

London Cycle Network Plus (LCN+)

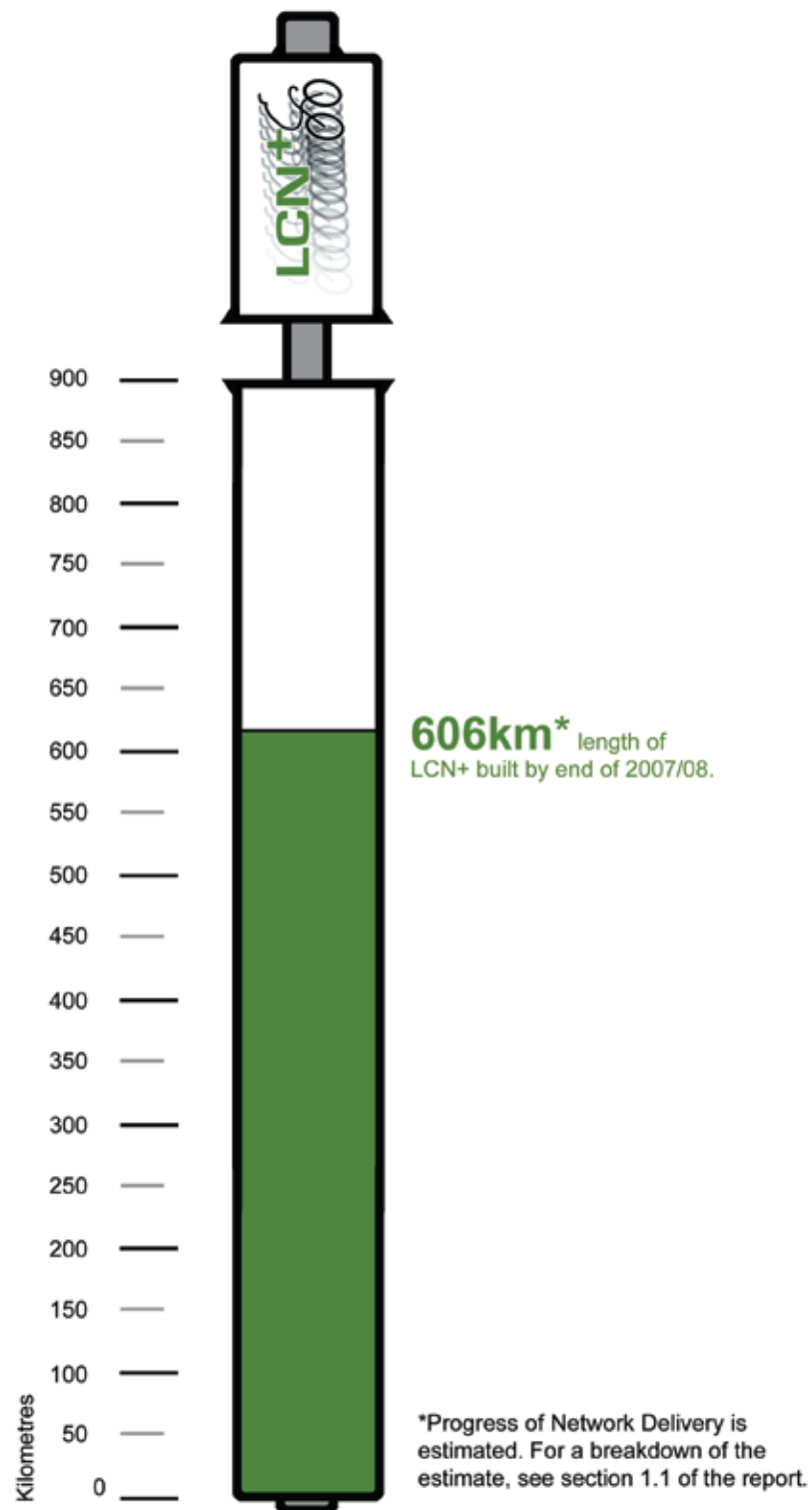
Annual Report

2007/2008

Spring 2009

Camden Consultancy Service | LCN+





Foreword by Transport for London

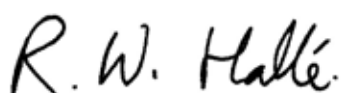
2007/2008 saw sustained progress towards delivering significant improvements for cyclists across the Capital. This report details activities undertaken to improve LCN+ routes, tackling some of the barriers that prevent more people from sharing in the many societal and financial benefits of cycling.

The time and effort that our delivery partners and stakeholders have put into developing LCN+ schemes is highly appreciated and I would like to thank all the individuals who have contributed their efforts and expertise.

In addition to the LCN+, the Mayor's Cycling Revolution is well underway. A bike hire scheme in Central London will operate from May 2010, and is expected to generate around 40,000 extra daily cycle trips from the day it begins operating. A series of Cycle Superhighways will provide cycling routes targeted at commuting trips into Central London. These will require creative thinking amongst all our stakeholders about 'barrier-busting', exploiting the experience and know how we are already using to build the LCN+.

Furthermore, the Mayor and TfL are looking to develop cycle hubs in the outer boroughs, where the residents of London's suburbs might benefit from targeted development of a cycle-friendly culture. This work will complement the Mayor and TfL's other existing programmes to support cycling on roads and in parks.

Together with plans to increase parking, safety and security for cyclists, this comprehensive package of programmes will together help build on the foundations already laid to make London a truly great cycling city.



Dick Halle
Strategy Director

TfL Surface Transport

Foreword by London Borough of Camden



The LCN+ project partners have again delivered an extensive programme of best practice cycle facilities for London, including 176 separate assets and more than 55km of additional route length. In total there were over 530 LCN+ schemes active on the programme during 2007/08, at varying stages of the process. It was through the ongoing effort and dedication of cycling officers that so many schemes progressed towards implementation and such high quality facilities were delivered. Each scheme contributes towards an increasingly safe and enjoyable city in which to ride, and the 91% increase in cycling levels since

2000 is in no small way a result of improved conditions for cyclists, through programmes such as LCN+.

The first section of this report details the contributions towards network and asset delivery, and project expenditure for the 2007/08 financial year. This section provides a quantifiable measure of LCN+ network activity across 2007/08. The second section offers an insight into the efforts and achievements for 2007/08 of the LCN+ partners at the boroughs and TfL. Profiles are provided for each Highway Authority, including details of particularly significant schemes and the main challenges to implementation.

The London Borough of Camden is proud to be lead borough for the LCN+ project and to assist the project partners to deliver a strategic cycling network for London.

A handwritten signature in black ink, appearing to read 'N Taylor'.

Norman Taylor

Head of Consultancy

Camden Consultancy Service, London Borough of Camden

London Cycle Network Plus

Annual Report

2007/08

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Executive Summary

This report is a record of activity for the London Cycle Network plus (LCN+) project during the 2007/08 financial year.

The LCN+ is a planned 900km network of radial and orbital cycle routes across London, involving borough roads, the Transport for London Road Network (TLRN) and off-highway segments. The project seeks to provide a network of quality cycling facilities across the city, and in doing so encourage more Londoners to cycle.

Network Delivery

Cycle infrastructure was introduced on, or conditions for cycling improved, across 55.27km of the network. The additional work raises the total network complete to date to 606km.

Asset Contribution

Physical works were carried out to construct or improve 176 assets including cycle lanes and tracks, junction improvements and cycle crossings.

CRISP Studies

In 2007/08, 16 CRISP studies were commissioned, of which 6 were finalised. Final CRISP reports had been produced for c.768km of the network by the end of 2007/08. The bulk of the remaining CRISP studies are planned to be completed in 2008/09.

Barriers

6 of the High Risk Infrastructure Barriers, highlighted in the January 2007 barriers report, moved to implementation.

Asset Management Initiative

13 Boroughs participated in the Asset Management Initiative accounting for £1.15M of spend. Asset Management Initiative works were completed across 56.9km of the borough network.

Expenditure

The total outturn spend for LCN+ in the 2007/08 financial year was £20.20M, of which £17.25M was spent on borough roads, and £2.95M on the Transport for London Road Network (TLRN).

Section One: Network Activity

1.0 - Network Delivery

1.1 - Contributions to Network Delivery

Total length of Network completed to the end of 2007/08 = 606km

12 month increase in fully implemented length since 2006/07 = 55.27 km

The total length of network completed is the total of route km delivered from Link sections assessed in CRISP studies. These completed sections now meet the LCN+ principal criteria of being fast, safe and comfortable.

Table 1: Contributions to Network Delivery in 2007/08.

Highway Authority	Length (km)		
	CRISP/Feasibility Completed	Design Completed	Implementation Completed
Barking & Dagenham	0.00	0.21	0.00
Barnet	0.00	0.00	0.00
Bexley	7.97	5.16	3.11
Brent	2.55	7.30	5.16
Bromley	7.34	6.07	5.76
Camden	1.97	1.56	0.43
City of London	2.94	2.06	0.11
Croydon	3.99	0.50	0.56
Ealing	5.41	4.00	0.55
Enfield	1.94	1.06	0.00
Greenwich	2.71	0.61	0.04
Hackney	5.26	4.44	2.32
Hammersmith & Fulham	6.07	4.30	2.19
Haringey	3.16	4.58	3.63
Harrow	4.21	4.53	0.80
Havering	2.95	2.68	0.82
Hillingdon	3.17	6.17	1.37
Hounslow	1.38	2.02	1.62
Islington	2.48	1.39	1.18
Kensington and Chelsea	0.46	0.00	0.00
Kingston upon Thames	3.08	0.36	1.17
Lambeth	4.07	3.81	1.30
Lewisham	4.89	1.17	3.38
Merton	6.08	1.71	0.45
Newham	0.00	0.00	0.00
Redbridge	0.00	0.74	0.00
Richmond	6.84	2.70	3.07
Southwark	4.22	1.17	1.32
Sutton	4.40	4.46	0.62
Tower Hamlets	0.11	0.87	0.96
Waltham Forest	0.00	2.74	2.13
Wandsworth	1.79	1.46	0.66
Westminster	7.11	3.03	2.53
TLRN	32.93	0.50	8.03
Total	141.48	83.36	55.27

1.2 - Map of the LCN+

This seventh version of the network map represents the latest and most accurate representation of the LCN+ routes, and incorporates the vast majority of CRISP recommended alignments. Some sections of the LCN+ were transferred to TfL's Greenways programme during 2007/08 as the route sections were more appropriate for development under the Greenways Programme. The LCN+ is shown in Figure 1

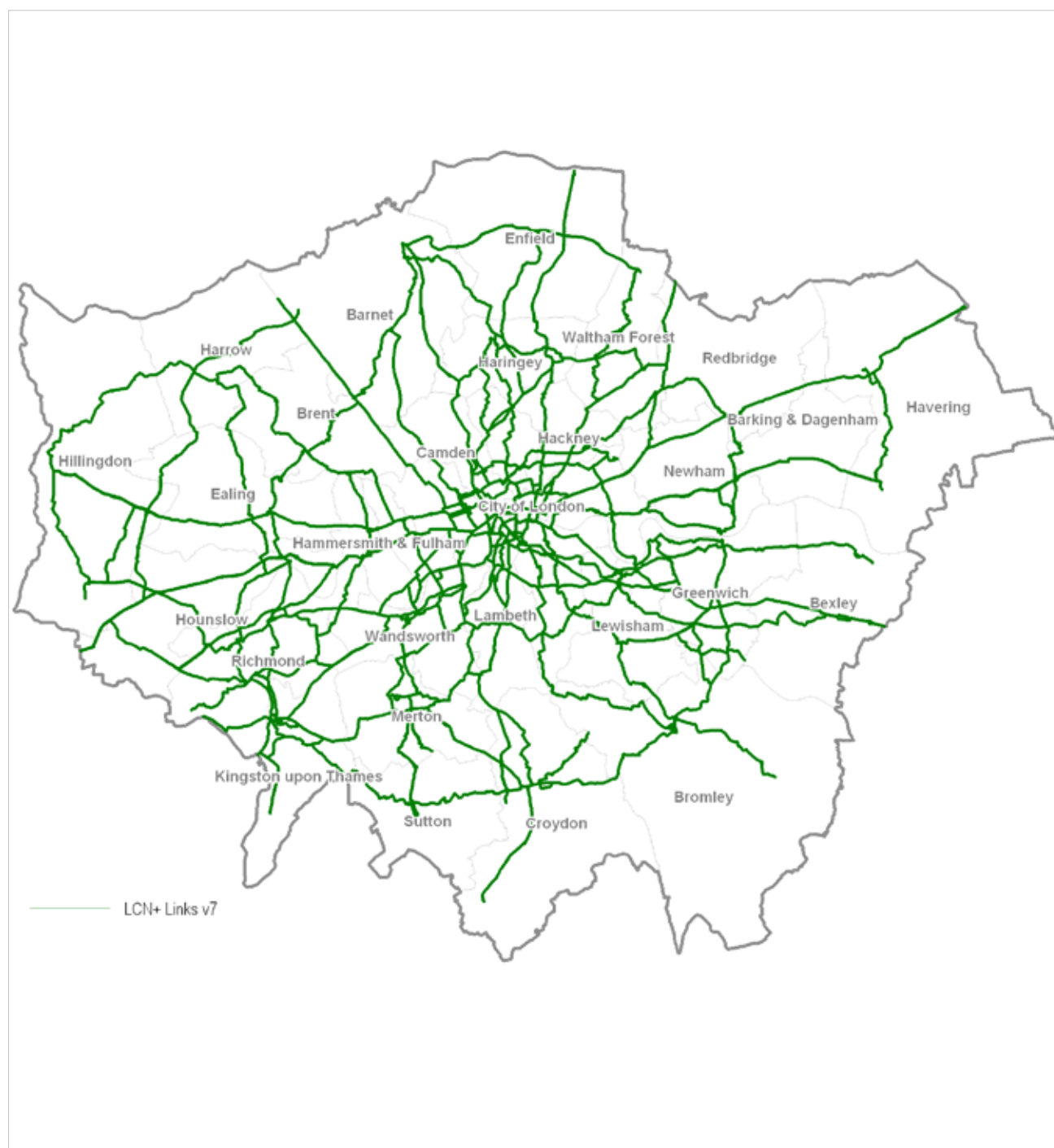


Figure 1 - LCN+ version 7

1.3 - Map of Contributions to the Network 2001/02 to 2007/08

A map of works undertaken across the network during 2007/08 (and LCN+ schemes delivered in previous years) is shown in Figure 2.

For a detailed view of all 2007/08 scheme locations please refer to the LCN+ website:
www.londoncyclenetwork.org.uk



Figure 2 - LCN+ funded works undertaken across the network during 2007/08

2 - Asset Contribution

2.1 – Asset Contribution by Asset Type

The completion of LCN+ schemes over the course of the 2007/08 financial year has delivered the following assets:

Table 2: Assets delivered through LCN+ schemes in 2007/08

LINEAR	
	Cycle lanes Cycle lanes provide a facility for cyclists where motor traffic volumes and/or speeds are medium or high or to by-pass queuing motor traffic. 6.05km LCDS Chapter 4
	Cycle tracks Cycle tracks are provided off the carriageway, within the public highway. 2.91km LCDS Chapter 4
	Shared paths with pedestrians Paths shared by cyclists and pedestrians, usually away from the highway. 5.21km LCDS Chapter 4
	Motor traffic speed reduction Measures Include vertical (sinusoidal humps, speed cushions etc) and horizontal (traffic islands, chicanes and kerb build-outs) deflections and speed limit reduction. 3.23km LCDS Chapter 3
	Signage and road markings Signs and surface markings communicate advisory, regulatory and route direction information. 5.43km (asset type and layout unchanged so no contribution to completed route length). LCDS Chapter 6
	Surface/condition upgrades Rectification of potholes, rutting and other surface defects by, for example, patching or resurfacing and trench reinstatements. 5.64km (asset type and layout unchanged so no contribution to completed route length). LCDS Chapter 7



Other

Other linear treatment that improves cycle conditions and not included in other categories (eg changes to vehicle parking/loading).

2.30km

LCDS Chapter 3

JUNCTIONS



Signal Works (treated and provided)

At signal controlled junctions, vehicle and pedestrian movements are controlled to manage competing demands.

6 assets

LCDS Chapter 5



Junction horizontal geometry

Horizontal deviations are used to improve sight lines or reduce motor vehicle speeds.

28 assets

LCDS Chapter 5



Entry treatments

Entry treatments may include narrowing side road carriageway, tightening kerb radii and raising the carriageway. Contrasting paving is used to raise awareness.

75 assets

LCDS Chapter 3



Roundabouts Treated

Treatments may include, controlling entry, circulatory and exit speeds, reducing unused carriageway space, including reducing the number of approach lanes, providing an alternative route or bypass; signalisation or conversion to signal control.

9 assets

LCDS Chapter 5



Advanced stop line boxes

Cycle ASLs and complementary facilities help to give cyclists priority at signalised junctions and raise driver awareness of cyclists.

25 assets

LCDS Chapter 5

CROSSINGS	
	Signalised (treated & provided) Signalised crossings connect sections of off-carriageway cycle tracks or routes on quiet roads. 9 assets LCDS Chapter 5
	Non-signalised Priority is usually indicated by give-way or stop signs and associated markings. Improvements for cyclists can be introduced through provision of islands, change of priority and horizontal or vertical alignment changes. 1 asset LCDS Chapter 5
ACCESS	
	Cycle gap A cycle gap allows cyclists to pass a restriction on motor vehicles. 7 assets LCDS Chapter 3
	Point no entry Point closures are used to close motor vehicle access to a street (one-way or two-way) while retaining cycle access. 1 asset LCDS Chapter 3
	Cycle access improvements May include provision of access for cyclists through pedestrianised areas. 53 assets LCDS Chapter 3
STRATEGIC SEVERANCE	
	Strategic Severance May include new or improved subways / bridges under or over waterways, roads or railways, land purchase or securing right of access. The photograph shows a bicycle wheeling channel on a footbridge. 1 asset LCDS Chapters 2 and 7

Note: The design of schemes illustrated in this document is the responsibility of the relevant highway authority.

2.2 – Asset Contribution by Highway Authority

Table 3: Assets delivered 2007/08

	Linear Measures (Km)	Number of Delivered Assets			
		Junctions	Crossings	Access	Other
Barking & Dagenham	1.03	2		1	
Bexley	1.35	1		3	
Brent	0.95	5		4	
Bromley	0.60	3		1	1
Camden	1.10	17		4	
City of London	0.25	1		1	
Croydon	2.70	2	1		
Enfield	0.00				1
Greenwich	0.00			2	
Hackney	1.21	7		4	
Hammersmith & Fulham	2.16	4		1	
Haringey	1.58	3	1	3	
Harrow	0.44	1			1
Havering	0.29	1		1	3
Hillingdon	0.20	3			
Hounslow	1.41	2	1		
Islington	1.37	3	1	4	
Kingston upon Thames	0.45	5		6	3
Lambeth	1.65	1			
Lewisham	0.10	5	3	2	1
Redbridge	0.00			1	
Richmond	2.90	2	1	1	1
Southwark	1.75	9		3	
Sutton	0.10			1	
Tower Hamlets	1.77	5		3	
Waltham Forest	4.13			2	
Westminster	1.20	5			
TLRN	8.03	9	8	5	
Total	38.72	96	16	53	11

Note: Boroughs with no delivery in 2007/08 are not included in this table.

3.0 – CRISP Studies

3.1 - CRISP Process

In order to ensure that the LCN+ meets the strategic needs of current and potential cyclists, all Links have had or will have had a CRISP (Cycle Route Implementation and Stakeholder Plan) undertaken on them, with a few exceptions. TfL/CCE issued a Generic Brief for CRISP studies to all boroughs and TfL Area Teams to use when commissioning the CRISP report.

A CRISP study identifies strategic solutions to provide good conditions for cycling along a Link. It allows stakeholders to contribute to scheme development at an early stage. CRISP study recommendations are the basis for the programme.

The CRISP process consists of the following stages:

Stage 1	Pre CRIM Report Assessment of existing information.
Stage 2	Cycle Route Inspection Meeting (CRIM) Site visit, including all key stakeholders, to review existing conditions and assess barriers for cyclists along the Link.
Stage 3	Draft CRISP Report The report documents information collected on existing conditions, stakeholder input, options considered and recommendations made. This is summarised in datasheets for each section/element that needs addressing along the Link; a schedule of estimated costs and a proposed programme of works. It should also address any route verification issues. This stage also includes the draft CRISP review meeting.
Stage 4	Final CRISP Report Amendment of the Draft CRISP Report taking account of feedback on the report from key stakeholders.

A Master Schedule of all LCN+ Links showing the Progress of CRISP studies against milestones is available on the LCN+ website.

3.2 – CRISP Progress Summary

During 2007/08 there were 16 CRISPs commissioned, 8 of which reached the draft report stage and 6 were finalised. 223 Links out of a total of 277 Links had been completed by the end of the financial year.

The LCN+ PM team undertook a modernisation of the CRISP reporting and digitisation process during 2007/08, to significantly improve the accuracy of network location and the reporting of network completion. Additional information was also received from Consultants and Boroughs with regard to the progress and completion of CRISP reports. A summary of CRISP progress, utilising this data, is shown in Table 4.

Table 4: CRISP summary

Financial Year		Programmed	Commissioned	Draft	Final
2003/04	No. Links				8
	km				28.27
2004/05	No. Links				68
	km				269.82
2005/06	No. Links		4	1	87
	km		10.04	1.54	293.95
2006/07	No. Links			5	54
	km			23.51	170.31
2007/08	No. Links	3	8	2	6
	km	10.47	16.88	7.54	6.25
Total	No. Links	3	12	8	223
	km	10.47	26.92	32.59	768.60

3.3 – CRISP Studies undertaken in 2007/08

A map of the CRISP Studies undertaken during 2007/08 is shown in Figure 3.

