivering a step change in the way it caters for the cyclist, making it better and safer to travel by bicycle in the borough and in doing so improving the health and well-being of its residents.

Increased cycling is critical to accommodating the increased growth planned for the borough and ensuring sustainable travel movement in the future. Existing plans for a number of key regeneration areas in Barnet provide for new and significantly improved cycle facilities in these areas.

The additional funding supporting the Mayors Cycle Vision provides an opportunity for the borough to develop a cycling strategy, building on the ideas generated through the recent mini-Holland application, to provide a framework and resources to effectively deliver a step-change in cycling provision and take up in the borough.

The borough has made improvements for off-road cycling in recent years, including in the Dollis Valley that runs through the centre of the borough using LIP and Mayoral Parks funding. This has improved and provided new off-road sections of route that can be used by cyclists. Improvements have also been made to other off-road routes in Hendon, Brunswick Park and Mill Hill and signed quiet road routes are now being developed.

Schools are supported through our school travel planning team to deliver cycle training, cycle clubs and new cycle facilities, to promote the health and environmental benefits of cycling and to encourage cycling to school and for other purposes. New cycle stands have been installed at a number of on-street locations recently and this year for the first time the borough is partnering British Cycling to deliver a series of SkyRide local events in the borough.

The programme of investment envisages building on these existing developer and LIP funded, activities and incorporates new and additional work through the Borough Cycle Programme, Cycle Superhighways and Quietways programmes in particular.

Bus Stop Accessibility

Some 49% of bus stops in Barnet are currently assessed as meeting TfL's criteria for an accessible bus stop (compared with 70% Londonwide). The investment programme includes proposals for increasing this to around 70% of stops. This is still some way below the Mayor's Londonwide aspiration of achieving 95% of bus stops accessible by 2016, but takes no account of the additional dedicated resources from TfL.

Funding

Anticipated funding available to deliver proposals in the 3 year delivery plan period 2014/15 – 2016/17 is shown below

Table 2 - funding sources

Funding source	Anticipated funding by year £k			
	2014/15	2015/16	2016/17	Total
LIP allocation*	4,735	4,623	4,770	14,128
Cycling Programme Funding	315	350	359	1,024
Colindale	1,385	TBC	TBC	1,385

Infrastructure Improvements**				
Other developer funding ***	100	100	170	370
Council revenue	434	434	434	1,302
Council capital	3,000	3,000	3,000	9,000
Total	9,869	8,507	8,733	27,209

* Anticipated funding at borough level for Corridors, Neighbourhoods and Supporting Measures, Principal Road Maintenance and Local Transport Funding Programmes

** GAF + s106

*** Plus additional funding TBC (see table 4)

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 March 2013 and may be subject to change.

The delivery plan aims to address the boroughs transport objectives giving priority to:

- developing the projects needed to support the level of growth within the borough through;
 - an improved understanding of the scale and impact of the demands on the transport network,
 - developing the infrastructure projects that will address these, and
 - developing complementary behaviour change programmes
- responding to the Roads Task Force report
- responding to the Mayors Cycle Vision
- addressing bus stop accessibility needs
- addressing road safety concerns

Priority projects supporting growth are identified in appendix DP1

Where funding is not available at the levels indicated in the delivery plan, implementation will be prioritised based on funding available from other sources, value for money in delivering outcomes, statutory requirements, and deliverability..

Delivery Plan risks

Table 3 - 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 2014/15 – 2016/17 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. Further detail for integrated transport elements is included in the separate pro-forma A

