#### **Transport for London**



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22 January 2007

Dear reader

#### London Cycle Network Plus (LCN+) High Risk Barriers (Infrastructure)

As you will be aware, the Mayor of London has set a target of an 80% increase in cycle flows on London's roads by 2010 against the baseline represented by the year 2000. Cycle flows have already risen by 70% over figures for the year 2000, so the target is now close to being achieved, four years early. In response to this, the targets are currently under review by the GLA.

The achievement of these targets depends to a large extent on completion of the London Cycle Network Plus (LCN+), a Mayoral commitment encapsulated in TfL's London Cycling Action Plan (LCAP). Around 50% of the planned 900km network has been implemented. Funding is included in the revised TfL business plan for the completion of 850kms of the planned network by 31 March 2010. To complement this, we are reviewing other funding sources and efficiencies to maximize the delivery of the network by that date. It should be noted that some sections of the network (in difficult locations) will need to be delivered later and it is these locations which make up the remaining 50kms.

There are some major challenges to providing a convenient, continuous and safe network. In order that these can be addressed in good time to deliver network benefits at the earliest opportunity, our strategy is to focus attention on finding solutions at the specific locations where the challenge is greatest. Using information obtained from the Highway Authorities and from CRISP reports, the lead borough for LCN+ (Camden) has prepared the enclosed report. The substance of the report is a listing of locations where the delivery of good conditions for cycling by 2009/10 is rated as being at high risk. Provision of good conditions at these locations is vital to the success of the project.

The purpose of this letter and the attached report is to emphasise the need to progress work at the high risk locations and to seek your active support for the effort to ensure that progress can be made in addressing those under your control. TfL has prioritised works at these locations in the allocation of scheme funding for 2007/08. Where works can be brought forward, we will offer an early allocation of funds within the financial year.

Funding and proposals should be developed with support from TfL's Cycle Programme Team for locations on the TLRN and the LCN+ Project Management Team at LB Camden for locations on borough roads. Development of proposals is to be made with reference to CRISP reports.

Tracking the planning and resolution of infrastructure barriers will be developed by the LCN+ Project Management team. Information on progress will be sought from Highway Authorities. Periodic reviews will be arranged when you will have the opportunity to propose amended priorities to include barriers currently rated medium or low risk and hence recorded outside this report.

Your co-operation is appreciated in addressing these barriers. If you wish to discuss this matter further please contact Peter Treadgold, the Cycle Programme Manager in the Directorate of Road Network Performance, who is available on 7027 9273 or PeterTreadgold@streetmanagement.org.uk.

Yours sincerely,

Please consider this letter as signed

Nick Morris
DRNP & Traffic Manager

## **London Cycle Network Plus (LCN+)**

High Risk Barriers (Infrastructure) Report

# Camden Consultancy Service LCN+







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#### November 2006

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Status: Final Issue no: 1 Date: 30/11/2006

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### 1. Executive Summary

The 900km network of strategic cycle Links that comprise the London Cycle Network Plus (LCN+) are programmed for completion by the end of 2009/10. To date approximately half of the network has been delivered. Achieving full completion of the LCN+ by this time will require renewed dedication by Transport for London (TfL) and the 33 London Boroughs.

This report has identified 140 high risk infrastructure barriers ranging from complex and busy junctions and gyratories to narrow road spaces, bridges and one way streets. There are 12 locations that are duplicated because they are on borough boundaries and included under both Authorities. Overall, approximately 50% of the high risk barriers are on the TLRN.

Generally the performance of the project has improved over the last few years. Budget increases have been approved, and to date fully utilised, and this financial performance has been achieved in tandem with acknowledged improvements in quality.

The barrier assessment was undertaken in close partnership with the boroughs and TfL Area Teams. The LCN+ Project Management Team also assessed the barriers against a 'Risk Rating' methodology (refer to Appendix A). The Risk Rating is defined as:

Risk Rating (R) = Probability of non-delivery (P) x Impact of non-delivery (I)

**Table 1: Risk Rating Categories** 

Risk Rating Category	(P x I)
1	НН
2	HM/MH
3	MM
4	LH/HL
5	LM/ML
6	LL

H = High
M = Medium
L = Low

Many of the barriers identified represent points on the network. They may be only short in length (e.g. the width of a junction), but the effect of the barrier may extend well beyond the point and this will have an impact on the accessibility and usability of the network.

The barriers in this report have been identified with the purpose of enabling responsible authorities to address them by 2009/10. It is recognised that reasons may arise (such as development control) that can affect this timescale. In such cases mitigating measures will be required until a permanent solution can be delivered.

Therefore it is likely to be necessary to prioritise and commence detailed design work on the most difficult of these projects well in advance in order to meet the programme end date. A mechanism to track the planning and resolution of these barriers will be deve-loped. Once in place, information on progress will be sought from the highway authorities.

## 2. Background

To identify barriers to the delivery of the LCN+, TfL's Cycling Centre of Excellence (CCE) ran a series of 'Barrier Workshops' in late September and early October 2005.