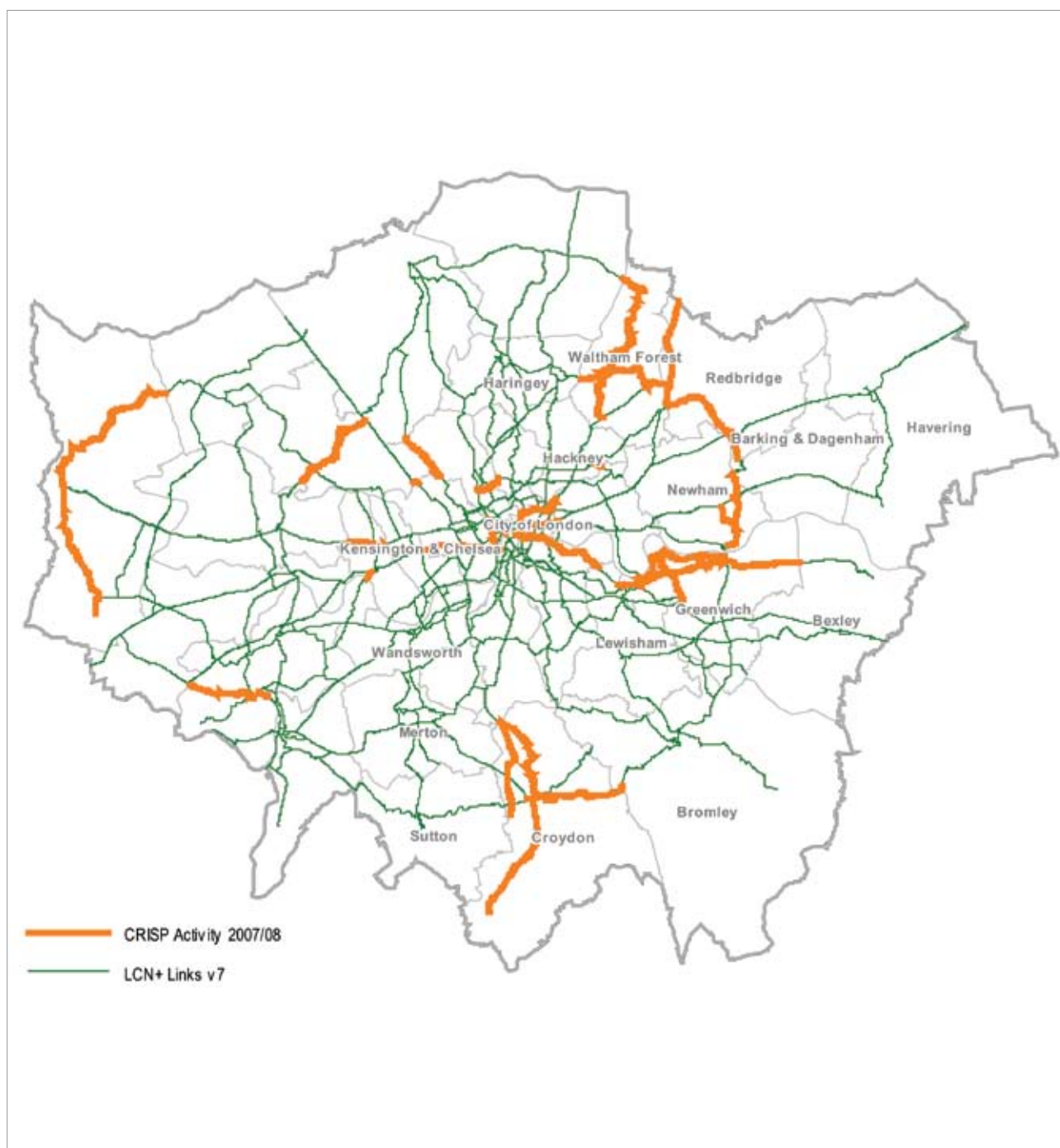


Figure 3 - CRISP Studies undertaken across the network during 2007/08

4 - Infrastructure Barriers

4.1 – Overview of High Risk Infrastructure Barriers

The LCN+ High Risk Infrastructure Barrier (HRIB) report was issued in January 2007, and highlighted 140 locations ranging from complex and busy junctions and gyratories to narrow road spaces, bridges and one-way streets. The HRIBs were identified so as to ensure the relevant authorities could target resources to improve conditions at the barrier locations.

The LCN+ PM team manage the resolution of the HRIBs on borough roads, and monitor progress on all identified HRIBs.

4.2 – Status of High Risk Infrastructure Barriers during 2007/08

Of the 149 total HRIBs, 73 were the sole responsibility of boroughs and 76 were located on the Transport for London Road Network (TLRN), and thus under the responsibility of Transport for London (TfL).

By the end of 2007/08 work had been undertaken to consider and address 36 of the borough barriers, of which 6 had progressed through to implementation. Work was undertaken on 20 of the HRIB's on the TLRN, with 4 having progressed through to implementation.

Table 5: End of year status of HRIBs for which work was undertaken during 2007/08

LCN+ Programme	Total HRIBs	Feasibility	Design	Implementation
Borough	73	19	11	6
TLRN	76	2	14	4

5 - Asset Management Initiative (AMI)

5.1 – AMI Overview

Given the importance of road surface condition to cycling, funds are made available by TfL to provide the boroughs with the opportunity to improve road and path surface quality, and address general maintenance issues along the LCN+ which cannot be dealt with under normal maintenance programmes and in locations where changes to the highway layout are not planned. This funding is allocated and managed through LCN+ funding arrangements, and is known as the Asset Management Initiative (AMI).

The AMI process involves a survey of the all LCN+ Links in each borough, carried out by an appointed surveyor by agreement with the borough, ensuring a consistent network-wide approach. The results are sent to the borough to produce an estimate for the repair of the identified defects. Applications for funding are made to TfL using the survey data and cost estimates as supporting information.

5.2 – AMI Funding Allocations

In 2007/08 AMI works were completed across a total of 56.9km of the borough network.

Table 5: Spending on Asset Management Initiative to date

Borough	Cumulative 2004/05 - 2006/07		2007/08	
	Outturn (£k)	Length treated (km)	Outturn (£k)	Length treated (km)
Barking & Dagenham	5.0	0	0	0
Barnet	0	0	0	0
Bexley	145.0	26.9	0	0
Brent	30.0	16.7	0	0
Bromley	28.7	15.0	60.0	1.3
Camden	308.4	3.1	57.5	0.8
City of London	0	0	0	0
Croydon	37.8	23.5	0	0
Ealing	145.6	26.1	150.0	0.4
Enfield	5.0	0	0	0
Greenwich	5.0	0	0	0
Hackney	5.0	0	0	0
Hammersmith & Fulham	28.0	8.4	0	0
Haringey	212.5	26.3	0	0
Harrow	5.0	0	0	0
Havering	5.0	0	0	0
Hillingdon	0	0	0	0
Hounslow	135.0	16.6	117.0	19.7
Islington	231.0	19.9	80.0	1.9
Kensington and Chelsea	0	0	0	0
Kingston upon Thames	259.3	28.5	0	0
Lambeth	232.0	19.3	89.6	0.8
Lewisham	181.4	8.1	92.1	1.6
Merton	111.0	19.1	150.0	8.5
Newham	55.0	7.4	104.0	0
Redbridge	224.6	12.8	70.0	17.7
Richmond	51.0	45.5	0	0
Southwark	283.0	32.5	0	0
Sutton	73.1	11.6	50.0	1.0
Tower Hamlets	91.0	0.4	0	0
Waltham Forest	127.0	2.9	0	0
Wandsworth	80.0	26.8	30.0	1.0
Westminster	150.0	28.2	102.5	2.2
Total	3250.4	425.6	1,152.7	56.9

6 - Expenditure 2007/08

6.1 - Allocation and Outturn

The total outturn spend for LCN+ in the 2007/08 financial year was £20.20M. (£17.25M borough, £2.95M TLRN).

Table 6: Allocation and outturn spend by Borough and TfL in each borough, includes accruals estimated at financial year end).

Borough	Original Allocation (£k)	Final Outturn (£k)
Barking & Dagenham	300	340
Barnet	40	20
Bexley	515	334
Brent	350	567
Bromley	540	555
Camden*	1,384	1,886
City of London	693	315
Croydon	426	360
Ealing	410	569
Enfield	98	94
Greenwich	550	404
Hackney	741	433
Hammersmith & Fulham	584	621
Haringey	525	884
Harrow	655	368
Havering	210	271
Hillingdon	836	330
Hounslow	610	687
Islington	573	746
Kensington and Chelsea	147	22
Kingston upon Thames	545	469
Lambeth	775	672
Lewisham	410	764
Merton	520	573
Newham	355	55
Redbridge	400	211
Richmond	630	909
Southwark	791	796
Sutton	440	251
Tower Hamlets	770	921
Waltham Forest	460	368
Wandsworth	590	170
Westminster	730	1283
TLRN	3,000	2,950
Total	20,602	20,196

* Project Management fees of £875k are included in LB Camden's allocation.

Section Two: Highway Authority Overview

7.0 Highway Authority Overview

7.1 Borough Officer Overview and Scheme Profiles

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7.1 Borough Officer Overview and Scheme Profiles

This section of the report represents a summary of network activity within each borough for 2007/08. Each Borough Officer has provided a written overview of their borough's progress and activities during the year. A scheme profile is provided that details a significant LCN+ scheme implemented or progressed during the year.

The Borough officer text may not necessarily represent the position of TfL or LCN+ PM.

Photos: All photos aim to highlight the implemented assets, and where possible show cyclists using the new facility. The photo chosen is the best representation of the scheme at the time the report was being compiled. For boroughs where no LCN+ schemes were implemented during the year, examples of design and other preparatory work have been included.

Scheme Code: This is a unique identifier used by TfL Borough Partnerships to track an individual scheme's budget allocation and progress.

Link Number: Each borough has unique Links which form part of the network. Links can be both orbital and radial and usually run from borough boundary to borough boundary. All LCN+ Links have been identified as strategic routes for cycling.

Scheme Profile Location: The exact location of the scheme is represented here. "Junction with" has been shortened to "j/w".

Description: A short description of the scheme in terms of assets delivered and benefits to cyclists. The London Cycling Design Standards are used as a reference for all technical descriptions.

Cost: The total cost of the scheme at the time of this reports publication. This is subject to change in some cases as the financial claims and accruals deadline is after the submission of this report.

Length: For implemented schemes this figure refers to the route length of the scheme. In the case of designs and feasibility studies the study area length is shown.

*Spur schemes or off-network schemes do not contribute to overall network completion length.

2007/08 Schemes: A list of all the 2007/08 LCN+ schemes with project phase information (FCDI) can be found on the LCN+ website - www.londoncyclenetwork.org.uk

London Borough of Barking & Dagenham



Borough Officer: **Nick Davies**

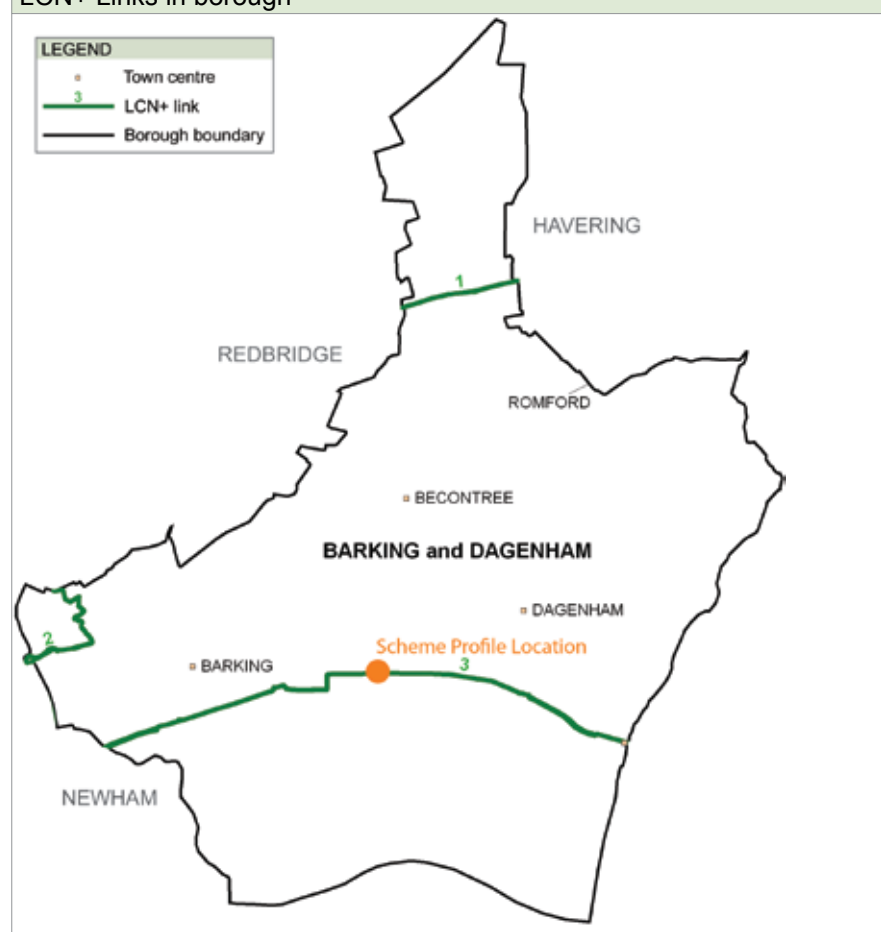
The main focus for 2007/8 was the improvements to the East-West LCN+ Link 3, highlighted within the CRISP reports, running through the south of the borough. The works included the completion of the Goresbrook Road off-carriageway cycle route, realignment of the LCN+ Link away from a narrow shared use segment of the A13 and development of detailed designs for the upgrading of the Heathway / Ripple Road / New Road junction, ready for implementation in late 2008, to cater for cyclists.

Through improved working with the borough Traffic Engineers and quality contractors, together we successfully implemented the majority of the years planned works. Liaisons with a range of in-house departments is an essential component of successfully delivering the LCN+ Network within the borough, although when necessary we do enlist the assistance of consultants.

The current development of the Lintons Estate and the un-adopted Queens Road Development means that Barking is delaying the required upgrades to LCN+ Link 2 which runs from LB Newham to LB Redbridge via Barking. The flip side is this provides an opportunity to secure monies from section 106 to undertake all required upgrades in the future, allowing me to concentrate existing funding on other sections of this Link. As a result of improvements to key cycle Links, there is a noticeable increase in the number of cyclists on the borough's network, with key indicators such as increased use of cycle parking facilities in the shopping centres, railway and underground stations.

Despite the internal re-organisation and a slow start to last year's works, the borough successfully delivered a number of key LCN+ cycle facilities, finishing the financial year strongly. This momentum has been continued into the early part of 2008/09.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
2	0.4	0.5	0.5		50
3	0.77	2.13	1.15		290
Total	1.17	2.63	1.65	0	340

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Goresbrook Road

Scheme Code: BS\07\LCN\BKG.03

The scheme is located on Link 3, Goresbrook Road and A13 (Heathway to Havering Boundary), in the London Borough of Barking & Dagenham

Background - In 2006/07 a section of footpath was converted to shared use, resulting in a facility that benefited local users, school children and commuters. The existing footpath was in poor condition and in need of resurfacing. Pedestrian movements were relatively low.

Design details and considerations - This scheme sought to complement the highly successful 2006/07 installation of shared use footway along Goresbrook Road by undertaking similar works on an additional 0.8km of the route. The additional length would provide a continuous cycle facility between Gale Street and Goresbrook Park. The design also included installation of a crossing point, entry and exit points for cyclists, and lining and signing works along the entire length. To improve facilities for commuter cyclists staying on-road, entry treatments were installed at all junctions. Edging works were undertaken to improve delineation of vehicle parking and to particularly address the problem of motor vehicles encroaching on the footway. These works addressed vehicle parking whilst maintaining an appropriate width to the road.

Cost: £250,000

Existing conditions:

- Shared use path installed on part of the route in 2006/07
- Footpath surface in poor condition
- Relatively low pedestrian movements

Scheme details:

- 800m of shared use path
- Crossing point installation
- Access for cyclists through previous closure (below)
- Lining and signing works
- Improved parking delineation

Before



After



After



London Borough of Barnet

LCN+ Links in borough


Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
4					0
5					0
6					0
7					0
8					0
9					0
10					0
All Links					20
Total	0	0	0	0	20

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

During 2007/08 £20k was spent undertaking preliminary feasibility work
in advance of CRISP studies planned for 2008/09.

London Borough of Bexley



Borough Officer: **Brian Dalton**

Development of the LCN+ schemes is managed within the Traffic & Road Safety Group within Transport and Traffic Services. Schemes are progressed from the CRISP reports as joint projects between the council and a dedicated team at our term consultants. Once consultation and approvals have been completed, the detailed designs are passed to our Highways & Amenities Department to supervise implementation through their term contractors.

One of the challenges we often face is convincing residents and members of the need for the improved facility. Being an outer-London Borough, cycling levels are not as high as more central boroughs, and so the need for improvements is not so readily appreciated. Having said that, we have implemented quite a number of projects all

over the borough, with some major builds planned. Showing a route strategy has helped, with new sections of route being seen as the next stage on from earlier work. This helps alleviate stakeholder concerns and so increases the number of schemes that are taken through to completion. As with most of our traffic schemes the designs try to include benefits for all road users, such as improvements for walking, and reducing road widths to encourage reduced vehicle speeds. Recent projects have focussed on taking cyclists off busy carriageway lanes onto widened segregated footways, and a great deal of effort is carried out into bringing old lanes up to current standards. Where appropriate, the running surface is renewed to provide smooth and hazard-free lanes. In a couple of cases the route alignment has been revised to either provide a more direct facility or to by-pass busy sections of road. This approach should provide safer facilities for both confident and less-confident cyclists. .

As our term-consultants also work on schemes for a number of other authorities, they bring this experience to use in Bexley. In addition, they work on a range of projects across different departments within the borough, which enables them to incorporate treatment for all road users in all schemes, rather than just tackle the base purpose of the commission. Regular meetings help track development progress and the sharing of knowledge and legislative changes ensures we are all kept up-to-date on standards. The LCN+ team provide useful information at review meetings and ad-hoc feedback on feasibility designs.



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
11	2.37	1.85	0.65		85
12	2.24	0.80	0.03		120
13	0.92	0.92			20
14					0
279	2.43	0.26	2.43		105
Multiple Links		1.33			4
Total	7.96	5.16	3.11	0	334

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Lyndon Avenue

Scheme Code: BS\07\LCN\BEX.18

The scheme is part of Link 12 in the London Borough of Bexley. Part of the link connects Link 64 at the Greenwich borough boundary with Crayford, via Bexleyheath Town Centre.

Cost: £15,000

Existing conditions:

- Low flow residential road with restricted access
- Cycle track on western footway of Westwood Avenue
- Poor line markings and signing
- Dropped kerb access to two way cycle track too close to junction apex

Scheme details:

- Enlarged pedestrian refuge
- Widened cycle lanes
- Improved delineation
- Generally improved safety and amenity

Background - Line markings and signing at the location were generally poor, and provided poor delineation for cycling, whilst the location of a dropped kerb for access to the two way cycle track was deemed to be too close to the apex of the junction, a potential point of conflict and a safety issue.

Design details and considerations - The scheme enlarged a pedestrian refuge, restricting the southbound carriageway to a single running lane with a widened cycle lane, and providing a northbound carriageway with a widened cycle lane and improved access to the off-carriageway cycle track beneath the main road. The refuge also created a protected waiting area for cyclists who wish to turn right into Lyndon Avenue. Pedestrian facilities were improved on both sides of Westwood Lane, and the area generally improved through enhanced tactile paving and dropped kerbs, and better delineation of segregated and shared use areas. The result is generally improved access in the Lyndon Avenue area, and reduced conflict between cyclists, pedestrians and vehicles.

Before



After



Before



After



London Borough of Brent



Borough Officers: **Jared Plumridge and Ben Bishop**

Brent's main focus in 2007/08 was to design and implement a high number of CRISP recommendations. We have managed to build an efficient and effective in-house model for delivery of the LCN+. Ben and Jared specialise in cycling design, however all Engineers within the Traffic Team contribute to design and delivery of LCN+ schemes.

Getting the first trial sinusoidal humps installed on Palermo Road proved a rewarding task. After careful review and monitoring, sinusoidal humps have now been installed on five other borough roads. Brent's performance for delivery of the LCN+ has significantly increased over the past few years, this is reflected in the fact that we excelled in delivery of the 2007/08 LCN+ programme.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
15		3.08	2.31		223
16		0.31	0.31		89
17	2.55	3.86	2.55		105
18		0.05			102
19					48
261					0
Total	2.55	7.30	5.17	0	567

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Palermo Road Junction**Scheme Code:** BS\07\LCN\BRE.10

The scheme is located on Link 15 in the London Borough of Brent.

Background - Speed cushions had previously been installed along the length of Palermo Road to address ongoing issues of excessive vehicle speeds. The roundabout at the junction with Wrotesley Road posed particular problems for cyclists due to the high vehicle speeds and generally poor visibility. In its current form, the roundabout offered no vertical calming and minimal deflection, allowing motor vehicles to regularly pass through without reducing their speed.

Design details and considerations - Agreement on the merits of replacing humps and cushions with sinusoidal humps required a site visit with senior management, to observe an existing sinusoidal scheme in LB Islington. Convinced of their merits, a design was prepared which involved conversion of six existing speed cushions in Palermo Road to sinusoidal profile humps, in accordance with LCDS, for more comfortable cycling. The CRISP study highlighted a desire for sinusoidal humps to replace these cushions, as with all other speed cushions on LCN+ Links across the Borough. Initially, two trial humps were installed to gauge the response from local cyclists, ensure the contractors could construct them within tolerance, and as reference installations for comparative speed surveys. The trial humps were met with a positive response, construction problems were ironed out and vehicle speeds reduced, enabling completion of the remainder of Palermo Road, and other roads across the borough. Problems associated with the mini-roundabout were addressed by tightening the geometry with kerb build outs and implementing an entry treatment on one arm to further reduce the speed of vehicles turning into or out of Wrotesley Road.

Cost: £104,000**Existing conditions:**

- Ineffective mini-roundabout with poor visibility for riders
- Vehicles regularly pass through without reducing speed
- Speed cushions

Scheme details:

- Conversion of 6 speed cushions to sinusoidal humps
- Kerb build outs
- Roundabout works and entry treatments for speed reduction
- Redesign of cycle contraflow

Before**After**

London Borough of Bromley



Borough Officer: **Malcolm Harris**



The main focus of my team was to design schemes from the CRISP recommendations on links 20, 22, 23 and 24 for implementation in 2008/09. Two particular schemes were progressed to a build stage, these being Thicket Road with Crystal Palace Park Road and Queensmead Road with Bromley Gardens on Link 20. Good progress was also made on a major Private Street Works code scheme in Crab Hill / Ravensbourne Ave, another one on link 20.

I run a team of 4 people who assist with the design, consultation and implementation of cycle and walking schemes. I also liaise with committee members and enlist the help of consultants for specific tasks, such as the Crab Hill scheme already mentioned. Partnership working with TfL, LBP and Seltrans also help to focus funding streams into areas where it might be difficult to otherwise make progress on schemes, particularly around rail stations. Since the inception of the LCN+ I have witnessed a growth in cycling of over 50% in this borough. Many of our residents are now cycling to work. This is evidenced by the increased demand for cycle parking at all our stations, street locations and here at the Civic Centre in Bromley. I am getting more e-mails from residents requesting cycle maps and more infrastructure improvements to cycle routes. The work place travel plans are also improving cycle numbers within the borough.

The Mottingham village schemes (Link 24/25) were difficult to progress. I needed to secure the approval of members to replace old roll top speed humps with new sinusoidal humps. This was achieved by also obtaining the funds to resurface rather than just patch Mottingham Lane in bits and pieces. The new Winn Road / Mottingham Lane roundabout produced lots of build problems, mainly drainage and electrical supply issues, and was a three borough scheme, with Lewisham and Greenwich. The last part of the scheme was to completely resurface the carriageway before re-marking. Staff was also an issue, but I recruited one new member to assist with the LCN+ programme.

My borough only struggled to deliver on two main schemes in 2007/08 due to programming with our site contractors. However, the schemes we did get on the ground were of good quality, designed within the framework of the LCDS and we have received very positive feedback from the general public. The delayed schemes are to be progressed and built in the 2008/2009 programme of works.