Table 4 - Programme of Investment

Programme areas	Funding source	Funding (£,000s)				MTS goals					LIP objectives
		2014/15	2015/16	2016/17	Total	Econ. devt and pop growth	Quality of life	Safety and security	Opportunities for all	Climate change	
Corridors, Neighbourhoods and supporting measures	North Finchley Cleaner Air Project	LIP allocation	80	80	0						1d
		Mayors Air Quality Fund	80	80	0	320	✓				2 3d 4
	Electric Vehicle Charge Points	LIP allocation	50	50	50	150	✓				4a
	Cycle training	LIP allocation	100	100	100						2 4c
		TfL Borough cycling programme	56	58	67	481	✓				
	Parking reviews - programme of parking reviews to address town centre parking issues, congestion and parking around transport hubs etc	LIP allocation	100	100	100	300	✓	✓		✓	1a 3d
	Disabled parking provision	LIP allocation	100	100	100	300				✓	1a 1d
	20mph speed limits/VA signs Implement outcomes of 20mph zone/VA sign reviews	LIP allocation	100	100	100	300		✓	✓		1d 2a
	Bus gate/width restriction review implement outcomes of bus gate/width restriction review	LIP allocation	50	50	50	150	✓	✓	✓		1a 1d
	Directional signage review Implement outcomes of directional signage review	LIP allocation	50	50	50	150	✓	✓			1a 1d
	Cycle route signage review Implement outcomes of cycle route signage review	LIP allocation	50	50	50	150		✓			1d 4c
	Traffic management and accident reduction (borough wide) Package of small scale traffic management and accident reduction schemes including traffic signal review.	LIP allocation	500	500	500	1500	✓	✓	✓		1a 1d
	Cycle routes Programme of cycle route provision to develop aspirations of mini-Holland expression of interest and other routes in borough	LIP allocation	400	400	400			✓	✓	✓	1d 3 4c
		Cycle Superhighways	TBC	TBC	TBC	1200					
		Quietways funding	TBC	TBC	TBC						
	Cycle parking on street and other public places	LIP allocation	20	20	20	60		✓			4c
		TfL Borough cycling programme	20	20	20	60					
Residential Cycle parking	TfL Borough cycling programme	100	100	100	300		✓			4c	

Programme areas	Funding source	Funding (£,000s)				MTS goals					LIP objectives
		2014/15	2015/16	2016/17	Total	Econ. devt and pop growth	Quality of life	Safety and security	Opportunities for all	Climate change	
School Travel schemes, Various locations boroughwide Measure in neighbourhoods around school to support school travel plans, tackling school run traffic and parking	LIP allocation	500	500	500	1500	✓	✓				1a 2a 2b 4c
Local access and accessibility improvements. Various locations boroughwide Improvements to respond to localised access and accessibility issues identified through year	LIP allocation	100	100	100	300				✓		1d 3d
Town Centre proposals TC decluttering (other centres)	LIP allocation	50	50	50	150		✓				1d 3d
Town Centre proposals Chipping Barnet	LIP allocation	40	90	100	300	✓	✓	✓	✓		1 3d
	Developer			70							
Town Centre proposals · Finchley Church End	LIP allocation	40	90	100	230	✓	✓	✓	✓		1 3d
Town Centre proposals · Edgware Town Centre	Developer	TBC	TBC	TBC	TBC	✓	✓	✓	✓	✓	1
Town Centre proposals · North Finchley Town Centre	LIP allocation	50			50						3d
Development of proposals/TfL liaison/Monitoring etc	LIP allocation	50	50	50	150						
Bus stop accessibility improvements	LIP allocation	100	100	100	300	✓			✓		1 3b 3d
Travel Planning – Staff and resources to support schools developing and implementing school travel plans and monitoring of development led plans	LIP allocation	400	400	400	1500	✓	✓				1a 2 3a 4b
	Developer	100	100	100							
Road safety Education, Training and Publicity	LIP allocation	200	200	200	600		✓	✓			1d 2 4c
Cycling/walking promotion	LIP allocation	25	25	25	75		✓				4c
Cycle grants to schools, Bike-it plus officer and Cycle to School Partnerships	LIP allocation	0	0	0	280		✓				2 4c
	TfL Borough cycling programme	70	105	105							
Support for cycling (cycle strategy and staffing)	TfL Borough cycling programme	66	66	66	260		✓				4c
	LIP allocation	9	20	33							
Roads Task Force Typology mapping exercise	LIP allocation	65	50		115	✓	✓				1 3c 3d
Borough transport modelling to support infrastructure delivery plan scheme development	LIP allocation	100	100	100	300	✓	✓			✓	3
CPC Safer Urban Driver training for borough fleet	LIP allocation	1	1	1	8			✓			1d
	TfL Borough cycling programme	3	1	1							
Moving Traffic Enforcement Cameras and TMO / sign review	LIP allocation	200			200	✓	✓	✓			1a 1d
Future regeneration priorities	LIP Allocation		90	334	424	✓				✓	3
Colindale Regeneration [2014/15] Junction Improvements Watford Way (A41) / Aerodrome Road	GAF + s106	1,385	TBC	TBC	1385	✓				✓	3

Programme areas	Funding source	Funding (£,000s)				MTS goals					LIP objectives
		2014/15	2015/16	2016/17	Total	Econ. devt and pop growth	Quality of life	Safety and security	Opportunities for all	Climate change	
Junction Improvements Colindale Avenue / Edgware Road (A5) (& A5 Montrose Ave) [Other Works TBC] Pedestrian Improvements Aerodrome Road/Colindale Ave											
Brent Cross Cricklewood	Developer	TBC	TBC	TBC	TBC	✓				✓	3
West Hendon	LIP Major schemes	TBC	TBC	TBC	TBC	✓				✓	3
	Developer	TBC	TBC	TBC	TBC						
Stonegrove	Developer	TBC	TBC	TBC	TBC	✓				✓	3
Mill Hill East	Developer	TBC	TBC	TBC	TBC	✓				✓	3
Integrated transport total		5,410	3,995	4,141	13,546						
Maintenance	Principal Road renewal - prioritised locations	LIP allocation	1,105	1,057	1,057	3,219	✓				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*	3,000	3,000	3,000	9,000					
Borough Road responsive maintenance	Council revenue*	434	434	434	1,302	✓				1b	
Maintenance total		4,639	4,591	4,591	13,821						

* The proposed Council funding reflects the Council's budget plans at March 2013. 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

Current plans for Cycle Superhighways include route CS11 from Marylebone via the A41 to the south of the borough and CS12 from Angel to Highgate just south of the borough.

An extension from CS11 to Edgware and links to BXC, and extensions from both CS11 and CS12 into the borough formed part of the borough's expression of interest for the Mayor's mini-Holland initiative. Development of these or other high quality routes into the borough as part of the Cycle-Superhighways or Quietways programmes of work is expected over this delivery plan period.

Cycle parking

Suitable cycle parking, generally in accordance with London Plan standards, will continue to be incorporated into all new developments. Residential cycle parking provision in estates managed by Barnet Homes is also planned through TfL's borough cycle programme funding.

Provision of stands on-street and in other public places will also be provided through town centre improvements and a rolling programme of provision to cater for unmet demand.

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

Table 5 -Anticipated delivery of cycle parking*

	2014/15	2015/16	2016/17
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 developments)	>500	>500	>500

Electric vehicle charging points

The borough is currently investigating demand for charge points in Barnet to inform a future decision about the type and locations of charge points to introduce in Barnet.

The borough also 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.

Better Streets

De-cluttering of streets forms an integral part of many proposals. Street layouts and public realm improvements in regeneration and development areas and town centres 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

The council plans commence with a £7m capital investment to replace the 38 refuse and recycling fleet with euro 5 engines, which are the most fuel efficient and environmentally friendly vehicles at this time. The council is following this with a £3/4m replacement programme of the existing mechanical sweeper fleet in early 2014, these will be fitted with euro 6 engines. The remaining fleet comprises of primarily minibuses and light vans/tippers that have either Euro 4 or 5 engines, these vehicles will be reviewed in next years fleet renewal.

The Council's fuel procurement is achieved via the Government Procurement Service (GPS) approved contractors. Committed to a cleaner and greener suburb, we use a 5% bio diesel mix for fuel used in the council fleet . Also the council's fleet procurement with maintenance services contract requires the approved contractor to generate innovation, regarding alternative fuels and alternative fueled vehicles sourced by the contractor.

Street trees

There are some 31,000 street trees in Barnet. 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.

In 2013/14 we expect to plant around 60 new town centre trees – 26 through the Mayor's street tree programme and others in conjunction with OLF and other town centre projects. The borough sustainably manages its stock to achieve at least replacement for trees lost. The delivery of major regeneration schemes and continued provision in conjunction with town centre projects is expected to continue to provide additional planting.