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
20	3.16	2.18	1.84		80
21	0.88	0.03	0.06		88
22	0.05	2.60	2.60		103
23	3.24				25
24		1.26	1.26		89
25					0
All Links				1.32	170
Total	7.33	6.07	5.76	1.32	555

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Winn Road mini-roundabout**Scheme Code:** BS\07\LCN\BRO.12

The scheme is located on Link 24, an east west link through the top corner of the London Borough of Bromley, which connects with Link 60 in Greenwich and Link 142 in Lewisham.

Background - Mottingham Lane is a narrow road, which was treated with sinusoidal speed humps for traffic calming in 2006/07. Having passed the last speed hump (towards LB Greenwich), however, vehicles tend to accelerate going into the bend of Mottingham Lane. The route is used as a cut-through by vehicles coming off the A20 (Sidcup Road) to get on to the A205 (Westhorne Avenue). There is an electronic sign on the A20 indicating when road problems are ahead and this can cause excessive use of the route. Vehicles turn into Winn Road at some speed (from both directions) and can severely hamper cyclists continuing along the LCN+ Link on Mottingham Lane. Vehicles coming from the direction of the A20 also tended to overshoot the bend, and frequently overrun the central carriageway markings, therefore posing a risk of head on collision.

Design details and considerations - The CRISP study identified a junction redesign as an appropriate measure to improve cycling conditions. Influencing potential designs were accident statistics indicating a need to formalise junction user priority, and observations of frequently excessive vehicle speeds. A mini roundabout was chosen as the most appropriate solution, as the approach would prevent westbound cyclists being cut off by drivers sweeping left into Winn Rd; reduce right turning accidents; reduce traffic speeds of vehicles speeding away from the final hump on Mottingham Lane; and provide a general speed reduction at the junction. Safety for both cyclists and pedestrians was further improved by inclusion of upgrades to the refuge in Mottingham Lane and to the traffic island in Winn Road.

During the earlier installation of sinusoidal humps, drainage issues were identified along the route, resulting in removal of several old gullies either side of the old roll top humps. During mini-roundabout works, ongoing drainage issues affecting the carriageway, and associated break-up of the road surface, were again identified. Investigation revealed a badly damaged surface water pipe, apparently damaged by a utility company digging in an adjacent grass verge. Complete pipe replacement works were subsequently undertaken to stop the new roundabout becoming flooded during periods of rain. Due to the significant amount of carriageway and kerb alterations, and necessary surface water pipe repair works, approval was obtained to completely resurface the carriageway, prior to road marking.

This scheme was a joint project between LB Bromley, LB Lewisham and LB Greenwich, and complements previous schemes in Mottingham Lane.

Cost: £60,000**Existing conditions:**

- Poor accident history
- Problems with unclear junction priority
- Excessive vehicle speeds
- Cut-through route between A20 and A205
- Treated with sinusoidal humps in 2006/07 on Mottingham Lane, Bromley Borough section.

Scheme details:

- Mini-roundabout
- Upgraded refuge in Mottingham Lane, Bromley Borough section
- Upgraded traffic island in Winn Road
- Complete road resurfacing and line marking

Before**After**

London Borough of Camden



Borough Officer: **Dave Stewart**



Our focus as a team was the progression of cycling schemes from feasibility through to implementation as recommended in various completed CRISP studies. Opportunities were available and subsequently taken, to advance some schemes through to completion that were originally scheduled to be implemented next year. A team of 5 Engineers, managed by myself, are responsible for progressing schemes from their conceptual stage through consultation, detailed design and finally to implementation. In certain instances, particularly in cases of signal design, consultants are engaged to prepare modelling data for presentation to the signal section at TfL. The team liaise with local Ward Councillors and Committee members to ensure that there is clarity of the scheme objective.

Recent counts on Link 30 (over 100 in peak hour) confirmed the increase in cycling and the clear demand for cycle facilities. This link incorporates a segregated cycle lane that

perhaps has been a victim of its own success since some now view it as inadequate to cater for the levels of demand, and therefore raise the question of whether it is the best facility for cyclists. Another indicator of increased cycling has been continuous requests for additional cycle stands at strategic locations across the borough. The design of the signalled junction for the segregated cycle lane required 5 phases to cater for all users. Whilst this was necessary to enable all to have a designated slot to cross the junction it meant a long red signal. It was considered necessary to review this as it was thought that users would disregard the signals and proceed before the green phase. The junction was re-designed and the segregation terminated before reaching the signal junction. Cyclists are now required to merge with and re-join the vehicular traffic arriving into an advanced stop line. This review reduced the number of phases to 3 as east west vehicles travel at the same time and cyclists and the removal of the cyclists phase.

Camden, though faced with many challenges where recommendations from the CRISP studies were not feasible, successfully implemented a wide range of LCN+ schemes to the point of exceeding the original allocated budget. Camden is well on its way to completing the LCN+ routes within the borough.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
26	0.46				28
27	0.81	0.81	0.04		188
28	0.29	0.28	0.02		353
29					6
30	0.40	0.46	0.16		311
31		0.01	0.01		23
50					0
All Links					23
Multiple Links			0.20	0.79	39
Spur					915
Total	1.96	1.56	0.43	0.79	1,886

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Ampton Street**Scheme Code:** BS\07\LCN\CAM.13

The scheme is located on Link 30 in the London Borough of Camden, an east/west route running between Cleveland Street on the boundary with the City of Westminster in the west and Farringdon Road on the boundary with LB Islington in the east.

Background - Due to the motor traffic free nature of Ampton Street, frequent conflicts occurred between pedestrians and cyclists, and as children often played in the street, reducing these conflicts was a scheme priority. Stakeholders also requested the introduction of a raised junction table at the junction of Ampton Street and Ampton Place to slow traffic, reducing the likelihood of turning conflicts between motor vehicles and cyclists and providing a level surface for pedestrians to cross. The area suffered from poor lighting and a generally gloomy appearance.

Design details and considerations - The designs sought to remove conflict between cyclists and pedestrians, improve sightlines and lighting in the area, to generally improving safety and create a more pleasant environment.

A two-way segregated cycle track with green anti-skid surface dressing was introduced on the cyclist's desire line, with flush dropped kerbs and cyclist specific road markings and logos. Local resident input resulted in the inclusion of sinusoidal humps and horizontal deflection on the cycle path to reduce cycle speeds through the residential area. A new pedestrian link from properties to the footpath on Ampton Street was built adjacent to the cycle facility, using Artificial Paving Slabs and providing appropriate surface drainage. Barriers were installed to ensure cyclists did not use the new footway. Soft landscaping was also introduced following consultation with residents.

Tree replacement works were undertaken to allow more natural light to penetrate to the street, which assisted with improving safety and the general environment for both residents and cyclists, and enabling a better alignment for the new facilities.

Feedback - Camden Cycling Campaign are very pleased with the outcome of the scheme.

Cost: £164,000**Existing conditions:**

- Residential cul-de-sac
- Pedestrian access via a footway for both properties and adjoining local roads
- Cycling illegal on current desire line, utilising footway towards Cubitt Street
- Poor lighting and local amenity
- Cyclist / pedestrian conflict

Scheme details:

- 2.5m cycle track
- 2.0m footway
- Removal of mature tree
- Relocation of two parking bays to improve sightlines
- Soft landscaping
- Streetscape enhancements
- Raised junction table
- Installation of cycle stands



City of London Corporation



Borough Officer: **Jereme McKaskill**



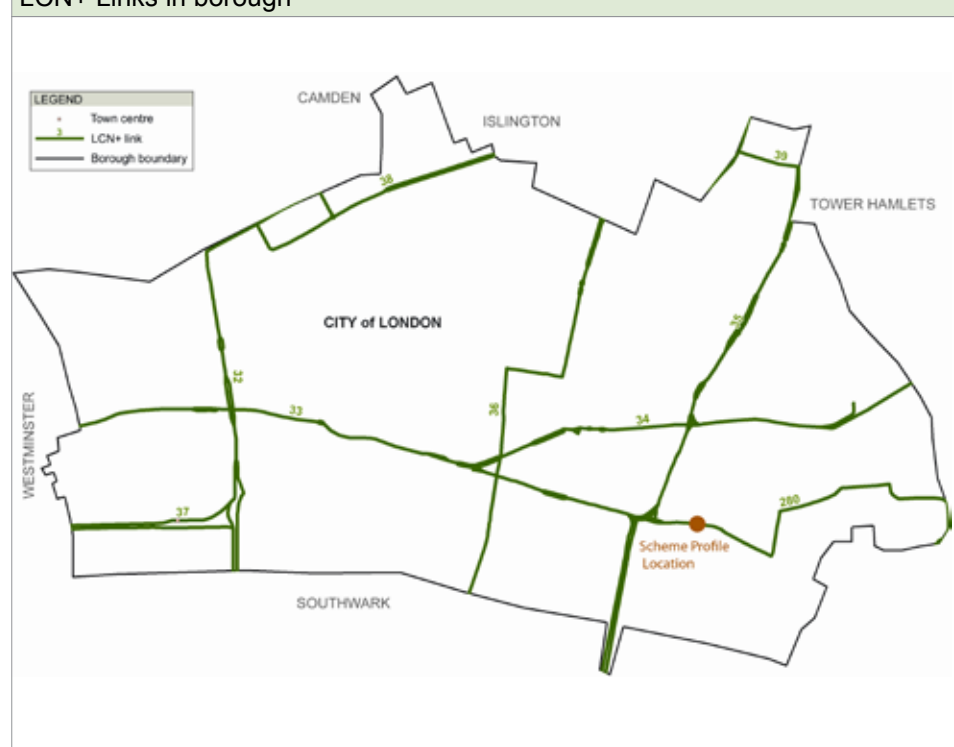
The City balanced the desire for quick physical improvements with work on larger and longer term schemes. I manage the internal approvals, budgets, consultation with City Cyclists and ensure the designs are the best for cycling in all LCN+ schemes. A few of us in the eight person team manage individual LCN+ schemes. Implementation of the physical work is undertaken by another department within the City.

Cycling in the City continues to rise. Our traffic composition surveys show cycle flows have increased by more than 60% between 2002 and 2007. Cyclists make up approximately 10% of all vehicles in the City and greater than 25% of vehicles on many streets in the morning peak period. Construction activity and the Thames Water replacement

programme have effected many streets, particularly LCN+ routes. We minimise the problems this causes the delivery of schemes by planning ahead and creating flexibility. Breaking schemes up into smaller elements that can be delivered when opportunities arise enables a scheme to move forward as best as possible.

We made valuable progress on the LCN+ in 2007/08, but wished we had been able to deliver more. We were able to make a number of improvements as well as designing further ones for future delivery. Additionally, we completed our final CRISP study, built stronger relationships with cycling advocates and strengthened our cycling infrastructure design knowledge.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
32					0
33	1.12	0.33			80
34	0.04				21
36	1.08	1.08			26
38	0.05				27
280	0.66	0.66			138
All Links					2
Spur			0.11		5
Total	2.95	2.07	0.11	0	299

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Eastcheap and Great Tower Street**Scheme Code:** BS\07\LCN\CIT.07

The scheme is 500m of Link 280, within the City of London Corporation, between Laurence Pountney Lane (just west of Monument Junction) and the junction of Great Tower Street with Mark Lane.

Background - Cannon Street is narrow with a high frequency of taxi movements. There are bendy buses and very high pedestrian flows. Eastcheap has a wide carriageway with parking and loading on both sides. The area generally exhibits variable road widths and frequent loading activity, limited pedestrian crossing opportunities, and a lack of adequate cycle parking.

Design details and considerations - To improve the safety and comfort of cyclists using the link, raised tables and entry treatments were designed for side roads, kerbs realigned for a narrowed carriageway, and cycle parking installed. Kerb build-outs and realignments improved crossings for pedestrians, reduced motor vehicle speeds, and provided a more "inset" arrangement for loading. With limited footway space to accommodate additional cycle parking in the City, the extra footway was utilised for this purpose.

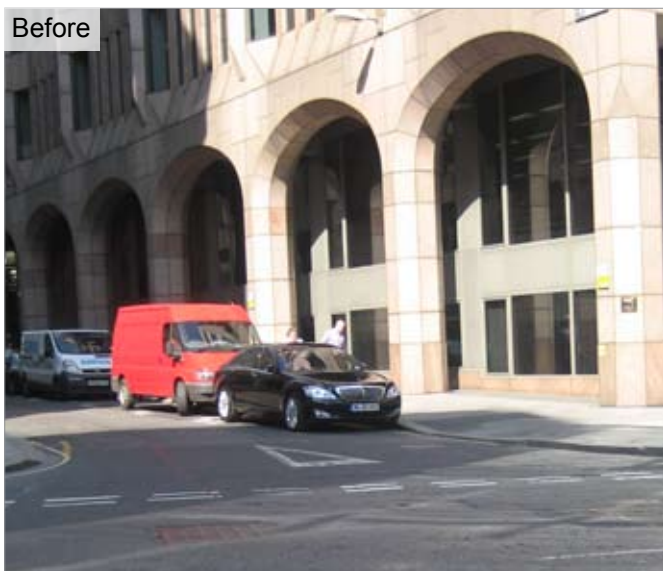
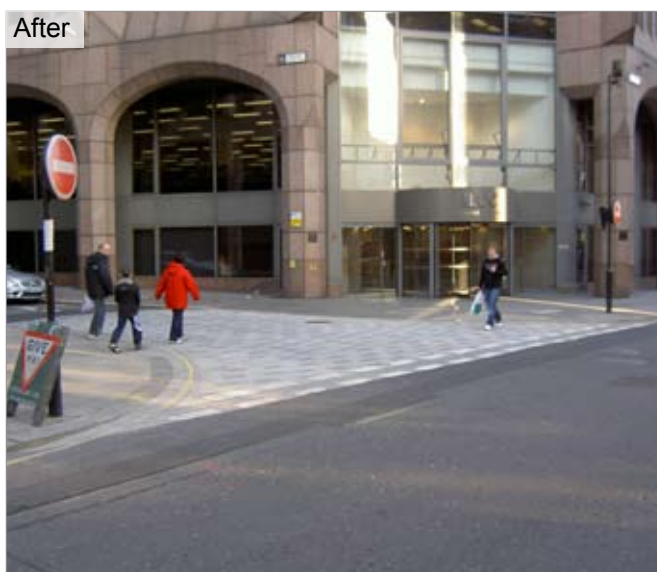
Feedback - It has been noted that both the cycle parking and pedestrian facilities are very well utilised.

Cost: £138,000**Existing conditions:**

- Variable carriageway width; narrow sections on Cannon Street; wide carriageway on Eastcheap
- High number of taxi movements
- High number of bendy buses
- Very high pedestrian numbers
- Frequent loading activity

Scheme details:

- Raised tables on side roads
- Kerb realignments (narrowing)
- Cycle parking
- Inset parking bays

Before**After****Before****After**

London Borough of Croydon

Borough Officer: **Derek Stidder**



I head up the Environmental Transport Team which is part of the Planning & Transportation Department. The various elements of cycling are dealt with by permanent staff and consultants dependant upon the general workload of the section. At the start of the financial year we had two CRISP studies outstanding, one of which has been completed while the remaining CRISP will be completed in 2008/09. Also, the commencement of the major cycle and pedestrian junction improvement scheme at Cherry Orchard Road has commenced with completion in 2008/09. Other major schemes at the design stage include the three junction improvements at Roman Way.

Consultation forms an important feature associated with cycle schemes and can delay schemes or prevent schemes from progressing without the approval of local residents and user groups. The Croydon Cycle Campaign is consulted at the initial design stage through the Croydon Cycle Forum at which schemes or changes on policy are discussed. This ensures that the local cycling groups provide comments or advice on projected schemes in advance of the detail design stage.

Cycle growth is difficult to determine in Croydon as there are many cycle routes into the town centre but discussion with the user groups suggest an increase in cycle travel. During 2008/09 we will be carrying out screen line cycle counts at the major entry points into the Borough, initially for inclusion in the new cycle strategy, but this information will also allow us to monitor cycle growth in the future. Projected major redevelopment improvements in Croydon town centre will be carefully monitored to ensure that that LCN+ routes are not compromised.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
40					0
41	0.13		0.13		171
42	0.30	0.43	0.43		79
43		0.07			50
44	3.55				10
45					0
278					35
Multiple Links					15
Total	3.98	0.50	0.56	0	360

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Cherry Orchard Road

Scheme Code: BS\07\LCN\CRO.09

The scheme is located at the junction of Cherry Orchard Road with Addiscombe Grove, on Link 45 in the London Borough of Croydon.

Background - At the inception of the LCN+ process it was established that the complex road junction of Addiscombe Road and Cherry Orchard Road should be upgraded to improve cycle safety and access. The junction was modified in 2000/01 to allow for the new tram system, and it appears that cycle access was not considered as an important design consideration at that time. No cycling facilities were provided, and cyclists were afforded little protection when utilising the junction, whilst often being subjected to delays.

Design details and considerations - Detailed designs were completed in 2005/06 following an extensive consultation process, which carefully accounted for the concerns of transport operators using the busy junction. The close proximity to East Croydon Station was also a key consideration. Protracted consultation took place with DTO to determine the planning and installation timescale of the revised traffic signal layout.

The junction improvement was designed to benefit both pedestrians and cyclists by providing a direct and safer route through and across the junction. The most appropriate option was to provide three new toucan crossings and the conversion of an existing staggered pelican to a straight across toucan crossing. Footways were improved to include additional shared use spaces. Construction was originally planned for 2006/07 but was delayed by about nine months whilst water main replacement works were undertaken. Scheme construction started in 2008/09 with completion planned for later in the year. The scheme has posed many challenges because of the complexity of the improvement and the working restrictions imposed by the tram system that runs through the junction.

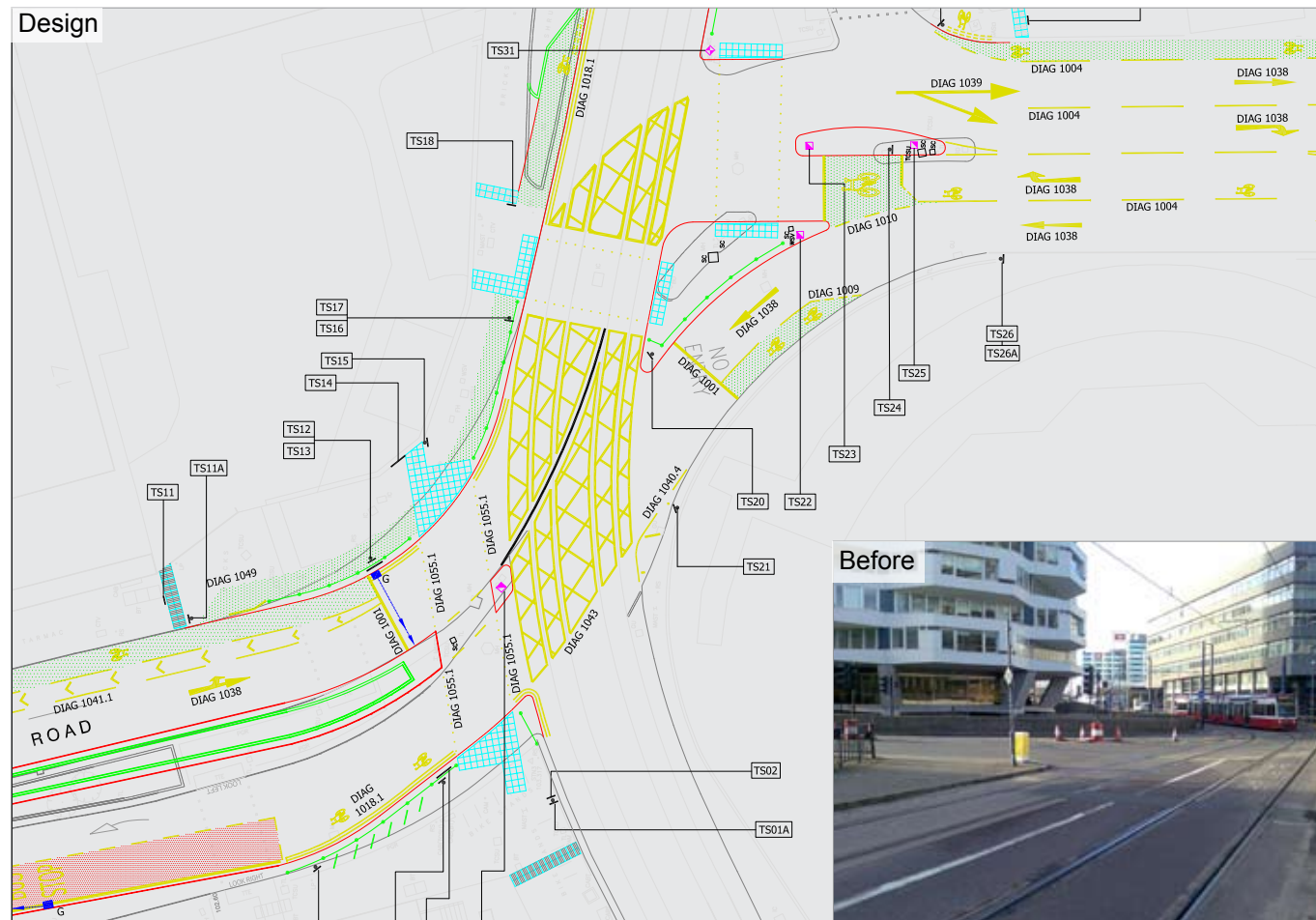
Cost: £170,000

Existing conditions:

- Busy junction with tram network
- Absence of dedicated cycling facilities
- Lack of protection for turning cyclists

Scheme details:

- Major junction improvements
- Cycle track, bypass of signals
- Toucan crossings
- Enhanced pedestrian measures



London Borough of Ealing



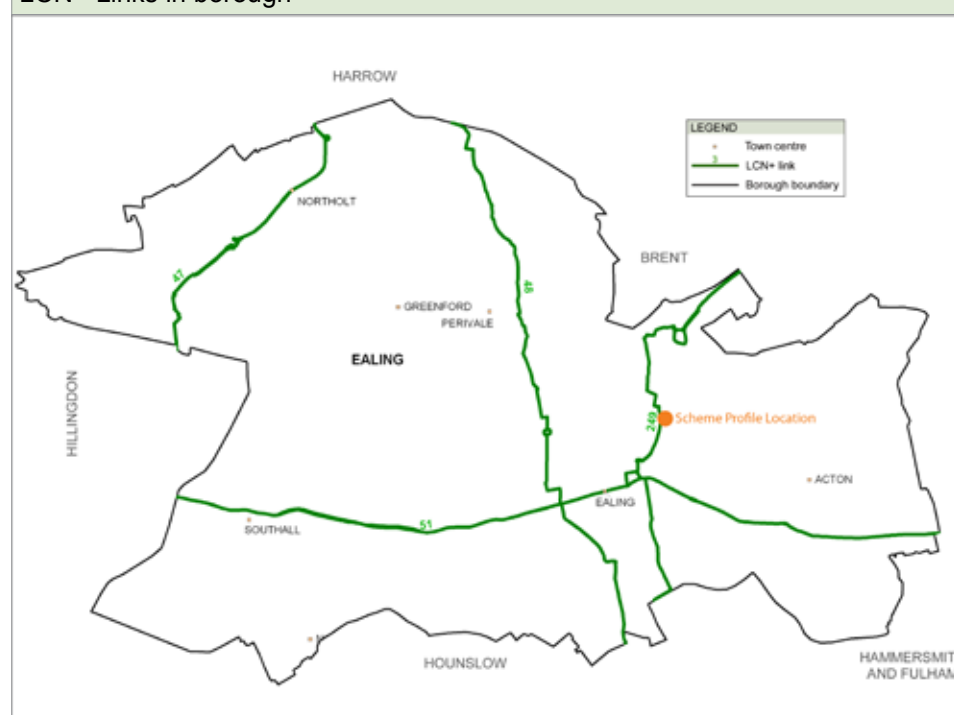
Borough Officer: **Colin McKenzie**

In 2007/08 we prioritised delivering 'quick win' schemes, such as West Walk. At the same time we made progress on designing and winning approval for more difficult schemes, such as the Hanger Lane Gyratory bypass. It is vital to implement the difficult schemes, to a high standard, if the network is to be completed. As cycling officer responsible for infrastructure, all schemes start with me. I have to ensure that they meet the LCN+ objectives and are politically acceptable. Schemes are designed and delivered by the Highways Management team, who have to reconcile the needs of all road users. I ensure that the delivered schemes benefit cyclists as much as possible.

Cycling growth in this outer London borough has been patchy. Good routes, especially off-road, do attract new cyclists, but major barriers remain and prevent faster growth. A petition was raised against our proposals to improve the crossing of Perivale Lane for pedestrians and cyclists, due to loss of parking space. Removing most of the pedestrian features made it possible for us to proceed with a scheme that fulfils LCN+ needs.

It continues to be challenging to deliver schemes on time, due to shortage of staff resources and strong opposition to some schemes. But our completed schemes are of a high standard, and reflect current best practice on cycle safety and convenience.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
47	0.21				33
48	4.76	3.36			163
51	0.11	0.25	0.05	0.4	205
249	0.34	0.39			132
All Links			0.50		36
Total	5.42	4.00	0.55	0.4	569

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: West Walk**Scheme Code:** BS\07\LCN\EAL.18

The scheme is a spur and complementary parallel route to a section of Link 249, in the London Borough of Ealing.

Background - The Link uses Corfton Road, an inclined residential road with either side parking. The West Walk spur runs roughly parallel to this route, and offers a more pleasant and attractive off-road alternative. It is particularly attractive for those cyclists riding uphill on Corfton Road, who feel threatened by passing parked cars whilst being repeatedly overtaken. Improvements to the spur would introduce an element of continuity to the route, as the nearby Mount Avenue is a similar off-road facility. Cyclists utilising West Walk avoid a right turn at the southern end of the current alignment; the two routes converging at the Haven Green Roundabout.

Design details and considerations - Key design considerations were that the turn off Corfton road onto West Walk is on a bend, requiring special measures to ensure motorists are aware of the presence of cyclists, and to prevent motorists encroaching over the centreline. West Walk previously comprised two parallel footpaths separated by a verge with trees and lamp columns. The design made one of these footpaths a two way cycle track whilst maintaining a suitably wide footway for the existing pedestrian usage on the other path. The cycle track markings and signage were also utilised to prevent pedestrians or cyclists using the wrong path. Railings were removed and drop kerbs added to ease access.

Cost: £100,000**Existing conditions:**

- Attractive off-road spur route
- Parallel pedestrian paths
- No provision for cycling

Scheme details:

- Conversion of footpath to two-way cycle track
- Cycle track markings
- Installation of signage
- Removal of railings
- Drop kerbs

Before**After****Before****After**

London Borough of Enfield

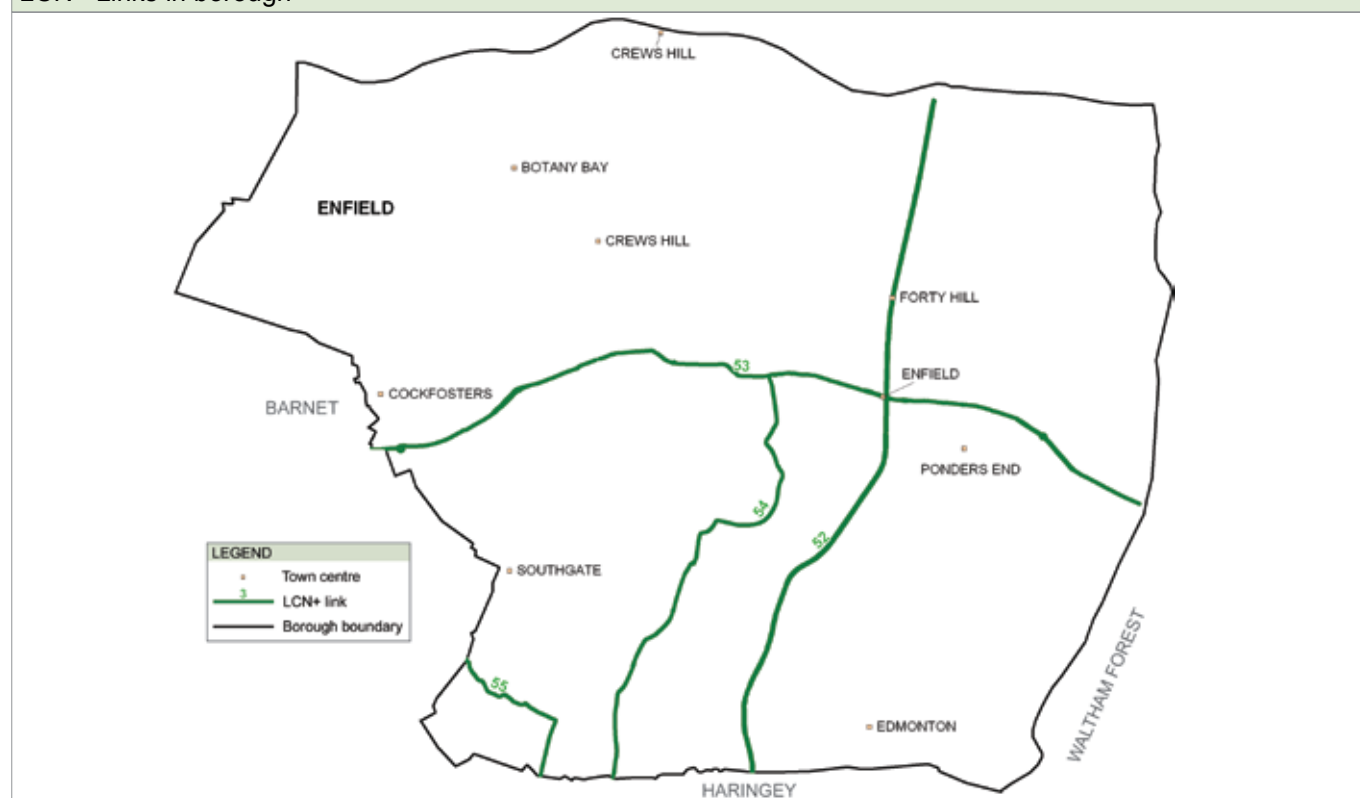


Borough Officer: **Liam Mulrooney**

The main focus of my team was to design CRISP recommendations for Link 53 for implementation in 2008/09 and to complete CRISPs for our two outstanding Links, 54 and 55. I run a team of 4 engineers, one of whom is involved in delivering the LCN+. I also enlist the help of the Council's own Highway Services team and of consultants to help with this delivery. I also liaise with committee members and members of the Enfield Cycle Forum.

Surveys have shown that existing LCN+ routes in Enfield are lightly used, however, the Council is keen to encourage cycling, particularly as a leisure activity, and is still eager to progress elements of the LCN+ that are off road or on quiet roads. Progress on implementing measures in 2007/08 was slow but LCN+ measures that run through green spaces, such as Arnos Park and beside Lea Valley Road, are well supported and should progress more quickly in 2008/09.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
52					0
53	1.94	1.06			76
54					11
55					7
Total	1.94	1.06	0	0	94

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

No schemes were implemented during 2007/08 though a small contribution was made to a traffic calming scheme on Link 53.

London Borough of Greenwich



Borough Officer: **Donald Anyiam**

I am situated within the Highways Department at the London Borough of Greenwich. Greenwich prides itself on its close relationship with cyclists in the borough. I myself attend the Greenwich Cyclists meeting once a month and have regularly consulted directly with them over progress on cycling schemes and initiatives throughout the Borough. We currently use a combination of in house staff and external consultants to meet our resource needs for the progressions of the LCN+ in our borough.

We are continuing to progress the Thames Path, National Cycle Network Route 4, which is largely a traffic free route and will therefore provide a safe, comfortable learning environment for new cycling and a good practice route for people returning to cycling for both everyday journeys and leisure. LB Greenwich has formed a good

partnership with Sustrans, the LCN+ office and the Royal Naval College to overcome initial barriers to the scheme. Close liaison between all parties has enabled a workable solution sensitive to its surroundings. It has been a difficult year due to resourcing issues, but we are proud to have completed a shared use path through the Old Royal Naval College after an extensive effort over a number of years. There has long been the aspiration for a route along the Thames path and through the college, and due to it being a World Heritage Site, exhaustive consultation and excellent relationships with stakeholders were needed in order to complete the scheme. In addition, we have worked well with our neighbouring boroughs to ensure Link continuity across the network. One example of this has been the installation of cycle channels across King John's Walk railway bridge, which at the borough boundary of Greenwich and Bromley, allows cyclists to negotiate the bridge and continue their journey across the newly installed A20 toucan crossing and into Bromley. Greenwich have continued to refer to CRISP Studies, the last of which have been completed, and have identified where local cycle users want routes developed and also have made best use of area based and regeneration schemes for safety improvements for cyclists.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
56	0.06				80
57					220
58	2.24	0.61			54
59	0.24				5
60					15
61	0.09		0.04		25
62					0
63					0
64					0
65	0.09				3
165					0
Multiple Links					2
Total	2.72	0.61	0.04	0	404

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Thames Path**Scheme Code:** BS\07\LCN\GRE.01

The scheme is located on Link 56, part of the Thames Path in Greenwich Town Centre, within the London Borough of Greenwich. The shared use path is actually within the grounds of the Old Royal Naval College, within the World Heritage listed centre of Maritime Greenwich.

Background - Along the Thames Path between Park Row and the Cutty Sark, the Thames Path is very narrow and cycling is not allowed. There has long been the aspiration for a route through the Old Royal Naval College grounds.

The borough has successfully negotiated with the custodians of the Old Royal Naval College, the Greenwich Foundation, for the gates at both ends of the shared use path to be opened for access for cyclists from 8am to 6pm. The sensitive nature of the World Heritage Site meant there were many stakeholders with whom the borough consulted to finalise the scheme. Access was previously prohibited for cyclists through this popular public area.

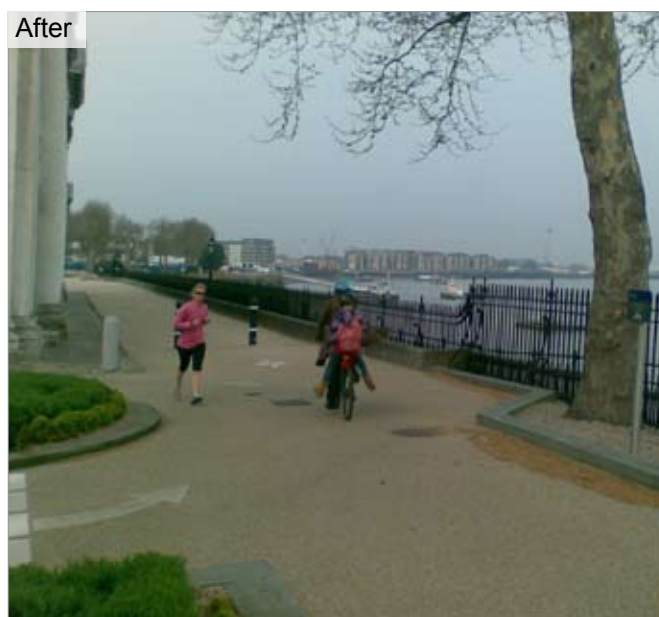
Design details and considerations - In 2006/07, after extensive efforts by the borough officer, a new and widened shared use path was implemented with a contribution from LCN+ of £150K. The second stage of this scheme was completed in 2007/08, to open up access to the path at both ends via historic gates which had previously been closed to public access. The path through the Old Royal Naval College, built in 2006/07, is shared use for cyclists and pedestrians, varying in widths from 3-5m.

Cost: £80,000**Existing conditions:**

- Locked gates
- Cycling prohibited through the facility
- Development of the shared-use path undertaken in 2006/2007

Scheme details:

- Allow cycle access to the site
- Gates opened at peak times



London Borough of Hackney



Borough Officer: **Jean Cantrell**



During 2007/08 the focus of Hackney's LCN+ team was to consult and deliver where possible CRISP recommendations for implementation, either in the current or following financial year where consultation was positive. Hackney has a team of 3 who help to deliver the CRISP recommendations within the borough. I liaise with different departments and ward councillors and where appropriate appoint the help of consultants for targeted tasks.

Growth has been monitored year on year at specific locations on each link within the borough through automated counts, this data shows an increase of both users at peak morning and evening commuting times, and demand for work based cycle parking.

LCN+ Links in borough



During 2007/08 we had a number of internal processes which caused delays to delivery. This was overcome by new procedures to speed up internal processes to help in delivery for 2008/09. However, the schemes we did manage to implement were of excellent quality and have received mostly positive feedback from all user groups.

Broadway Market j/w Lansdowne Road and London Fields - access and safety improvement £51.5k



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
66	1.00	1.63	0.65		131
67	0.30	0.30			5
68	1.16	0.95	0.54		197
69		0.81	0.81		4
70	0.43				5
71					6
72	1.90				20
250	0.43	0.43			21
251		0.32	0.32		29
284					0
Multiple Links	0.04				15
Total	5.26	4.44	2.32	0	433

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Powerscroft Road**Scheme Code:** BS\07\LCN\HAC.10

The scheme involved Powerscroft Road / Chatsworth Road / Millfields Road Junction improvements between Leyton Marshes and Powerscroft Road, located on Link 68 in the London Borough of Hackney.

Background - The scheme is located at a three-arm priority junction, with zebra crossing on the western arm. The cycle route takes a dog-leg alignment to Millfields, and cyclists are required to negotiate a carriageway with complex bus movements, illegal parking and unclear route delineation. The cycle route subsequently leads cyclists through another difficult junction between Leyton Marshes and Powerscroft Road. Conditions for cycling were generally poor, and often intimidating. Safety issues had been identified for certain right turn movements at the junction.

Design details and considerations - A complete junction redesign was required to provide a safe right turn facility for cyclists at Powerscroft Road and South Millfields Recreation Ground. The scheme improved the alignment for cyclists, and included installation of calming features to lower traffic speeds on approach to the junction, and in doing so address issues of cyclist safety. The scheme also involved improving access to the adjacent park.

Additional works, including further traffic calming, and the introduction of extra straight crossings, and a possible route realignment have been identified by stakeholders as possible options to further improve conditions for cycling.

Cost: £40,000**Existing conditions:**

- Difficult junction arrangement
- Safety concerns, particularly for right turn movements
- Complex bus movements
- Illegal parking issues
- Unclear route delineation

Scheme details:

- Complete junction re-design
- Traffic calming
- Raised table to provide at-grade pedestrian crossing
- Improved access to park

Before**After****Before****After**

London Borough of Hammersmith & Fulham



Borough Officer: **Simon Franklin**

I am a transportation planner with wider responsibilities than cycling, but, as part of my cycling officer role have specific responsibilities for overseeing the development of the LCN+ network in the London Borough of Hammersmith & Fulham. My colleague Colin Glendenning, as Engineering Project Team Manager, manages the physical implementation of the schemes through the resources of his team along with term contractors and agency staff.

A continuing challenge in LBHF is that, whilst there is a well developed local cycle network and high levels of cycling activity, there are still a number of significant barriers to a fully integrated strategic network because of conflict with heavy traffic in the Town Centres of Hammersmith and Shepherd's Bush.

In 2007/08, CRISP studies were successfully carried out on LCN+ Links 73, 74 and 75. This has helped to determine a consensus on measures needed to improve conditions for cyclists on these busy roads, and completes the CRISP Study programme for the Borough. The issue of re-allocating scarce road space to cyclists is addressed in conjunction with Network Management Duty requirements. There has been further steady progress in 2007/08 in improving conditions for cycling on the LCN+ network. A corridor treatment approach has been adopted to provide faster, safer and more comfortable conditions for cyclists. On the busy LCN+ Link 73 corridor along the Uxbridge Road, features such as side road entry treatments have been installed at Godolphin Road, Oakland's Grove and Galloway Road where there has been a history of accidents. Similarly on the LCN+ Link 74 corridor along the Hammersmith Road, safety improvements have been achieved through the introduction of measures such as the side road entry treatments at Colet Gardens and Wolverton Gardens. Plans are also being developed to improve cycle movements to and from Shortlands linking to the Hammersmith Gyratory bypass. On the north/south LCN+ Link 262 corridor, three complementary measures were introduced to provide a new two-way connection to North Pole Road and the east. This was achieved by entry treatments at Glenroy Street and Nascot Street and a road closure with cycle provision at Eynham Road. For the first time, continuous cycle lanes have been introduced along the Wandsworth Bridge Road and proposals are being developed to improve cycling and pedestrian convenience and safety at the junction with Townmead Road. Now that all the CRISP Studies have been completed, a full programme of schemes to completion can be identified and worked through with key stakeholders. It will be particularly rewarding to see the results of integrated working when the Westfield Shopping Centre opens in autumn 2008.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
73	1.44	1.44			200
74	2.62	0.84	0.74		175
75	0.21	0.21	0.14		21
76	0.50	0.50			42
77	1.31	1.31	1.31		54
262					114
263					0
All Links					15
Total	6.08	4.30	2.19	0	621

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Wandsworth Bridge Road**Scheme Code:** BS\07\LCN\HAM.16

The scheme is located on Link 77 in the London Borough of Hammersmith and Fulham. Link 77 is 1.33Km in length, and connects Wandsworth Bridge (Link 217), Townmead Rd (Link 263) and New King's Road (Link 76) via Wandsworth Bridge Rd.

Background - The Link was only recently added to LCN+, following a CRISP study completed in 2006/07. The Link is on a busy strategic road used by three bus routes and popular with HGV's. Surrounding land use is a mix of residential and small retail.

There were no existing cycle facilities on the route, and there was evidence of a previous accident history.

Design details and considerations - The busy, strategic nature of the route required upgraded facilities to reduce journey times, and generally improve the safety and ride quality for an increasing number of cyclists. The agreed design involved the addition of 1.5m advisory cycle lanes, kerb widening north of the bridge, introduction of ASLs, and some road marking adjustments. Lamp columns on Wandsworth Bridge were to be set back on the bridge.

This scheme represented the first time continuous advisory cycle lanes were introduced along Wandsworth Bridge Road north and south bound carriageways.

Feedback - Positive feedback has been received, particularly by commuter cyclists, since the cycle lanes were installed.

Cost: £43,000**Existing conditions:**

- Busy strategic road
- Popular route for HGV's
- Major bus route
- Absence of cycle facilities
- Increasing number of cyclists, particularly commuters

Scheme details:

- 1.5m Advisory Cycle Lanes in both directions
- Dropped kerb amendments
- Adjustments to road markings
- Introduction of ASLs
- Improvements to journey times

Before**Before****After**

London Borough of Haringey



Borough Officers:

Malcolm Smith, Maurice Richards, John Kingsford and Matthew Davies



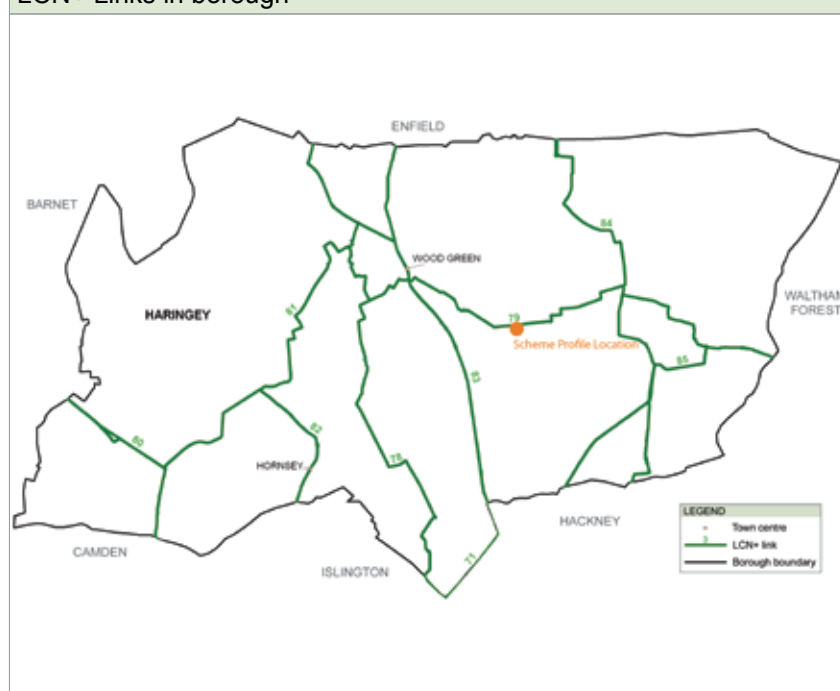
Our team is structured with Transportation Planners Maurice Richards and Malcolm Smith responsible for development and management of the LCN+ and Project Engineers Matthew Davies and Clement Frempong being responsible for implementing schemes on the LCN+ over the 2007/08 financial year. The team work very closely to deliver all aspects of the LCN+ projects from CRISP studies to scheme design and implementation.

There are 9 LCN+ Links in the borough. CRISP studies have been completed on all 9 Links. The CRISP process has helped us to develop better route improvement strategies through better local stakeholder involvement and cooperation. The data from

the CRISP studies was used by the LCN+ Project Management team at Camden to create Haringey's LCN+ programme to completion. We have implemented the measures recommended by the final CRISP reports as detailed in the 2007/08 baseline programme. On Link 79 a cycle lane was put in Station Road to improve access to Wood Green Station. A continental style roundabout was put in on Downhills Park Road and the first sinusoidal speed humps were put in along Southwood Lane on Link 80. On Link 81 route enhancements included a cycle track at the entrance to Alexandra Park whilst on Link 82 side road entry treatments were implemented on Park Road, N8.

The challenges that we faced in delivering cycling in 2007/8 included programming traffic signal schemes with TfL and obtaining final approval of CRISP studies from TfL CPT.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
78		0.96	0.96		172
79	0.36	1.01	1.01		358
80	0.76	0.76	0.76		50
81		0.02	0.02		63
82	1.47	1.47	0.89		195
83	0.58	0.37			31
84					0
85					15
All Links					0
Total	3.17	4.59	3.64	0	884

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Downhills Park Roundabout**Scheme Code:** BS\07\LCN\HGY.32

The scheme is located on Link 79. This is a four armed roundabout with Belmont Road/Downhills Way running north-south and Downhills Park Road running east-west.