Appendix DP1 – priority projects supporting growth in the borough

<i>Name / Location</i>	<i>Description</i>	<i>Issue Addressed / Benefits Unlocked</i>	<i>Funding Requirement</i>	<i>Delivery Timescale</i>	<i>Apr 2013 Position</i>
COLINDALE	Growth area spanning the LB Barnet and LB Brent boundary delivering 12,500 homes and 1,000 jobs. To date 25% of new homes are completed and new commercial floor space has been delivered in Beaufort Park. Stage 1 junctions were required as mitigation to address the first 30% of the development, Stage 2 junctions are required to support up to 7000 new homes (i.e. development due to be delivered by 2020).				
A5 Edgware Road / Montrose Avenue (Stage 1)	Junction improvements providing signalised layout to deliver additional capacity	Identified in Colindale Area Action Plan and Infrastructure Delivery Plan as Critical to prevent increased congestion as the area is developed. <i>Needed to support first 3000 homes (almost complete)</i>	£1,053,000	2011-15	Outline design and estimates complete
A5 Edgware Road / Colindale Avenue (Stage 1)	Junction improvements to deliver additional capacity.	A key gateway into identified in Colindale Area Action Plan and Infrastructure Delivery Plan as Critical to prevent increased congestion as the area is developed. <i>Needed to support first 3000 homes (almost complete)</i>	£1,000,000	2011-15	Feasibility study complete
Bunns Lane / Grahame Park Way (Stage 1)	Junction improvements to deliver additional	Identified in Colindale Area Action Plan and Infrastructure Delivery Plan as Critical to prevent increased congestion as the area is developed. <i>Needed to support first 3000</i>	£1,100,000	2011-15	Outline design and estimates complete

<i>Name / Location</i>	<i>Description</i>	<i>Issue Addressed / Benefits Unlocked</i>	<i>Funding Requirement</i>	<i>Delivery Timescale</i>	<i>Apr 2013 Position</i>
	capacity.	<i>homes (almost complete)</i>			
A5 Edgware Road / A5109 Deansbrook Rd (West of the Borough: Pre 2016 highways investment requirement)	Junction capacity needs to be enhanced to prevent bottleneck on A5 from developing.	The council's infrastructure delivery plan identifies that major work will be required at this location to cater for future demand given the scale of growth anticipated in the west of the borough and more generally in Barnet. <i>Critical junction that lies between: Edgware Town Centre (500 units + 19,000 sqm retail) and Colindale Growth Area (10,000 units + 1000 jobs)</i>	£3,500,000	2011-15	Feasibility assessing constraints and deliverability is planned from LIP funding in 2013/14.
Aerodrome Road / Colindale Avenue / Lanacre Avenue / Grahame Park Way (Stage 2)	Road realignment and junction improvements to deliver additional capacity	The key junction in Colindale identified in Colindale Area Action Plan and Infrastructure Delivery Plan as Critical to prevent increased congestion as the area is developed. <i>Needed to support first 7000 homes and enable delivery of local high street linking the new developments</i>	£4,500,000	2016-2020	Feasibility study and estimates complete
Colindale Avenue public realm	Road realignment, footpath	The key stretch of road providing a local high street linking tube station to RAF Museum and new developments and public squares identified	£4,000,000	2016-2020	Feasibility study and estimates

<i>Name / Location</i>	<i>Description</i>	<i>Issue Addressed / Benefits Unlocked</i>	<i>Funding Requirement</i>	<i>Delivery Timescale</i>	<i>Apr 2013 Position</i>
(Stage 2)	widening and new cycle lanes	in Colindale Area Action Plan and Infrastructure Delivery Plan as Critical to the area. <i>Needed to support first 7000 homes and enable delivery of local high street linking the new developments</i>			complete
Peel Centre Link Road (connecting Aerodrome Road with Colindeep Lane)	Upgrading a private link beneath the Northern Line to form a single carriageway road with facilities for pedestrians and cyclists	This would provide an additional access to/from the MOPAC Peel Centre site facilitating the growth envisaged in the Colindale Area Action Plan and potentially allowing additional growth to take place.	TBC	TBC	Being assessed

Name / Location	Description	Issue Addressed / Benefits Unlocked	Funding Requirement	Delivery Timescale	Apr 2013 Position
<u>Brent Cross</u> <u>Cricklewood</u>	<p>Growth Area spanning the North Circular Road in LB Barnet near to the LB Brent boundary delivering 7,500 homes and 20,000 new jobs to connect the spaces together. Includes creation of Metropolitan Town Centre, M1 / A406 / A5 junction works, A41 / A406 junction works, New Thameslink Station, strategic waste facility, naturalisation of Dollis Brook river course and substantially more physical, social and green infrastructure investment in the area.</p> <p>To date all infrastructure within the Red Line Boundary is due to be funded by the developer, but sitting just outside of the boundary of the Growth Area are two major junctions that are projected to present major capacity constraints once combined development in the borough's Growth Areas has been delivered together with existing traffic flows.</p>				
North Circular Road / Golders Green Road junction improvement	<p>Implementation of cut and cover major scheme.</p> <p>Feasibility and design work to be completed using LIP funding in 2013/14.</p>	<p>The council's infrastructure delivery plan identifies that major work will be required at this location to cater for future demand given the scale of growth anticipated in the west of the borough and more generally in Barnet.</p> <p>The previously developed "inherited scheme" for this location for which land has been safeguarded was estimated at £60M when reviewed in 2004.</p> <p><i>Critical junction that lies between: Henleys Corner (A1 / A406 / A598) and Brent Cross Growth Area (7,500 units + 20,000 jobs)</i></p>	£60,000,000	2011-15	A feasibility study to assess whether benefits might be delivered by a smaller scale scheme is planned from LIP funding in 2013/14
A41 /	Feasibility and	The council's infrastructure delivery plan	£10,000,000	2011-15	Feasibility