Background - The CRISP study for Link 79 highlighted the roundabout as a safety issue due to high traffic speeds, particularly north-south which is the main through route for traffic. This scheme was due to commence in 2008/09, however, additional funding became available for work within the park and also to provide access to a nearby school which included the roundabout as part of a major route for school children. Funding was made available by variation to complete the works in 2007/08 so that the entire project could go ahead as one.

The roundabout comprised a small island with trief kerbs on each corner with extensive guard railing. The island caused little deflection and heavy north-south flows meant that vehicles were often observed negotiating the roundabout too quickly. A zebra crossing was provided on the south arm of the junction allowing pedestrians from the west access to/from Downhills Park. There were also pedestrian refuges on the northern and eastern arms of the roundabout.

Design details and considerations - The main aspect of the works, as specified in the CRISP, was to reduce speeds by altering the geometry of the roundabout and also provide a new zebra crossing on the north arm. In altering the roundabout it was necessary to completely remove the existing island, add an overrun facility around the island and resurface the entire area. In addition a significant amount of the existing guard railing was removed. With the funding partners in mind, the existing zebra crossing on the southern arm was raised to further reduce speeds. This zebra crossing forms part of the route from the park to a path leading to the school and so the borough opted to make the footway either side of the zebra crossing shared use; this enables cyclists to legally use the zebra crossing.

Funding - The LCN+ Programme provided £206k with additional £264k coming from other programmes (includes works within Downhills Park)

Cost: £206,000**Existing conditions:**

- Small roundabout with trief kerbs
- Extensive guard railing
- Little deflection and excessive vehicle speeds
- Zebra crossing and pedestrian refuges

Scheme details:

- Remove existing island
- Overrun facility around island
- New zebra on north arm
- Removal of guard railing
- Formalise shared use footway

Before**After****Before****After**

London Borough of Harrow

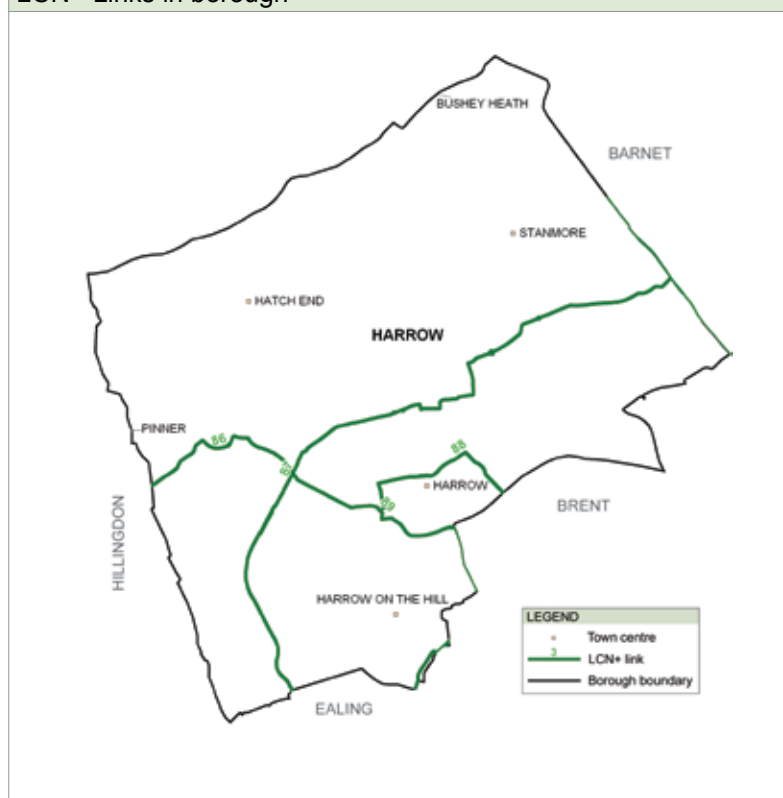


Borough Officer: **Sajjad Farid**

The main focus during 2007/08 was to fully utilise the LCN+ funding allocation for design/implementation of the LCN+ schemes, following the completion of all the CRISP studies in Harrow. The Council has a Borough Cycling Officer working full time on the LCN+ schemes, supported by colleagues in the transportation team as required. Term consultants are also utilised to meet the tight timescales for the implementation of the LCN+.

There has been a noticeable growth in the level of cycling in Harrow, not only has there been a visual increase in the number of people cycling, I have also noticed the demand on secure cycle parking at key locations far outstrips that which we had earlier anticipated/supplied.

LCN+ Links in borough



During 2007/08 we were unable to achieve a full spend of the budget due to a number of issues. A scheme along Pinner Road (Link 89) was aborted due to a statutory company programmed to carry out works either side of Pinner Road. Late notification of statutory authority works caused scheme implementation to be aborted. We have reviewed the problems and have learnt from them and put in place measures and milestones with the aim of enabling plenty of time to programme and implement future works. We have also appointed a senior engineer to assist with the LCN+ schemes to ensure we meet our target of completing the LCN+ by 2010. Although the council's performance/delivery of the LCN+ schemes was not as good as we would have liked we have learnt from our shortfalls and are fully committed to delivering the LCN+. The schemes which were implemented on Links 87, 89 & 86 (eg Station Road, Pinner Road, North Harrow) such as the introduction of a contra-flow cycle lane along Canterbury Road which helps cyclists to bypass the junction, have all provided significant improvements to cycling conditions in the borough.

Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
86					0
87	3.48	3.57	0.80		184
88					93
89	0.72	0.95			81
282					0
Multiple Links					10
Total	4.20	4.52	0.80	0	368

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Headstone Drive j/w Princess Drive**Scheme Code:** BS\07\LCN\HRW.02

This scheme is located on Link 87 at the junction of Headstone Drive and Princess Drive.

Background - The Link 87 CRISP study identified that vehicle speeds through the roundabout were high, encouraged by the generous lane widths of the approach arms. The CRISP recommended that the junction be redesigned as a signal controlled junction, incorporating advanced stop lines for cyclists.

Design details and considerations - High traffic volumes meant that signalisation would be difficult and, after consulting with the Directorate of Traffic Operations at TfL, it was decided that any scheme that involved signalising the junction was unlikely to be acceptable. Once an alternative design was drawn up it was sent to the LCN+ project management team to go through the design check procedure and at this stage there were concerns that it wouldn't do enough to slow down vehicles. However, build outs weren't possible due to the high volume of HGVs using the roundabout as a result of its proximity to industrial estates. The implemented scheme used red-surfaced hatching on the approaches to encourage motor vehicles to slow down before the roundabout whilst patches of hatching on the roundabout itself were used to try and persuade drivers to maintain a tighter line and slower speeds. Cycle logos were strategically placed to promote a safer line for cyclists along the middle of the road rather than allowing themselves to be forced out wide. Improved destination signs before the junction helped cyclists to position themselves early in order to be in the correct position for their desired route.

Cost: £25,000**Existing conditions:**

- Roundabout with large diameter
- HGV turning movements
- High speeds on junction approaches

Scheme details:

- Red surface Hatching
- Junction geometry tightening
- Cycle logos

Before



After



After



London Borough of Havering



Borough Officer: **Musood Karim**



I coordinate the borough's LCN+ programme and by using our in house appointed consultants, I am able to commission the works direct to them. I also liaise with local cycling campaign groups through regular Cycle Liaison Group meetings, TfL Road Network Development and the LCN+ team to ensure that our schemes will benefit cyclists whilst meeting the design standards. My role also involves dealing with the Bus Priority programme, therefore, I am able to make improvements for all road users where possible.

With all our CRISP studies completed (Links 90, 91 and 92), the main focus of 2007/08 was moving the schemes forward for implementation, whilst ensuring design and modelling were carried out on other schemes to be implemented in future years.

LCN+ Links in borough



I am pleased to say that there has been a steady growth in cycling on the borough's roads and through leisure parks since the start of the LCN+ project. I am hoping that this will continue to increase as more cycling schemes are implemented.

The main difficulty in 2007/08 was implementing schemes to meet the LCDS particularly where there were land constraints. I have overcome this by thoroughly reviewing the designs or considering alternative designs with various groups thus ensuring that the best possible cycle facilities are implemented.

Thurloe Gardens, Romford - upgraded existing cycle track £15k



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
90	0.31	0.31	0.10		115
91	2.50	2.24	0.69		94
92	0.14	0.14	0.03		62
Total	2.95	2.69	0.82	0	271

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Ferry Lane j/w Wennington Road, Rainham **Scheme Code: BS\07\LCN\HAV.20**

The scheme is located at the eastern end of Link 92 close to where the Link terminates at Rainham train station, at the junction of Ferry Lane, Wennington Rd and Broadway.

Background - Travelling southbound in Broadway, Rainham the road bends sharply to the left and continues into Ferry Lane. At this point, it is joined by Wennington Road which conveys considerable volume of through traffic to Wennington Village and beyond. The entrance into Wennington Road is wide and drivers have been observed entering the road without slowing down or signalling their intentions. This arrangement was creating potential conflicts between cyclists travelling southbound and traffic entering into Wennington Road.

Design details and considerations - A kerb build out at the entrance of Wennington Road was designed to slow the traffic. A second kerb build out was built directly opposite, on the other side of Wennington Road, to tighten the radius of the bend and decrease the speeds of northbound traffic. Due to the changes in the layout of the junction, the borough has upgraded the existing street lighting on safety grounds. The pictures below show completed works at the junction, and is exclusive of road markings, whereas lighting works have been part completed.

Feedback - There has been a noticeable decrease in speeds both on the main carriageway and also through the side road. When the markings have been amended the cycle lane and centre line will further narrow the effective width of the carriageway and additional benefits are expected.

Cost: £54,000

Existing conditions:

- Open side road layout at junction
- Excessive vehicle speeds
- Vehicles regularly fail to indicate

Scheme details:

- Kerb buildouts
- Lighting upgrade
- Line marking (to be completed)



* Scheme in progress, cycle lane and other road markings to be modified

London Borough of Hillingdon



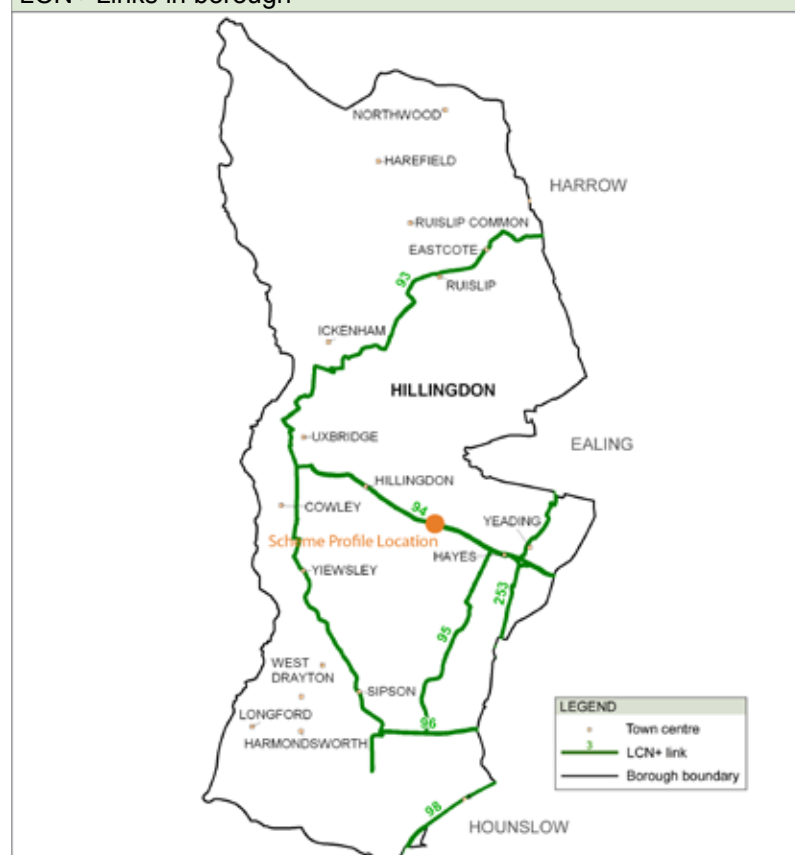
Borough Officer: **Alan Thompson**



Our teams' main focus was to carry out feasibility studies and designs for a number of recommendations put forward in CRISPs for implementation in 2007/08. I am a member of a team of four people who assess feasibility, design, carry out consultation, and gain Cabinet approval for CRISP recommendations. The Council's term contractor then implements the schemes.

Cycling has seen a moderate growth in the Borough since the inception of the LCN+. Demand for additional facilities on alternative routes, and cycle parking at stations and shopping areas show that residents of the borough are increasingly using cycling as a feasible mode of transport to work and for local trips.

LCN+ Links in borough



Lead cycle officer Nigel Coates moved on from Hillingdon last year and one of the biggest challenges has been the continuation of his contribution to cycling in Hillingdon. To overcome this, the remaining team members have given extra effort to continue the momentum of previous years. Limited staff resources coupled with a generous allocation meant that 2007/08 was a very challenging year for our team. A heavy workload meant our term consultant was unable to deliver two large cycling schemes after a large amount of public consultation was completed. However, implementation of these schemes is due to complete in 2008/09 and good progress has been made on future schemes.

Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
93	0.21	3.12			65
94		0.23	0.23		61
95	2.96	2.82	1.13		205
96					0
98					0
253					0
Total	3.17	6.17	1.36	0	331

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Uxbridge Road east of Hayes End Road**Scheme Code:** BS\07\LCN\HIL.17

This scheme is located on Uxbridge Road, east of Hayes End Rd, on Link 94.

Background - Uxbridge Road is a well used dual-carriageway with a 40mph speed limit, making it unfriendly for cyclists in parts. There are good sections of cycle track and cycle lanes, but these have gaps in them and need to be linked together in order to make riding along the Link continuous and also safer for cyclists using it. The Link 94 CRISP report showed that there was stakeholder desire for a continuous facility. The report also highlighted that traffic moved quickly along Uxbridge Road, creating problems for cyclists going across the side road junctions who might be faced with a vehicle turning off Uxbridge Road at speed.

Design details and considerations - At an early stage, the restricted width at a bus stop was identified as a major obstacle to providing a continuous cycle facility. With northbound cyclists using the carriageway and southbound users the adjacent footway and cycle tracks, there was the need to accommodate both on one side of the carriageway, whilst maintaining room for pedestrians and buses. In order to sufficiently accommodate all users, the bus stop lay-by was narrowed to minimum width. As a result the bus stop encroached into the carriageway, although it was possible to ensure that it did not encroach into the general traffic lanes by realigning the new advisory cycle lane. A new green-surfaced cycle track was laid either side of the bus stop, with the area around the stop resurfaced and made shared-use, to provide a good quality surface for cyclists and pedestrians with the new layout making it clearer to all users where cyclists should be. In addition, the entry to Westcombe Lodge Drive was narrowed to reduce entry and exit speeds by motor vehicles and decrease the time that cyclists have to spend crossing the junction mouth.

Feedback - Stakeholders on the CRISP study had requested that any gaps between facilities were completed in order to increase safety for cyclists and to provide a high quality and consistent Link that would be attractive to new cyclists.

Cost: £60,000**Existing conditions:**

- Dual carriageway
- 40mph speed limit
- Generally unfriendly to cyclists
- Intermittent cycle lanes

Scheme details:

- Bus stop realignment
- Cycle lanes to provide continuous facility
- Junction narrowing
- 2-way cycling possible on one side of the dual carriageway

Before



After



Before



After



London Borough of Hounslow



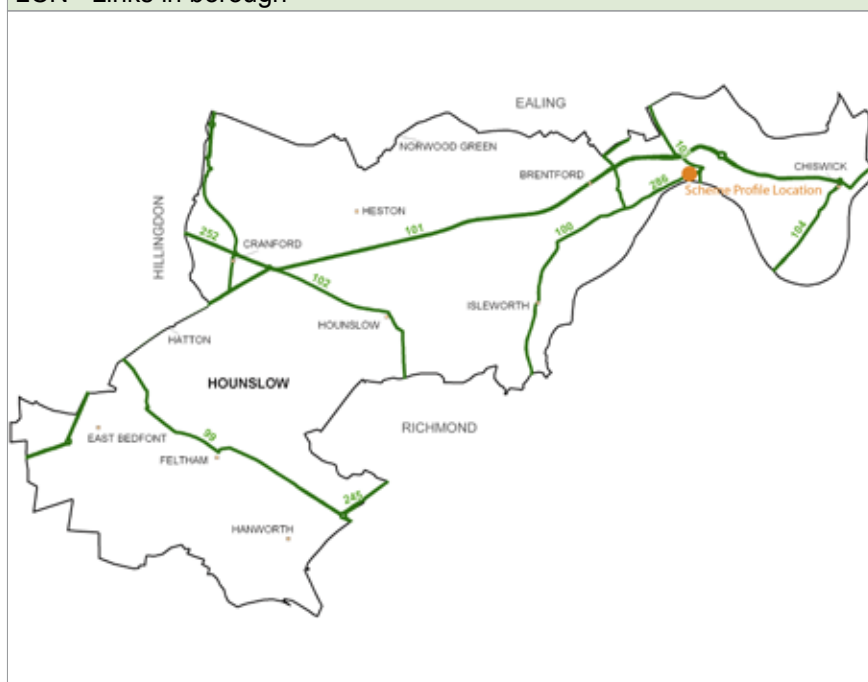
Borough Officer: **Chris Calvi-Freeman**

Having completed all the CRISPs in previous years, the main focus of the LCN+ programme in 2007/08 was on delivery of high quality improvements, particularly where there was an opportunity to combine LCN+ and bus priority or local safety scheme funding to design and implement comprehensive schemes. LB Hounslow is one of very few boroughs that does not have a dedicated cycling officer. As Head of Transport this role falls to me, amongst other duties. I work closely with consultants to design larger LCN+ schemes, while smaller schemes are designed in house.

The number of people cycling in our borough has grown significantly since the inception of the LCN+ programme, particularly in the east of the borough, where road and residential characteristics are more similar to inner London. Hounslow has made major

inroads into the challenge of persuading more children to cycle to school and this will lay the foundations for older family members to follow suit, initially for recreation then for commuting. The main challenge for delivery of the LCN+ programme is one of skilled resources to plan schemes and take them through to implementation. Consultants have assisted in this challenge, and we have had the active encouragement of several councillors. Another challenge is to encourage TfL to implement improvements to LCN+ schemes along the TfL Road Network, particularly the A4. LB Hounslow is fast gaining a reputation for the design and delivery of superior LCN+ schemes. The Borough won the London Transport Awards' Cycling Improvements award for 2008, mainly for promotion of cycling, but the judges also noted the delivery of high quality on-street infrastructure.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
99	1.29	1.30	1.29		282
100	0.02	0.23	0.02		50
101					0
102	0.08	0.48	0.31		245
103					0
245					0
252					0
286					100
Multiple Links				19.7	10
Total	1.39	2.01	1.62	19.7	687

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Kew Bridge Road**Scheme Code:** BS\07\LCN\HOU.09

This scheme is located on Kew Bridge Road, along Link 286, in the London Borough of Hounslow

Background - A CRISP study was carried out on the Link following its addition to the LCN+ network in 2006. This identified that stakeholders were unhappy with the off-carriageway cycle track for cyclists heading southwest, which was narrow and close to the kerb, whilst the surface was also in poor condition. Stakeholders preferred to remain on-carriageway. The route featured a standard bus lane in one direction with a poorly constructed and intermittent cycle track in the other that was too close to the carriageway and below the standard set out in LCDS.

Design details and considerations - In order to accommodate an on-carriageway cycle lane on one side the borough needed additional carriageway width. The plan was for a 1.5m westbound cycle lane, with eastbound cyclists accommodated in the existing 3.0m bus lane. This required minor road widening and adjustment to central refuge islands. Kerb works were undertaken in order to provide the new cycle lane. These had to be carefully executed in order to minimise the need to relocate utility services. The scheme was initially delayed as the borough had to wait for Thames Water to finish a major Victorian water mains replacement programme in the area. The borough worked closely with Thames Water, who found it necessary to lift a long section of kerb line for their works. This kerb line was then replaced, further back, by the borough's engineers, avoiding any need for rework. Finally, the scars left by the Thames Water project were obliterated by principal roads resurfacing, resulting in a high quality surface on which the green cycle lane was installed.

The borough now intends to install a 30m long loading and parking bay in the very wide footway, which will clear the way to implement an "at any time" waiting and loading restriction along the entire length of the new cycle lane.

Feedback - Hounslow cyclists strongly favoured on-road facilities as they felt that not only was the existing facility not used but that any upgrade to the cycle track would still result in the majority of cyclists preferring to use the road, as the cycle track brought cyclists into conflict with pedestrians and forced cyclists to stop or give way to motor traffic at vehicular entrances to apartment and commercial blocks.

Cost: £100k from LCN+ funding with other funding from TfL's local safety schemes and principal road renewal programme

Existing conditions:

- Bus lane eastbound
- Substandard off-road cycle track with poor quality surface westbound
- Cycle track excessively narrow and too close to carriageway
- Stakeholder preference for on-road facility

Scheme details:

- 1.5m green surfaced cycle lane
- Three entry treatments
- Bus stop modification



London Borough of Islington



Borough Officer: **Chris Bowers**



The main focus of my team was to deliver cycling schemes based on CRISP recommendations. We had a successful year in this regard. Our secondary focus was to develop CRISP recommendations through feasibility and consultation to allow design and implementation to be undertaken in 2008/09. I manage a team of two Engineers who design, consult and implement CRISP recommendations within the borough. I liaise directly with committee members and representatives of the Islington Cyclists Action Group (ICAG) at all stages of scheme development. This ensures transparency and gives all parties the opportunity to comment on scheme designs at an early stage. My team relies heavily on our framework consultants for specific tasks. Such assistance has been required for feasibility work on schemes which are to be developed further in 2008/09.

LCN+ Links in borough



Cycling levels have increased significantly in LB Islington since 2000. This is in line with general growth of around 90% across Greater London. Many of our residents and indeed LB Islington employees are now cycling to work. This is evidenced by the increased demand for cycle parking at key trip generators throughout the borough. We encountered problems at consultation stage during the development of a scheme on Link 106 at Dalmeny Road. Some residents objected to our proposal to improve access for cyclists through a fire gated road closure. Their concerns were based around cyclists travelling too fast and the potential for conflict between cyclists and pedestrians, particularly young children playing in the road. We revised the proposal in an attempt to force cyclists to slow down and behave with due care towards pedestrians. We received a letter from the LCN+ Project Manager commending us for our good performance in 2007/08. Indeed, we managed to exceed our original financial allocation by 30%. In general we have performed well and delivered a number of significant improvements on the ground as demonstrated above. There have been some frustrations but we have had to accept that some schemes take longer than 12 months to deliver. We have therefore had to carry over a number of schemes with a view to completing these in 2008/09.

Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
106	0.08				136
107					0
108	0.49	0.65	0.61		147
109	0.01	0.01	0.01		55
110	1.09	0.16	0.16		130
111	0.29	0.05	0.05		80
112	0.11	0.11			15
113	0.36	0.35	0.35		22
114					0
115					2
248					0
All Links					110
Multiple Links	0.05	0.05		1.86	50
Total	2.48	1.38	1.18	1.86	747

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Various locations on Link 106**Scheme Code:** BS\07\LCN\ISL.03

The scheme involved carriageway resurfacing and sinusoidal road hump upgrades along Link 106, particularly between Holloway Road and Hungerford Road, in the London Borough of Islington.

Background - Conditions along this route were generally poor for cyclists, particularly as a result of the extremely poor condition of the road surface along Hungerford Road. The round topped road humps were also uncomfortable for cyclists due to their severe ramp gradients, and there were barriers at three road closures with cycle gaps less than 1.5 metres wide, and interruption of the cyclist desire on Dalmeny Road between Anson Road and Archibald Road due to the presence of a fire gate.

Design details and considerations - The major design considerations were the improvement of ride quality for cyclists, and improvement of cycling permeability. The cycle gaps at road closures on Dalmeny Road between Anson Road and Archibald Road; Dalmeny Road junction with Mercers Road; and Tytherton Road junction with Yerbury Road; were upgraded to a minimum width of 1.5m, as per LCDS requirements. The rough ride quality across the very poor road surface was addressed with 300m of carriageway resurfacing. Traffic calming upgrades on Hungerford Road between Middleton Grove and York Way involved replacement of the round topped road humps with sinusoidal road humps, which are far more comfortable for cyclists.

The cycle gap upgrades improved road safety, comfort and accessibility for cyclists. The fire gate upgrade at Dalmeny Road between Anson Road and Archibald Road removed a minor barrier to cycling, but some residents have voiced concerns about potential conflicts between cyclists and pedestrians.

Feedback - Carriageway resurfacing and sinusoidal road hump upgrades have drastically improved comfort for cyclists. The cycle gap and fire gate upgrades have also improved the route continuity.

Cost: £89,000**Existing conditions:**

- Sub-standard cycle gaps
- Extremely poor road surface
- Round topped cycle humps
- Fire gate barrier on desire line

Scheme details:

- 300m of carriageway resurfacing
- Sinusoidal humps
- Cycle gap upgrades to 1.5m

Before



After



Royal Borough of Kensington and Chelsea



LCN+ Links in borough



The Royal Borough does not have a dedicated cycle officer. The needs of cyclists are given close consideration with those of other road users as part of the development of every road scheme drawing. The very heavy demand on road space in the Royal Borough, particularly for kerbside parking, makes it increasingly difficult to provide more of the 'standard' on-street bicycle measures. The Royal Borough now focuses on a more holistic approach that benefits all road users. This is exemplified by our treatment of Kensington High Street, where bicycles make up 25% of all traffic.

The Royal Borough is keen to promote cycling as a healthy and environmentally friendly mode of transport. We believe that one of the most effective ways of doing this is giving high priority to ensuring all carriageways and street lighting are maintained to a high standard so our roads are safe and comfortable for cyclists to use. Education is also fundamentally important and the free cycle training to national standard we provide for children and adults who live in the Royal Borough continues to be very popular and extremely well received. We have over 2000 on-street cycle parking spaces and continue to increase this number. All these measures have helped to encourage cycling but we are keen to provide for the growing number of cyclists on the road in other effective and practical ways. In

2007 we liaised with local and national representatives of bicycling organisations about what constitutes effective bicycle provision in the Royal Borough. As a result we have just completed a review of our bicycle policies to form a basis for providing practical measures to facilitate cycling, the cornerstone of which would be to allow cyclists to use selected one-way streets in the opposite direction just by sign posting with the flying motorbike sign instead of no-entry signs. This is to be trialled in six roads and if successful will be introduced in more one-way streets so that cycling permeability and access onto and off the LCN+ is improved. In addition, where demand for bicycle parking cannot be provided on the footway, the provision of bicycle stands in the carriageway in place of underused visitor parking bays will be implemented at various sites. All parts of the LCN+ are now established in the Royal Borough and are being kept under review by carrying out annual surveys to check cycling levels and monitoring cyclist casualties.

Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
116					4
117					2
118	0.46				2
119					4
120					4
All Links					7
Total	0.46	0.00	0.00	0	23

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

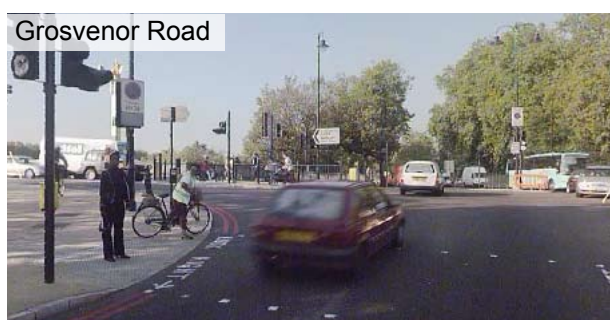
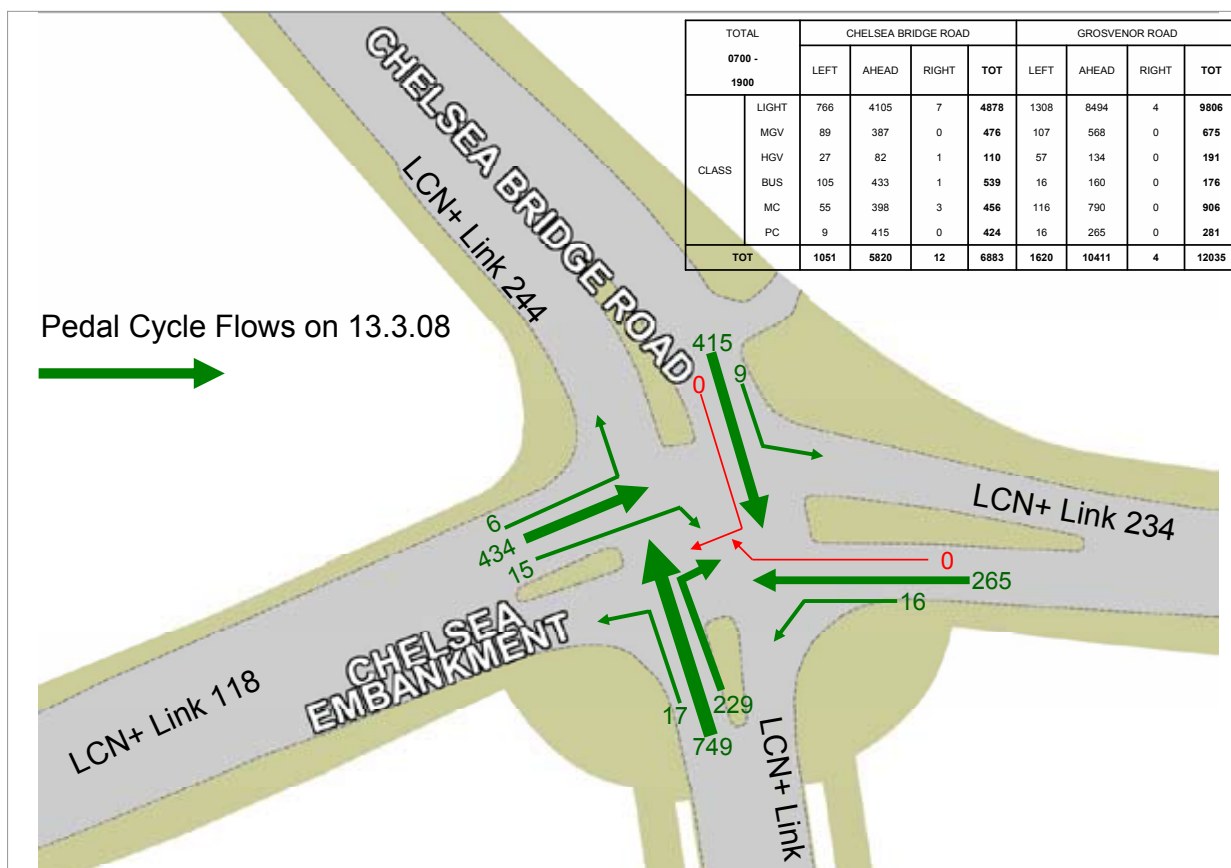
Scheme Profile: **Cycle Counts (All Links)**

Scheme Code: BS\07\LCN\KAC.01

Annual cycle counts were undertaken at 14 locations on the LCN+. The counts were manually recorded and used to identify traffic trends and modal share.

Cost: £7,000

Sample Site - One of the 14 counting sites was at Chelsea Bridge Northside, intersection of Chelsea Embankment and Chelsea Bridge Road. This site is on the boundary with the City of Westminster. Photos of all four approach arms, and cycle counts are shown.



Royal Borough of Kingston upon Thames



Borough Officers: Rob Parsey and John Martin

Rob Parsey, Cycling Officer, and John Martin, Sustainable Transport Manager, in the Sustainable Transport Unit in the Royal Borough of Kingston upon Thames (RBK) are experienced and dedicated officers responsible for the delivery of the LCN+. Schemes are designed in conjunction with other RBK design officers and engineers and implemented with term contractors.

Kingston's Cycle Strategy was approved in 2005 and the RBK LIP approved March 2006, which set out the Council's policies to continue enhancing the network of LCN+ and other on and off-street

cycling routes and providing more facilities to promote cycle use. The completion of the LCN+ cycle network is well advanced in the Borough and future works will concentrate on upgrading existing infrastructure and the provision of secure off-street parking. A major project in 2007/8 was the introduction of an advisory contra-flow cycle lane in Fife Road and Dolphin Street in Kingston Town Centre. In addition to improving cycle route penetration to the main shopping area, this scheme also forms the first part of a new LCN+ Link to the north of the Town Centre which will provide a direct and convenient route between Kingston Bridge and Kingston Railway Station. RBK has purchased and installed 2 new permanent automatic cycle counters (Zelt) within the existing cycle tracks on Kingston Bridge. These show over 2000 cycle trips on average summer weekday (24 hours) and about 3000 trips on a Sunday. The upward trend in cycling is attributed to both infrastructure improvements and "soft" measures such as travel awareness and cycle training provision. The Kingston Cycling Campaign continues to take an active and positive role in the delivery of the cycle network through regular liaison meetings with Council Officers, attending the Borough's Neighbourhood Committee meetings, and accompanying officers on site visits to review cycle infrastructure schemes outside the Borough.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
121	1.15		0.76		67
122	0.15	0.15	0.07		105
123	0.09	0.09	0.23		100
124	1.57				42
126					69
163	0.09	0.09	0.09		8
254					0
Multiple Links	0.02	0.02	0.02		79
Total	3.07	0.35	1.17	0	470

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Kingston Town Centre**Scheme Code:** BS\07\LCN\KIN.24

The scheme is in the Kingston Town Centre, along Fife Road and Dolphin Street, located on Link 122 in the Royal Borough of Kingston upon Thames.

Background - Fife Road/Dolphin Street between Castle Street and Wood Street was a one-way road (north to south & west to east). It also formed part of the 20mph zone within Kingston Town Centre relief road. A Cycle Route Implementation & Stakeholder Plan (CRISP) study in 2006 identified that the existing cycle routes connecting Kingston Bridge and destinations towards the north and east of the town were very indirect. Cyclists travelling north-east/south-west through the Town Centre were required to negotiate Eden Street, which is very congested with buses and pedestrians at its northern end. The situation encouraged some cyclists to ride illegally on footways and through the pedestrianised areas of Clarence Street.

Design details and considerations - The scheme directly targets the desire by cyclists to access the Bantalls Centre/Clarence Street shops from Fife Road. Many cyclists were riding the wrong-way (north-east to south west) along the one-way section of Fife Road between Castle Street and Dolphin Street as there is no alternative apart from dismounting and cyclists pushing their bicycles along the narrow heavily used footways of Fife Road. This particular design contributes to forming a continuous cycle route to and through the Town Centre, with implementation divided into 3 phases for implementation and funding reasons. The carriageway/footway layout of Dolphin Street at its junction with Fife Road was slightly modified so larger vehicles did not need to overrun the advisory cycle-lane whilst negotiating the sharp bend. Cars and light vans are still able to travel along Dolphin Street and Fife Road without needing to enter the advisory contra-flow cycle lane. The introduction of direct two-way cycle routes radically improved cycle journeys for those people travelling to and through the Town, especially between Kingston Bridge and Kingston Station.

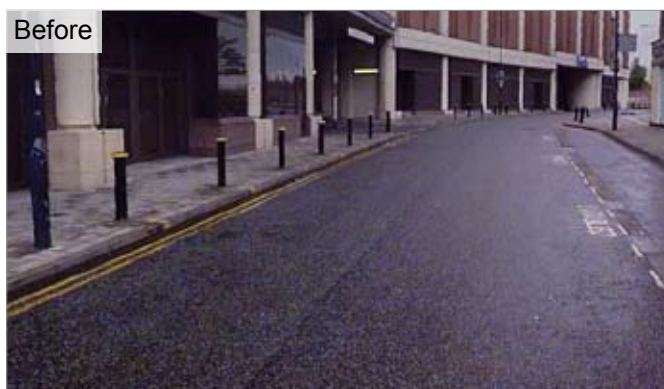
Feedback - The scheme has been well received. Feedback that the small raised sausage “overrun” islands at the junction of Dolphin Street/Fife Road were inconspicuous was subsequently addressed, with the introduction of additional white-line markings improving delineation.

Cost: £38,000**Existing conditions:**

- Lack of continuous two-way cycle route in Town Centre
- Dismount section for cyclists travelling east to west along Fife Road
- Indirect cycle routes
- Frequent illegal use of footways and pedestrianised areas

Scheme details:

- 1.5 m advisory contra-flow cycle lane
- Length of facility 225m
- Inset parking and loading bays
- 3m running lane retained for other traffic
- Minor carriageway widening to allow for vehicle swept paths



London Borough of Lambeth



Borough Officer: **Richard Ambler**



Lambeth had a large cycle programme in 2007/08 which included some complex schemes. We focused on developing these to the final design stage, while implementing schemes which were developed the previous year.

In 2007/08 I ran an LCN+ development team of four dedicated officers. These officers were split across three departments: Transport, Highways, and Strategy. This structure worked

well as it created good inter-communication between departments. For 2008/09 we have changed the structure to reflect the emphasis on implementation. Lambeth's commitment to cycling is reflected in the fact that half of the Transport Strategy team cycle regularly. Cycle counts have shown a 50% increase in cycling on key routes since 2005 and in many areas it is hard to keep up with demand for cycle parking. The biggest issues in 2007/08 were the Traffic Management Act 2004, the disruption caused by Thames Water's mains replacement programme, and the increasingly complex notifications system. Combined, these issues mean that the development and implementation of schemes is much more complex than in previous years. To some extent we have reduced the difficulties caused by the TMA by ensuring that the Act is interpreted in line with our sustainable transport agenda.

In terms of implementation, outturn was somewhat disappointing in 2007/08 but this is largely a reflection of the increasing complexities of scheme delivery and I am satisfied that we worked well through the ever-changing landscape of scheme development, bringing ten schemes to the construction design stage and implementing four schemes. The underspend is partly a reflection of the fact that we did most of the design work in-house and thus did not spend a lot of money on consultants

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
127					0
128	2.41	1.53	0.50		184
129	0.29	0.09		0.82	81
130		0.25			25
131					0
132	0.26		0.26		7
133					0
134					0
135					0
136					0
137	1.09	1.09			50
138	0.03	0.52	0.55		46
139					130
All Links					90
Multiple Links		0.34			59
Total	4.08	3.82	1.31	0.82	672

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Norwood Road**Scheme Code:** BS\07\LCN\LAM.21

The scheme is located on Norwood Road, Links 138 and 128 in the London Borough of Lambeth.

Background - The carriageway of Norwood Road ranged in width from 9.9 to 10.4 metres, containing one general carriageway lane in each direction. Cycle lanes were not present, but the width was sufficient for a review of on-road facilities. The road is characterised by a gradual bend as it approaches a signalised junction, with very few side roads (just one) and thus relatively few turning movements and generally linear traffic flows.

Design details and considerations - The preliminary design stage of this scheme critically assessed the merits of cycle lane installation, seeking to ensure it would actually benefit cycle users. It was not considered appropriate to install lanes simply as a means of getting cyclists out of the way. The merits were established, and concepts prepared using the design philosophy of National Standards cycle training. Rather than a generic off-the-shelf cycle lane design 1.5m from the kerb, the dynamics of traffic and road layout were carefully considered, leading to a design that allowed the cyclist to safely position themselves for maximum visibility and safety.

The design process involved allocating the minimum acceptable carriageway width for general traffic and utilising the remaining space for cycle lanes, in this case ranging from 1.5m to 2.9m. Where the space remaining for a cycle lane was more than 2.4m, a 0.5m buffer was included to prevent encroachment by motor vehicles. Great care was taken to ensure the cycle lane design put the cyclist in the best road position for each stretch of road, specifically considering, for example, the need for cyclists to avoid being sent near the kerb on the bend, where they would be out of drivers' field of attention. Equally it was considered important to ensure that drivers would not 'cut the corner' on the bend. A wide cycle lane with buffer zones on the approach to the bend was thus included in the scheme to deal with these issues.

The cycle lane design approach utilised for all three cycle lane schemes implemented in Lambeth in 2007/08 allows and encourages cyclists to position themselves according to best practice cycle training.

Feedback - Many cyclists voiced their full support for the scheme to site engineers during construction.

Cost: £40,000**Existing conditions:**

- 9.9m – 10.4m carriageway with no cycle lanes
- Linear traffic flows and just one side-road
- Gradual bend in the carriageway approaching a signalised junction

Scheme details:

- 1.5m – 2.9m cycle lanes
- 0.5m buffer zones where sufficient width available
- Emphasis on maximising cyclist visibility

Before



After



After



London Borough of Lewisham



Borough Officer: **Carole Crankshaw**



I project manage the LCN+ budget and implementation of the schemes from bidding for the funds to the final implementation of them. I have six in-house engineers working on the detail design of the projects. It is a heavy workload especially when you consider that I usually run up to 6-8 projects funded directly from the BSP/LIP/portal as well, which includes cycle parking, cycle parking audit and cycle parking database and the Greenways projects, and others. The cycle training and cycle awareness programs, however, are dealt with by our road safety department.

With the increase in cycling quite noticeable in the borough, as well as in central London, this has created a great deal of demand from the public for amenities and for advice and help in all areas of cycling. We have also experienced a significant increase in cycling by members of staff, many of whom now cycle to work and have been keen to find routes and information that will help them on their way. Lewisham this year had 76 members of staff cycle the London to Brighton ride, so much is the interest and growth in cycling. The increase in fuel prices increased the demand for on street cycle parking facilities so we have tried to meet demand in that quarter too.

Change of policy of removing motorcycle barriers have aided faster flow through some previously threatening areas and CCTV being installed in these areas has increased safety. We will continue to remove the barriers to aid all cyclists, including disabled cyclists who use trikes, and some tandem users and tourers with panniers who's levels of comfort and vulnerability are significantly affected by the need to dismount. Asset management has improved comfort in some areas by allowing us to resurface some roads and the installation of sinusoidal humps has improved comfort to many. Two toucan crossings implemented in just this year have improved safety to many including pedestrians, children, local people as well as cyclists.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
140	1.94				4
141	1.01	0.39	0.43		164
142					20
143		0.08	0.94		41
144	1.46	0.69	1.46		252
145	0.42	0.02	0.20		169
146					26
147					0
275					0
All Links			0.36		86
Multiple Links	0.05			1.61	2
Total	4.88	1.18	3.39	1.61	764

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Deptford Church Street Toucan Crossing Scheme Code: BS\07\LCNLEW.11

The scheme is part of Link 145, an east/west route running between Surrey Canal Road at the Southwark borough boundary in the west and Norman Road/B208 at the Greenwich borough boundary in the east.

Background - Deptford Church Street is a busy dual carriageway, comprising of a single bus lane and a single motor vehicle lane in both directions.

When approaching the dual carriageway from the west, cyclists would emerge from Coffey Street (a 20mph zone) and then negotiate the dual carriageway via a staggered zebra crossing, before continuing their journey via Bronze Street, a traffic calmed minor road. Although cyclists could use the zebra crossing, they either had to dismount and walk across the footway or emerge from the 20mph zone, turn right, and then immediately turn left across any traffic. Dismounting was difficult, whilst sharp turning movements increased the likelihood of collisions. A further issue was that traffic would often queue during the peak hours, whilst buses would continue their journey unimpeded through the bus lane. This meant that queuing traffic would often let pedestrians and cyclists cross, only for the pedestrians/cyclists to emerge from the queuing traffic into the free flowing bus lane.

Design details and considerations - The scheme provides cyclists with a staggered toucan crossing to improve the safety for both pedestrians and cyclists alike, whilst the side road entry treatments on Coffey Street and Bronze Street reduced vehicle speeds and provided a flush surface for cyclists to access the new shared-use footway to use the staggered toucan. Push buttons were added in the central refuge to ensure cyclists or pedestrians could activate the crossing phase from the middle of the crossing, whilst shared use signs and corduroy paving was used to comply with all relevant DDA regulations regarding shared use areas.

A map-type sign was also used to direct cyclists to the new route and to illustrate how to negotiate the crossing, and resurfacing of the carriageway improved safety by providing a smoother and more comfortable ride for cyclists.

Cost: £121,000

Existing conditions:

- Staggered zebra crossing
- No shared use surface
- High traffic speed/flows
- Cyclists had to dismount or make dangerous manoeuvre

Scheme details:

- Staggered toucan crossing
- Shared use areas to access crossing
- Side road entry treatments
- Carriageway resurfacing

Before



After



London Borough of Merton



Borough Officer: **Pete Thomas**

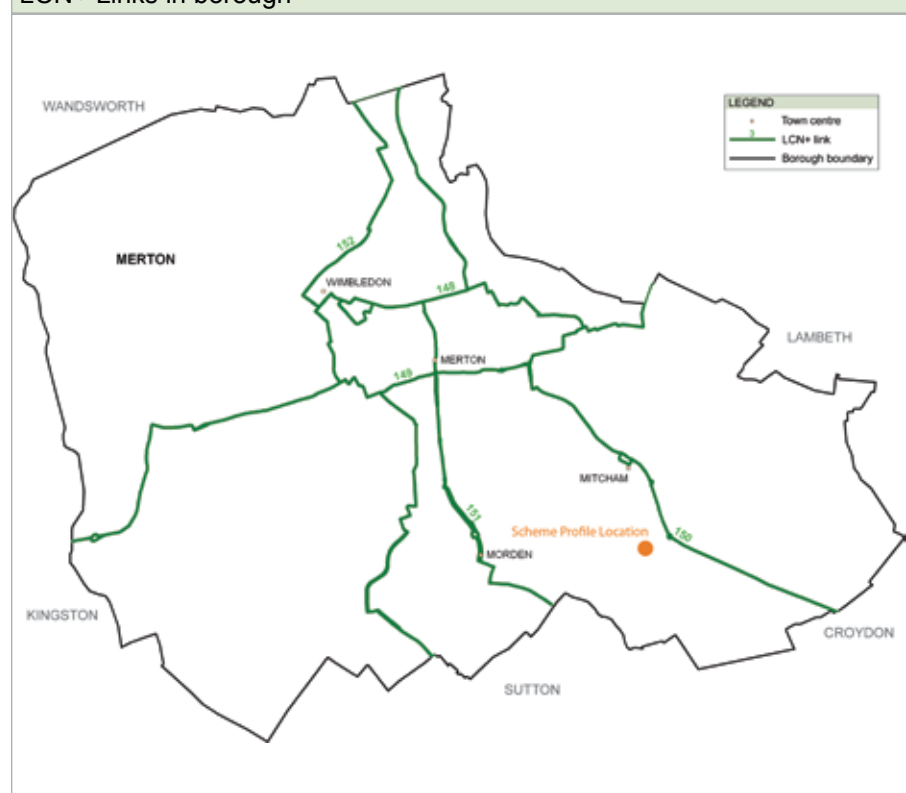


After a difficult period during 2007/08 with one part-time cycle officer progress is improving as Merton now has two cycle officers. We project manage and undertake delivery of schemes from the CRISP process for the 5 key Links in the borough and also the Greenways programme which includes a former LCN+ Link. Our duties include the design, consultation committee process and site works. As is common across many of London's boroughs the most significant element is winning the hearts and minds of local people and their Councillors.

The increase of cycle use London wide is reflected in Merton with anecdotal evidence such as a significant increase in parking at rail stations and increased demand for installation of cycle parking facilities. One of Merton's key scheme developments last year was the

proposed cycle track outside and adjacent to Raynes Park Station. This scheme required transfer of Network Rail embankment land which would require a retaining wall. Unfortunately, this would have involved the loss of several mature trees. Mainly due to the loss of trees, this scheme was rejected at Committee despite a majority in favour from the extensive consultation undertaken. However, following a site visit with the Council Committee's Chair, an alternative but compromise scheme is now being designed which, it is hoped, will be accepted. Given the resource level last year, programme delivery was good but scheme completion was understandably poor. However, the overall spending level was high with much resource being focussed on scheme design and, towards the end of the year, improving the existing cycle network assets. It is anticipated that the level of scheme delivery in 2008/9 will be high.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
148					4
149	0.06	0.34			84
150	0.64	0.11			35
151					0
152	4.90	0.75			40
276	0.39	0.44	0.44		163
Multiple Links	0.09	0.08	0.01	8.5	247
Total	6.08	1.72	0.45	8.5	573

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: **Wandle Trail**

Scheme Code: BS\07\LCN\MER.21

The scheme is an upgrade of the Wandle Trail, located on Link 276 in the London Borough of Merton.

Background - The trail has long been a narrow unmade gravel riverside path, bounded by overgrown vegetation and industrial fencing. Damaged bollards located at irregular intervals indicated a shared use facility, however, the overgrown vegetation and narrow paths made it difficult for cyclists to pass pedestrians. The path surface needed sealing to improve the ride quality, and investment was required to improve the generally unpleasant and neglected feel of the path.

Design details and considerations - The scheme provided a new 3m wide shared path along its entire length. The construction consisted of a 25mm DBM wearing course, a 50mm base course and a 150mm Type 1 granular sub base. A geotextile membrane was used for certain sections of the path that were located close to tree roots, providing additional strength from potential movement. Key design considerations were that the path should conform to LCDS standards, have improved drainage, and provide an increased feeling of security by removing vegetation and generally improving sight-lines and visibility.

Cost: £150,000

Existing conditions:

- Poor quality gravel path surface, with drainage issues
- Damaged and irregular signage
- Unpleasant and neglected feel
- Narrow width with potential for pedestrian conflict

Scheme details:

- 3m wide shared path facility
- Improved riding surface for cyclists, and geotextile membrane for stability and support
- Path conforms to LCDS standards
- Increased feeling of security due to vegetation clearance
- Improved drainage

After



After



Before



Before



Before



London Borough of Newham



Borough Officer: **Ian Murdoch**



I am based within Newham's Traffic Management and Road Safety section, and liaise with colleagues in other Council departments and other stakeholders such as the LCN+ team and TfL. Although I am the officer specifically dealing with cycling, I do so with the assistance of other engineers within my section.

Although no LCN+ schemes were implemented in 2007/08, we were occupied with progressing the remaining CRISP studies, and a number of schemes from these studies have now been designed and are going out to informal and statutory consultation. It is hoped that we can obtain the necessary approvals, so that schemes can be progressed towards implementation during 08 / 09.

LCN+ Links in borough



In 2007/08, Newham were also heavily involved with the development of Olympic Greenway routes in the Borough, and this (as well as many other Planning / Regeneration matters arising in the Borough) kept myself and other colleagues fully occupied. It is hoped that we can further progress the LCN+ programme as much as possible, provided we receive all the necessary approvals from internal and external statutory stakeholders.

Although no cycle usage data is readily available at this stage, I am certain that cycling is on the increase in Newham. The local LCC group is experiencing a rise in membership, and a new cycling and walking map (the Newham "Ride and Stride" leaflet) has been produced recently which shows links to the various Olympic venues across East London, as well as other local attractions. A significant amount of interest has been shown in this guide from existing and potential cyclists. Furthermore, around 2000 Newham staff are moving to modern premises in the Docklands in late 2008 / early 2009, and there has been a great deal of interest from Newham staff regarding the cycling facilities available at the new location. It appears that the Council will at last be adopting the "Bike to Work" scheme for employees.

In conclusion, we hope that 2008/09 will see more LCN+ schemes implemented "on the ground", as there are an increasing number of cyclists in East London who would benefit from improved facilities.

Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
154					4
155					23
156					14
281					0
285					14
Total	0	0	0	0	55

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

No schemes were implemented during 2007/08.

London Borough of Redbridge



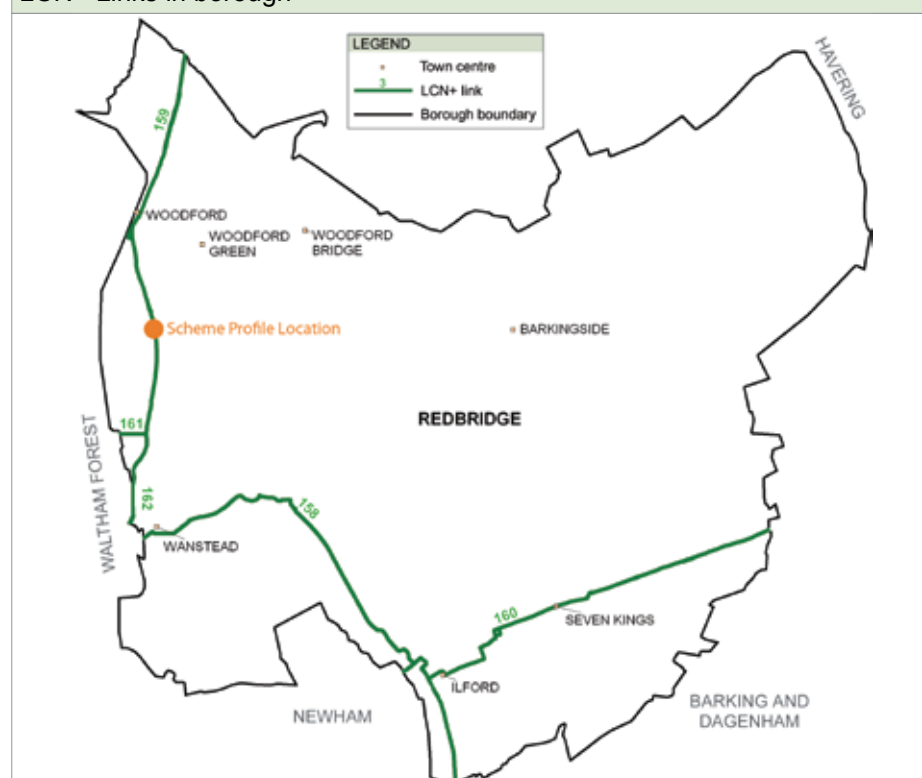
Borough Officer: **Jack Redman**



The main focus of the borough's works during 2007/08 has related to the project management associated with the detailed design of the George Lane cycle advanced stop line scheme, the progression of the borough's Asset Management works and the undertaking of CRISP studies prior to detailed design.

The development of the LCN+ cycle route project has been overseen by the borough with additional resources being provided via its framework consultants, enabling the delivery of cycle route design and asset management works this year. During the period when the LCN+ has been progressed there has been a noticeable increase in the level of cycles within town centres and at rail station cycle parking areas within the borough.

LCN+ Links in borough



Within the year there have been challenges encountered in obtaining technical approval for access to bridge structures affected by schemes and in the receipt of detailed approvals from statutory undertakers regarding the possible diversion of their services. This has been addressed by the endeavours of the borough, supported by its consultants and the LCN+ team, ensuring steady progress throughout the year.

The borough has ensured that although barriers to progress have arisen, that schemes have progressed and that it is well placed to pursue the LCN+ programme to completion. Two major LCN+ schemes are ready to move forward and the detailed design for the CRISP proposals has been commissioned, with approval in principle.

Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
158					36
159		0.74			97
160					6
161					0
162					1
Multiple Links				17.7	70
Total	0	0.74	0	17.7	210

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: George Lane Junction Design

Scheme Code: BS\07\LCN\RED.03

The design below is planned for implementation in 2008/09. This involves a significant length of widening to allow for advisory cycle lanes as well as ASLs at all signalised junctions and further kerb realignments at the George Lane junction with High Road, Woodford.

This scheme has been on the programme since 2005/06 and has now been approved by TfL's structures team for the widening to occur on the bridge over the A406. Once approval was granted, 2007/08 funds were released to pay for relocation of statutory undertakers plant. This has meant a significant spend was achieved in 2007/08 even though the main civils works and DTO signals activity will occur in 2008/09.

Cost: £95,000

Scheme details:

- Carriageway widening
- Bridge widening
- Advisory cycle lane
- ASLs



London Borough of Richmond upon Thames



Borough Officer: **Neil West**



This year has been a challenging year in delivering the programme due to the turnover of key staff and the restructuring that has taken place within our department, however, the programme has been delivered. The new structure will allow for the appointment of a permanent cycling officer who will form part of the delivery team and allow schemes to be developed with a more holistic approach in mind, which should produce a more robust and acceptable scheme. We have had some concerns over a number of recommendations made from the CRISP process as a number of them do not appear to be feasible and it would be difficult to seek approval from our members to proceed any further. However, to ensure delivery

of the 2008/09 programme we have set up a task team made up from officers from the bus, cycle and local safety teams who will review the whole area but develop only one scheme. This approach was trialled out along Hampton Court Road and has proved quite successful particularly during the consultation stages, in fact this approach helped to identify a potential off road shared cycle facility adjacent to a high speed section of carriageway and without cross modal funding we would not have been able to develop the scheme. We are confident that with the support from the LCN+ team we are able to produce a number of high quality schemes during the upcoming year.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
167	3.34	1.21	1.21		290
168	3.34	1.50			275
169					0
170			1.70		245
171					0
172					0
173					0
174	0.01		0.01		33
175	0.16		0.16		36
176					0
246					0
All Links					15
Multiple Links					15
Total	6.85	2.71	3.08	0	909

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: **Richmond Park and Petersham Gate**

Scheme Code:
BS\07\LCN\RIC.10 and RIC.22

The schemes are located on Link 170, a north/south route within the London Borough of Richmond, running between Richmond Town Centre and Petersham Road on the boundary with the Royal Borough of Kingston.

Background - The new shared use path follows a historic desire line for pedestrians and cyclists on the south side of Richmond Park between Ham Gate and Petersham Gate. The need for such a facility was first identified 20 years ago by a Royal Parks committee, and again identified in the CRISP study, undertaken in March 2005. The puffin crossing at Petersham Gate was identified in the CRISP as a location appropriate for a crossing point for pedestrians and cyclists to assist the significant number of pedestrians and cyclists that enter the park, from Richmond Town Centre, and the Thames Path via Petersham Meadows.

Design details and considerations - The two schemes provide a continuous, safe section of link, as an alternative to Petersham Road, and generally improve the attractiveness and comfort of cycling within the Richmond Park.

The two key design criteria for the cycle path were resolution of poor site drainage, and a sympathetic character in keeping with the natural setting. A Coxwell Gravel finish was chosen, providing a semi-sealed surface that balances through-drainage with excess water runoff. In order to semi-seal the surface, the material had to be laid and rolled in damp conditions; too dry and the gravel would turn to dust, too wet and the material would not have bound properly. The colours of all raw materials were sympathetic natural tones.

Feedback - The new path has been deemed as a success by all stakeholders, noted as providing a continuous, high quality surface for both cyclists and pedestrians between Ham Gate and Petersham Gate. It has also significantly improved access to a children's playground at Petersham Gate. Site observations indicate that the path is well used by both cyclists and pedestrians.

Cost: £235,000

Existing conditions:

- Informal route, but currently unsightly and unattractive to use, especially for cyclists, and muddy during wet weather.
- Environmentally sympathetic infrastructure, un-sealed surfaces, natural colours.
- Lack of crossing facilities at Petersham Gate posed difficulties for both pedestrians and cyclists trying to cross the busy road with limited intervisibility

Scheme details:

The Path in the Park:

- 1.5km shared use path with high quality semi-sealed surface.
- 4m wide.
- Provides link along historic desire line
- Installation of culverts and drainage
- Landscaping

The Toucan Crossing:

- Raised table
- 4m wide
- Extension of start of 20mph zone

Before



After



After



After



London Borough of Southwark



Borough Officer: **Sri Raviculan**

I am situated within the Public Realm Project team of the Department of Environment and Housing of London Borough of Southwark. I am responsible for the design and implementation of LCN+ schemes in the borough. Our main focus for 2007/08 was to complete the outstanding CRISP recommendations as much as possible. I run a team of three engineers who design, consult and implement CRISP recommendations within the borough. In addition, our partnering consultant addresses specialist tasks. Our Cycling officer Roger Stocker gives us advice on policy matters and overall cycling issues.

The number of cyclists on Southwark's highways is increasing steadily since the inception of the LCN+. This is evidenced by the increased demand for cycle stands in commercial and leisure facilities and the increased number of cyclists travelling to and from work during peak hours.

Dulwich Village/ Carlton Avenue/ Court Lane junction posed a major challenge to our design team. Two LCN+ cycle routes cross at this complicated five road junction with very high peak time traffic flow. This special task of designing a safe junction layout for the benefit of the cyclists, pedestrian and other road users was commissioned to a consultant who carried out traffic modelling.

In the year 07/08 Southwark Council undertook to deliver a large number of schemes. However, our borough struggled to keep to our intended programme due to various difficulties. The major contributors are (1) Changes taken place in the project team structure. (2) Loss of experienced design staff and unavailability of suitably experienced replacement. (3) Delays caused in resolving concerns raised by opposing stakeholder groups. However, schemes implemented during 2007/08 received positive feedback from the general public.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
177	1.14	0.64	0.09		232
178	1.21	0.23	0.08		207
179	0.09	0.07	0.07		209
180					0
181					0
182	1.45	0.23	1.08		126
183					0
184					2
185					0
186	0.32				5
187					0
188					0
All Links					13
Multiple Links					2
Total	4.21	1.17	1.32	0	796

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Dunton Road j/w Lynton Road**Scheme Code:** BS\07\LCN\SOU.38

The scheme is located on Link 178, an east west link from London Bridge to the Lewisham borough boundary within the London Borough of Southwark. Cycling through the area involves negotiating the four-arm junction of Dunton Road, Lynton Road, and Willow Walk.

Background - Link 178 crosses Dunton Road between Willow Walk and Lynton Road. At this location, the roads are slightly offset and cyclists must perform a difficult manoeuvre to pass. The volume of traffic on Dunton Road makes it difficult for cyclists to cross in one movement, particularly as a result of relatively high traffic speeds along the straight, at certain times. The cycle refuge on the right hand side of the carriageway, used when exiting Willow Walk, invites conflicts with motorists also turning right from Willow Walk. This busy junction, with high volumes of crossing traffic, requires cyclists to forcefully enter the traffic stream to be able to successfully traverse the junction.

The scheme attempts to improve general safety by reducing conflict between cyclists and vehicles, and reducing traffic speeds, as well as providing better pedestrian facilities.

Design details and considerations - The CRISP study identified the redesign of the junction with a raised table as an appropriate measure to assist cycling. The scheme design removed the existing sub-standard cycling facilities that put cyclists into a poor carriageway position, simplifying the junction movements. The raised table was constructed to kerb height with ramps of 1:15, allowing for local bus movements. Existing traffic islands were redesigned to widen them and align closer to the junction to provide extra protection to cyclists crossing the main road. To the north of the junction, a new traffic island was designed to provide protection from the opposite direction.

Cost: £122,000**Existing conditions:**

- Complicated vehicle movements
- Significant conflict between vehicles and cyclists
- High vehicle speeds
- Poor pedestrian crossing opportunities
- Exposed turning position for cyclists

Scheme details:

- Raised table junction
- Offset crossroads, table approx 60m long

Before**After**

London Borough of Sutton



Borough Officer: **Paul Blunt**

The main focus in 2007 was to establish a whole new route from Rosehill to Sutton, Link 193, as a result of the CRISP suggesting a new direct route rather than the established back road route. I use 'in house' staff to design schemes and progress implementation by using term contractors. The Borough has no recent pedal cycle counts to confirm an increase in cycling but there is evidence of increased parking at cycle parking facilities. Our persistence in providing backup information to justify two schemes to our councillors, when some residents were objecting, helped to progress the schemes to implementation. Our borough struggled to deliver schemes in 2007/08 due to a large programme and insufficient staff resources at the beginning of the year, however, the schemes we did implement on the ground were of good quality and the two schemes that have been carried into 2008/09 are ready to implement early in the new year.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
191	1.11				17
192	0.60	2.00	0.62		70
193	2.69	2.46			108
All Links				1	50
Multiple Links					6
Total	4.40	4.46	0.62	1	251

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Hackbridge Road**Scheme Code:** BS\07\LCN\SUT.09

The scheme is located on Link 192 in the London Borough of Sutton, and involved approximately 55m of advisory cycle lane in both directions along Hackbridge Road, with shared use/segregated areas at both ends. Standard signage and corduroy paving were added where appropriate.

Background - Cyclists would emerge from the riverside Wandle Trail and be faced with crossing Nightingale Road/Hackbridge Road, before continuing on with their journey. A lack of signage and cycling facilities contributed to drivers not being aware of cyclists in the area, and the possibility of new cyclists not being aware of the continuation of the route.

Works at this site sought to compliment other schemes already carried out on the spur to Hackbridge Station. Initially, a concept was developed which would create a crossing point/refuge island, however, site specific constraints led to a reconsideration of alternative options, and agreement on this scheme as the final design.

Design details and considerations - The scheme involved introduction of signage (diag. 950, 951, 956 and 957), corduroy paving (grey), and application of green antiskid surfacing on the existing advisory cycle lane with the marking re-marked on the completion of the surfacing.

Advisory cycle lanes have increased safety, raised driver awareness and guide cyclists along the link alignment, whilst the shared and segregated paths have reduced the chance of potential conflicts with pedestrians.

Feedback - Minor issues regarding the use of signage were overcome, and the scheme has been generally well received by key stakeholders.

Cost: £30,000**Existing conditions:**

- Poor signage
- Lack of driver awareness of cyclists
- Poor route delineation
- Difficult road crossings

Scheme details:

- Cycle lanes
- Shared Use footpath

Before



After



After



London Borough of Tower Hamlets



Borough Officer: **Ashraf Ali**

The Transportation and Highways division of LB Tower Hamlets is structured on a project management basis, with the Project Manager for Sustainable Initiatives being responsible for the entire cycling portfolio including cycle infrastructure, promotion, training and cycle awareness. I sit within the Safety and Sustainability Group and can draw on a pool of Engineers and Designers within that group, according to my resourcing requirements for delivery of cycling projects including the LCN+ projects. We also use external consultants to undertake any feasibility studies, transport modelling assessments and Cycle Route Implementation & Stakeholder Plan (CRISP) studies.

The challenges faced whilst delivering cycle facilities in 2007/08 along Cable Street have been the vast number of statutory undertakers works in the area and development of innovative design solutions to satisfy the needs of the cyclist without compromising on

road safety. We had to work closely with the utility companies and have regular site meetings to efficiently coordinate works. Procurement for special works (demolition of the garages) and consultation on the Hanbury Street project was also a challenge. The scheme was not on the public highway and during procurement we found there was a lack of interest from specialist companies due to the small scale but technical complexity of the project. Eventually we allocated the works to different contractors on their respective speciality for example appointing all lighting works to a lighting contractor, railings/fencing contractor, footway/resurfacing contractor and landscape contractor. Land take, residents parking spaces and access issues made consultation with the local residents, Tenants Association and the local Housing Association crucial. We consulted on several design options and presented to residents at various TA meetings, engaging them at every stage but most importantly ensuring their requirements were transparently considered in the design process. We have a strong Local Strategic Partnership structure which underpins all the Council's work and means that we are in close contact with the Police and PCT. This enables us to take a wider view of a locality than simply focussing on provision of a cycle route. The demolition of the Hanbury Street garages is a case in point as this involved working with the Housing Office and local stakeholders, and the result has turned an anti-social behaviour hotspot into a pleasant route which has opened up the whole area.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
194					0
195		0.20	0.20		425
196		0.33	0.33		60
197	0.11	0.33	0.42		216
198					0
199					220
200					0
260					0
Total	0.11	0.86	0.95	0	921

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Hanbury Street**Scheme Code:** BS\07\LCN\THA.12

The scheme is located on Link 197, Hanbury Street (East End - Greatorex Street to Vallance Road Section), in the London Borough of Tower Hamlets. Hanbury Street was a narrow alleyway, bounded by the high brick rear walls of a row of housing estate garages.

Background - The route was not an attractive option for either pedestrians or cyclists. The cycle lane itself was very narrow, the alleyway approximately 1.5m wide. Barriers halfway along the narrow alley required all cyclists to dismount. There were seven garages with the wall backing onto the walkway making it very dark and dull area for pedestrians and cyclists to use, as well as creating an unsafe environment, particularly at night due to a high level of anti-social behaviour in the area.

The area was generally avoided by non-motorised users, who preferred to cross the road and bypass the area.

Design details and considerations - The design was developed in consultation with both the council housing estate and local residents, with the agreed approach being to demolish seven existing car garages, and relocate the parking spaces. The result was the creation of significantly widened space containing a 3m cycle lane and 2m pedestrian path. Two trees were also removed to create open space and improve visibility, promoting natural surveillance for reduced anti-social behaviour.

Improvements included construction of the new walkways and resurfacing the existing garage area, additional lighting, drainage works, planting trees, signage and road marking.

Feedback - The local cycle campaign group has been very positive towards the scheme, noting that it has vastly improved facilities for cyclist. It has been reported by several stakeholders that the scheme has largely put a stop to anti-social behaviour and removed conflict between pedestrians and cyclists.