<i>Name / Location</i>	<i>Description</i>	<i>Issue Addressed / Benefits Unlocked</i>	<i>Funding Requirement</i>	<i>Delivery Timescale</i>	<i>Apr 2013 Position</i>
Queens Road 'Hendon Quadrant'	design work to be completed using LIP funding in 2013/14.	<p>identifies that major work will be required at this location to cater for future demand given the scale of growth anticipated in the west of the borough and more generally in Barnet.</p> <p>A cut and cover scheme is proposed to move ongoing A41 vehicular movement into an underpass and return pedestrian movement to at grade crossing from the current underpasses.</p> <p><i>Critical junction that lies between Colindale Growth Area (10,000 units + 1000 jobs) and Brent Cross Growth Area (7,500 units + 20,000 jobs)</i></p>			assessing constraints and deliverability is planned from LIP funding in 2013/14.

Name / Location	Description	Issue Addressed / Benefits Unlocked	Funding Requirement	Delivery Timescale	Apr 2013 Position
<u>West Hendon Estate</u>	<p>Within the Brent Cross Cricklewood Growth Area in LB Barnet next to the LB Brent boundary delivering 2,500 homes alongside the Brent Reservoir SSSI. Involves major improvement works to A5 Edgware Road and removal of the Gyratory that provides both a bottleneck in the area and divides communities and undermines local retail.</p> <p>To date the combined scale of infrastructure and dense nature of development within the Red Line Boundary is limiting the viability of the scheme, but a bid for TfL Major Scheme funding has been submitted and the principle of supporting investment in the A5 has been accepted.</p>				
A5 West Hendon Improvement including Station Road junction improvement	Feasibility and design work to be completed using LIP funding in 2013/14.	<p>The council's infrastructure delivery plan identifies that major work is required at this location to the A5 to cater for future demand given the scale of growth anticipated in the west of the borough and more generally in Barnet, and to prevent the stretch of the A5 from becoming a traffic bottleneck.</p> <p><i>Critical junction that lies between: Colindale Growth Area (10,000 units + 1000 jobs) and Brent Cross Growth Area (7,500 units + 20,000 jobs) and is adjacent to the West Hendon Estate Development (2,500 units + school)</i></p>	£5,500,000	2011-15	<p>Feasibility study and estimates to be completed by the developer.</p> <p>£100k from TfL to work up detailed scheme</p>

Name / Location	Description	Issue Addressed / Benefits Unlocked	Funding Requirement	Delivery Timescale	Apr 2013 Position
<u>Whetstone</u>	<p>Whetstone is one of Barnet's District Town Centres where 8-10 large development sites are coming forwards for planning permission in the next 2-3 years, delivering approximately 500-1000 new homes in this area through reuse of existing employment land or densification of existing residential sites.</p> <p>At the centre of the town centre is the major junction of A1000 / A109 / A5109, which is currently staggered and therefore acts as a bottleneck and network constraint for traffic flows along both arterial routes.</p>				
A1000 / A109 / A5109 Junction Realignment	Land assembly and simplification to crossover junction.	<p>The TfL North London model identifies this junction as a major cause of congestion and network constraint for this side of the borough.</p> <p>To enable developments in the town centre to come forwards, a solution to limited capacity at this junction needs to be delivered.</p> <p><i>Needed to support delivery of 500-1000 homes and reduce congestion and rat running across the entire north east of the Borough as well as to improve the high street space for pedestrians.</i></p>	£10,000,000	2016-2020	Feasibility assessing constraints and deliverability is planned from LIP funding in 2013/14.