Cost: £150,000**Existing conditions:**

- 1.5m cycle path with physical barriers
- Poor security, visibility and lighting
- Pedestrian / cyclist conflict
- Unattractive route avoided by majority of cyclists and pedestrians

Scheme details:

- Removal of garages, replacement fencing
- 3m cycle track
- 2m pedestrian path
- Additional lighting
- Improved public space, landscaping and drainage
- Improved signage and road marking

Before



After



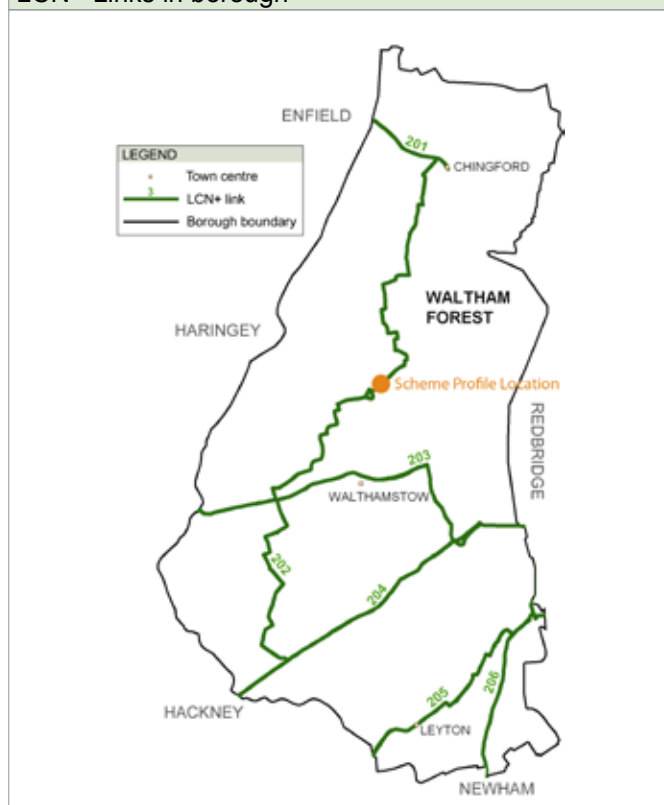
London Borough of Waltham Forest



Borough Officer: **Gina Harkell**

The main work this year has been to improve existing facilities on the quiet route from Chingford to Hackney and 3 miles of cycle lanes on Forest Road. As usual, the engineering work has been carried out by our in-house engineers. Resources continue to be a problem but we now have two engineers working on design and another on the construction of schemes on the ground. Maintenance of existing facilities is hard to keep up with as we now have a network of 22 miles of cycle lanes on main roads and 20 miles of quiet routes where directional signs need to be constantly monitored and rectified. Cycling is still increasing with a rise of 93% on 10 screenlines between 1998 and 2007. The local LCC are consulted on all traffic schemes which may affect them, not just specifically cycle schemes.

LCN+ Links in borough



Black Path cycle path £20k



Essex Road cycle access £15k



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
201					0
202		2.74	2.13		145
203					132
204					70
205					11
206					0
Multiple Links					10
Total	0.00	2.74	2.13	0	368

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: South Access Road**Scheme Code:** BS\07\LCN\WFO.13

The scheme is located on Link 202 in the London Borough of Waltham Forest.

Background - South Access Road runs through an industrial area where there are relatively low traffic flows. The CRISP study highlighted the need for improvements to the area in general but particularly the poor shared-use path that cyclists and pedestrians were meant to share.

Due to the nature and location of the existing facility, there were problems with debris which was always on and around the path. Access onto the path involved a sharp turn, increasing the possibility of conflict with pedestrians whilst the path itself was uneven and cluttered with bollards, telegraph poles and lamp columns that hindered cyclists.

Design details and considerations - The main consideration during the design stage was to create adequate room for comfortable cycling and allow road sweepers to access the cycle track, whilst preventing unauthorised vehicles from using it as a short cut. The track also had to be wide enough to accommodate two-way cycling with flaring at both ends so that cyclists could enter and exit the track safely and without having to make tight turns.

In order to implement a scheme that met stakeholder expectations, whilst preventing unauthorised vehicles from accessing the cycle track, more room was gained by cutting through a grassed road closure that was bordered by trief kerbs. The old shared-use path was converted to a footpath with a two-way cycle track built alongside it. Both were resurfaced to allow for improved comfort and the kerb reinstated, along with bollards at either end of the track, to stop motor vehicles gaining access. A slight curve and drop kerbs at both ends allows cyclists to use the track without losing momentum and the segregation between cycle track and footpath minimises conflict between cyclists and pedestrians. To complete the area, and minimise damage to the surroundings, the grass verge was reseeded and a drop kerb used to allow access for grass cutting.

Feedback - Waltham Forest Cycling Campaign were pleased with the efforts to overcome the South Access Road barrier.

Cost: £15,000**Existing conditions:**

- Low traffic flows
- Generally poor cycling conditions
- Poor quality shared use path with uneven surface and excessive amounts of street furniture
- Debris on the path

Scheme details:

- Conversion of shared-use path to footway
- Two-way cycle track
- Resurfacing
- Drop kerbs
- Landscaping



London Borough of Wandsworth



Borough Officer: **Dalton Cenac**



The focus of 2007/08 has been on the completion of our CRISP studies and to progress design works and obtain Member approval for CRISP recommendations in preparation for significant scheme delivery in 2008/09. The main issue to enable successful delivery of these projects has been the management of staff resourcing and retention of staff. To assist, external consultants were engaged to complete the final CRISP study. Consideration regarding the future use of external consultants on an ad-hoc basis where necessary for design works has been undertaken to ensure that we can fully utilise our allocation and meet our commitment to complete the LCN+.

Link 209 Queenstown Road is the busiest cycle route in the borough and provides direct access for commuter cyclists heading into central London with significant

concentrated morning and evening peaks. Design works were completed and committee approval obtained for a continuous cycle lane/track for implementation in 2008/09. Statutory consultation has commenced. Cycle parking supports the continued growth of cycling in the borough. In addition to the on-street facilities provided in 2007/08, the provision of secure cycle parking in housing estates, parks and open spaces is being investigated in 2008/09. Continued asset management funding this year has provided further comfortable and consistent surfaces for cyclists in addition to improved signage and road markings. We continue to consult and work constructively with the Wandsworth Cycling Campaign on the development of all LCN+ schemes and "missing links" in the cycle network. Measures including cycle training, education and publicity to raise road safety awareness remains a priority, with a range of programmes provided to accommodate identified need.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
208					20
209	0.69	0.69			40
210					0
211					5
212	0.11	0.11			24
213	0.66	0.66	0.66		15
214					0
215					0
216					0
218	0.33				20
219					0
270					0
273					0
All Links					31
Multiple Links				1	15
Total	1.79	1.46	0.66	1	170

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: Queenstown Road (design approach)

Scheme Code: BS\07\LCN\WAN.02

The scheme is located on Link 209, a route encompassing Queenstown Road between Chelsea Bridge and Lavender Hill. It is the busiest Link in the London Borough of Wandsworth, which offers access to Victoria via Chelsea Bridge.

Background - As identified by CRISP stakeholders on the CRIM, the existing southbound cycling facility on the footway is unsatisfactory because of its discontinuous nature and multiple conflict points at crossovers and side roads. Works are required to improve the general safety of the route, and provide a more continuous facility.

Design details and considerations - The existing cycling facilities provided in the area are deemed unsuitable, and replacement with an on-road facility more appropriate. The existing cycle track and southbound shared use footway are to be replaced with a widened carriageway and continuous mandatory on-road cycle lanes in the southbound direction, significantly improving the continuity of the route. Operating times for the northbound bus lane are to be extended, offering northbound cyclists an extended use period of the priority lane.

The addition of the on-road cycle lane involves a widening of the carriageway, which will require significant relocation of statutory utilities in the footway.

Cost: £40,000

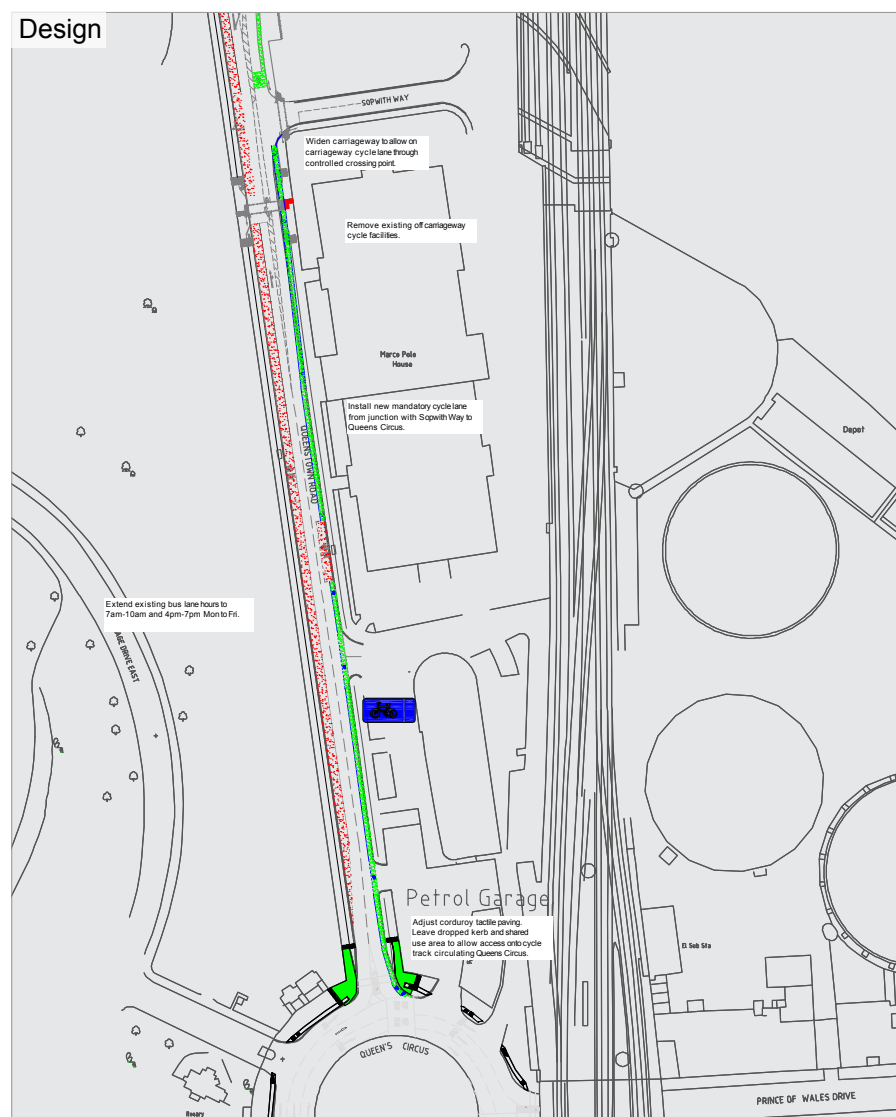
Existing conditions:

- High traffic volumes (highest in Wandsworth)
- Poor cyclist crash history
- Shared use southbound off-road path
- Interrupted link with conflict points
- Insufficient on-road carriageway width for mandatory lane

Scheme details:

- Widen carriageway to enable on-road facility
- Mandatory on-road cycle lane southbound
- Extend operating hours of northbound bus lane

Design



Before



City of Westminster



Borough Officer: **Bob Clark**



2007/08 saw the completion of the last CRISP report in Westminster with the main focus shifting into the design and implementation of the CRISP recommendations. We have also expanded our cycle team along with our consultancy partners who have now allocated a dedicated team leader in their team with the result that we achieved a 50% expansion of our LCN+ programme over the previous years.

Cycle growth has been spectacular in Westminster with certain routes, such as Upper Brook Street parallel to Oxford Street having peak flows of over 400 cycles per hour, accounting for almost 50% of all vehicles using that street. On street cycle parking provision is now over the 5000 mark within the borough and we are still experiencing

massive demands for more cycle parking throughout the whole of Westminster. Every cycle scheme within Westminster, especially in the West End, has been a large challenge. There is a growing demand for more cycling facilities in what is already a heavily congested area for all sorts of traffic including very heavy pedestrian flows. Each Link, and indeed sections within Links, have their own specific problems needing their own specific solutions. As cycle numbers have increased so has the demand for cycle parking. To cope with this demand it is hoped that the cycle hire project will take off to provide an additional solution to the continuing growth in cycling. Another issue being tackled in the West End is how to deal with the myriad of narrow one-way streets. This will involve joint studies with area based teams with a view to possibly change the network, or, where roads are wide enough, possibly reverting to two-way flows. Watch this space! The additional resource both within Westminster City Council and its joint venture team of consultants has seen a big jump in performance with the result that the next two years should see the development on the ground of most of the LCN+.

LCN+ Links in borough



Network Activity Summary Table

Link Number	Feasibility (km)	Design (km)	Implementation (km)	Asset Management (km)	Cost (£k)
221	0.19				31
222	1.68		1.68		29
223					24
234					0
235	0.02				8
237	0.46	0.02			280
238					0
242	0.71		0.72		408
243	0.28				80
244					0
All Links					94
Multiple Links	3.76	3.01	0.14	2.15	303
Spur					25
Total	7.10	3.03	2.54	2.15	1,282

For a comprehensive schedule and map of schemes with descriptions, photographs and locations please go to the project website at www.londoncyclenetwork.org.uk and follow the links via the annual report page.

Scheme Profile: **South Carriage Drive j/w West Carriage Drive** Scheme Code:BS\07\LCN\WES.17

The scheme is located on Link 237 in the City of Westminster, between Hyde Park and Kensington Gardens.

Background - Coalbrookdale access to Kensington Gardens forms an intersection with West Carriage Drive and South Carriage Drive. The junction is signalised though there are no dedicated pedestrian or cyclist phases. The existing junction layout makes it difficult for a variety of movements at the junction of West Carriage Drive and South Carriage Drive. There are no ASLs at the stop line approaches to the junction. The carriageway is red-surfaced. Footways north of the intersection feature cycle lanes.

The junction has been problematic for the park. Many vehicles make illegal manoeuvres and it is very difficult for pedestrians and cyclists to negotiate. It is a major entrance to the park from Exhibition Road. It also forms important connections to the cycle routes in the Park and LCN+ routes. The infrastructure for the junction was removed to accommodate the Tour de France Prologue and it was at this point it was thought that it could be significantly improved for cyclists taking on board the CRISP recommendations.

Design details and considerations - The introduction of two toucan crossings was identified as the most appropriate way to assist cyclists to cross between Kensington Gardens, South Carriage Drive and West Carriage Drive. These signal installations were complimented by the upgrade of street furniture and an increase in the shared-use space on the junction's north-east corner. Additional space was provided for cyclists and pedestrians, and the entrance to the park generally enhanced for all users, simplifying access.

The concept design was drawn up just before the Tour de France 2007. Surveys and modelling of the junction, including Exhibition Road, were undertaken and detailed designs prepared. There were many discussions and design alterations before agreement was reached on a satisfactory solution to the many complex interrelated issues. The main constraint was the proximity to the junction on Kensington Road and the limited footway widths.

The final design included the upgraded junction and signals, a footway widened to include a cycle path, diverted footpath, and amenity works enhancing shrubbery, landscaping and an attractive wall. The traffic signals have been designed to be removable in preparation for the 2012 Olympic triathlon – the cycle route will be running through this section of the park.

Feedback - The improvements have been welcomed as having had a positive impact on the junction.

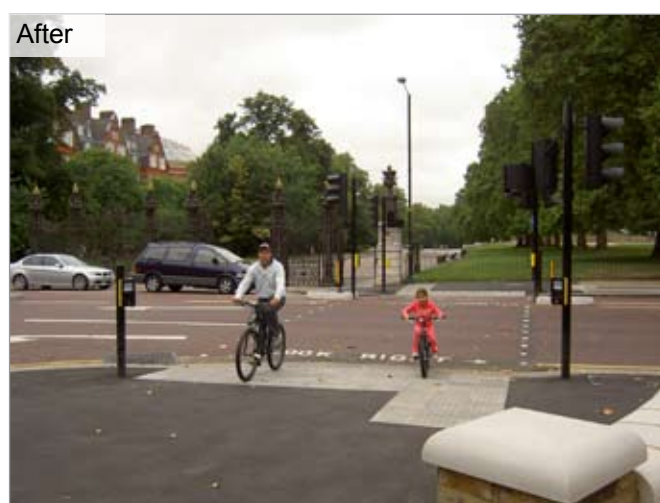
Cost: £250,000

Existing conditions:

- Signalised junction without dedicated phases for pedestrian or cyclist
- Junction geometry poses difficulties for several popular movements
- No ASLs at stop line approaches
- Cycle lanes provided on northern footways
- Difficult park access for non-motorised users

Scheme details:

- Introduction of two toucan crossings
- Major junction upgrade
- Upgrade of street furniture
- Increased shared-use space
- Improved junction approach for pedestrians and cyclists



TLRN Scheme Profile: **A20 j/w Kippington Drive**

Scheme Code: TS.044.0002983

The scheme is on the A20 near the junction of Kippington Drive and King John's Walk, located on Link 61 in Greenwich and Link 25 in Bromley.

Cost: paid 2006/07 - £150,000

Existing conditions:

- Green Chain Walk
- London Inner Orbital Path
- 40mph dual carriageway with no formal crossing point

Scheme details:

- Staggered toucan crossing
- Jointly funded by TfL Walking and Cycling budgets

Background - Local cyclists have been calling for a toucan crossing at this point for many years. The A20 bisects King John's Walk which is on the Green Chain Walk and is used by walkers and cyclists travelling between Greenwich and Bromley.

Design details - The scheme reduces severance of A20 by providing a formal crossing point, making the LCN+ and pedestrian routes more accessible, and enabling continuity of good conditions for cycling and walking.

Feedback - Scheme will be subject to outcome monitoring in future years.

Before



After



Before



After



TLRN Scheme Profile: **A12 j/w M25 Slip Road**

Scheme Code: TN.022.3000221

The scheme is in Havering at the junction of the A12 and the M25, located on Link 90.

Cost: £150,000

Existing conditions:

- No formal crossing facilities
- Motorway slip road
- High traffic flows
- Fast moving traffic
- Demand by cyclists for safe route

Scheme details:

- New controlled crossing
- Shared pedestrian and cycle path
- Delivered in partnership between TfL and the Highways Agency

Background - The scheme was identified by stakeholders as part of the Link 90 CRISP in June 2005 as a means of linking the shared pedestrian and cycle path facility in Havering with the Essex County Council facilities on the other side of the M25. At the time no formal crossing was present and yet it was obvious that a route was sought due to the formation of an unofficial route across the grass under the flyover.

Design details - TfL worked with the Highways Agency on this project as the motorway junction was being upgraded at the same time.

Before



After



TLRN Scheme Profile: **Upper Richmond Road Cycle Lanes**

Scheme Code: TC.009.0002531

The scheme is on Link 208 in Richmond and runs between Priory Lane and Roehampton Lane on the A205 – Upper Richmond Road.

Cost: £100k

Existing conditions:

- Single Lane carriageway with traffic queuing in two lanes on junction approaches
- Bus Stops
- High traffic volumes
- “Squeezing” effect on cyclists

Scheme details:

- 1.5m cycle lanes
- Formalise road function
- Redistribution of carriageway space

Background - In the CRISP study which took place in November 2005 all stakeholders agreed that introducing a cycle lane was necessary as the heavy traffic flows and wide single lanes meant that vehicles were forming two lanes and reducing the amount of road space available for cyclists.

Design details - The introduction of cycle lanes has formalised the function of this stretch of highway as a single lane carriageway. Capacity effects were anticipated but the positive effects on cyclists, who are now able to use the carriageway, and pedestrians, who no longer need to share the pavement with cyclists using it illegally, were great enough to overcome these concerns.

Feedback - Reduced pavement cycling by adults has been anecdotally reported.

Before



After



After



Section Three: Project Management

9 - Project Management

9.1 - LCN+ Project Achievements 2007/08

- Completion of the Programme to Completion; a fully scoped schedule of works for the completion of the entire network.
- Significant conversion of existing Link Map data to the Integrated Transport Network (ITN) road centreline dataset – for more accurate mapping and spatial recording of network completion.
- Nominated for National Transport Awards in the Technology category for the Scheme Information Management System (SIMS).
- Successful upload of Funding Proposal into the new TfL Borough Portal, on behalf of the Boroughs.
- Achieved full spend across the programme.
- Undertook data analysis to inform TfL business case to support cycling in London.
- Responded to 100% of all TfL and Borough requests on time and to schedule.
- Maintained highest standards of project management in terms of methodology, innovation and support.

9.2 - Project Conferences

During 2007/08 two conferences took place, the Borough Officer Workshop in July 2007 and the launch of the Programme to Completion in November. Both events involved Borough Cycling Officers and TfL engineers working together to discuss issues across the project.



9.3 - About the LCN+ Project Management team

The LCN+ Project Management team at Camden Consultancy Service comprises of a project director, project manager, project co-ordinator, three sector managers, four project officers, one GIS officer, One Graphics/ GIS officer, and one administration officer. The team is employed by CCS within the Culture & Environment Directorate of the London Borough of Camden.

Camden Consultancy Service (CCS) specialises in progressive transport planning, design and implementation. Our service comprises of project managers, engineers, technicians, CAD operators, IT and support staff. We are engaged in the management and improvements of road networks in the heart of London. One of our key roles is project managing the delivery of the London Cycle Network Plus (LCN+) with the support of the 33 London boroughs and in partnership with Transport for London (TfL). We currently hold the TfL support Services Highway Maintenance Works (Central Area) contract. CCS also administers the Local Authority Cycling Association, a national organisation whose members exchange information on best practice in terms of cycle facility design and implementation.

In addition to the LCN+ project management, the CCS Cycling Team undertake cycle facility concept development and design, Cycle Route Implementation and Stakeholder Plan (CRISP) studies, and Cycling and Road Safety Audits.



Left to Right: Lailaa Jooma, Jon Wheatley, Brian Deegan, James Guy, Steve Cardno, Luke Stewart, Brad Hamilton, Martin Blick, David Oelman, Julie Reid, Kristian Turner, Jonathan Chen, Chris Williams, Rob Curtis, Johnny Tyson.

9.4 - About the TfL Cycle Programme Team

The Cycle Programme Team (CPT) is the primary delivery unit in the Cycling Walking and Accessibility group of TfL/Surface Transport responsible for implementation of cycling schemes on TLRN and borough roads, and off-road land owned by boroughs and other managing authorities. The role of CPT is to work with stakeholders to identify projects, routes and networks and then to assemble business cases, funding requirements, project management and supply chain resources to realise the schemes so identified.

Part of this work includes the recording and reporting on scheme and programme outputs, monitoring of the scheme outcomes and informing future plans and designs to optimise funding choices.

The CPT acts as Senior Responsible Owner, providing funding authority and delivery assurance for schemes forming the TLRN component of the LCN+ Programme and non LCN+ Programme, through its internal clienting operation.



Left to Right: Iain Houston, Robert Semple, Nick Chitty, Shaun Benn, Jessica Ellery, Khalid Parvez, John Nicholson, Lee Clarke, Peter Treadgold.

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