In total 26 out of the 33 London Boroughs were represented. Six delegates attended from the North, South and Central TfL Area Teams (refer to Appendix B).

The workshops were focussed on barriers to the completion of the LCN+ by 2009/10. The workshops did not aim to identify all potential barriers, nor attempt to establish ways in which to mitigate or resolve these. This will be undertaken at a later stage and is initiated by this report.

Following the workshops a part-populated barrier schedule was sent to all relevant borough and TfL Area Team representatives for completion.

The response rate averaged 50 per cent. Hence, the LCN+ Project Management Team (LB Camden) have added considerable input to this task, based on our knowledge of the network, discussion and liaison with borough cycling officers and participation in all Cycle Route Inspection and Stakeholder Plan (CRISP) studies.

It is considered that the information collected to date is an accurate identification and assessment of the key barriers as they currently stand.

The barriers identified in this report represent a risk to the completion of the LCN+. They do not include difficult locations that we anticipate can be resolved through current mechanisms within the project timescale.

The information collected through the workshops is complementary to and not a replacement of the CRISP process, therefore, some identified barriers may be addressed ahead of the current CRISP study timetable.

## 3. Barrier Maps

The barriers have been plotted on LCN+ Sector Maps (refer to Appendix C). Mapping has only been carried out for red High Risk (Infrastructure) Barriers on an LCN+ Link:

- Map 1: Central Sector
- Map 2: North West Sector
- Map 3: North East Sector
- Map 4: South East Sector
- Map 5: South West Sector

### 4. High Risk Infrastructure Barriers

The Barrier Reference is a location specific identifier made up of four parameters in the following order:

- 1. Barrier status (Red = High Risk)
- 2. Borough Reference Number (eg Merton = 22)
- 3. Unique Borough Barrier Number
- Road Network (TLRN, Borough or both TB).

Barriers were also classified against 7 categories and barriers could be a combination of these.

- A Access/permeability issues preventing direct passage for cyclists
- **C** Corridors with adverse moving motor traffic conditions and/or and kerbside/amenity complexities
- **G** Busy/complex Gyratories with poor conditions for cycling
- J Busy/complex Junctions with poor conditions for cycling
- L Legal restrictions preventing legitimate access for cycling
- **S** Severance causing discontinuity or long deviation to cycle route
- W Width/space restrictions preventing good conditions for cycling

Table 2: High Risk (Infrastructure) Barriers (continues overleaf)

Barrier Reference	Borough Name	LCN+ Link	Barrier Location	Barrier Type
R.16.01.B	Barking & Dagenham	2	Northern Relief Road crossing	J
R.30.01.B		5	A1000 j.w Station Road	J
R.30.02.B		5	A1000 j.w. Totteridge Lane/Oakleigh Road North	J
R.30.03.B		5	A1000 North Finchley j.w. A598	J
R.30.04.B		5	A1000 North Finchley High Road between A406 & A504	С
R.30.05.B	Barnet	6	Templehof Bridge	A,C
R.30.06.TB		6, 10	A5 j.w A406 - Staples Corner (borders with LB Brent)	J,S
R.30.07.B		8	Crossing of LUL at County Gate (no bridge at present)	S,L
R.30.08.B		10, 16	A5 - Burnt Oak Broadway, Edgeware Road, The Hyde, West Hendon Broadway	С

Barrier Reference	Borough Name	LCN+ Barrier Link Location		Barrier Type
R.18.01.B	.B Bexley 12 Bexleyheath		Bexleyheath Town Centre (relief road)	С
R.18.02.B		12	Crayford Town Centre	G, J
R.28.01.B	Brent	17	A5 - Cricklewood Broadway, Kilburn High Road	С
R.28.02.TB		17, 18	A5 j.w A406 - Staples Corner (borders with LB Barnet)	J,S
R.19.01.B		20	Crystal Palace Road j.w Westwood Hill	J,L
R.19.02.T	Bromley	22	Park Road & Widemore Road - access to Bromley Town Centre	A, J
R.19.03.B		22	Westmoreland Road j.w. High Street - access to Bromley Town Centre	J
R.02.01.B		27	Tottenham Court Road	C,L
R.02.02.T		27	Camden High Street	C,L
R.02.03.T	Camden	27	Hampstead Road and Euston Road	J
R.02.04.B		27	Kentish Town Road/Highgate Road/ Fortess Road	J
R.02.05.B		50	Bloomsbury Way gyratory	G, L
R.00.01.T		32	Blackfriars Bridge - north junction	C,A
R.00.02.T		32, 33	Ludgate Circus	J
R.00.03.B		33	Cannon Street, Queen Victoria Street, Friday Street	G
R.00.04.T	Corporation	34	Aldgate gyratory (borders with LB Tower Hamlets)	G
R.00.05.B	of London	34	Bank junction	J
R.00.06.B		34	Smithfield's Market	G
R.00.07.T		35, 280	Monument junction (including approach to London Bridge)	A,J
R.00.08.B		280	Mark Lane & Crutched Friars	L
R.00.09.T		280	Tower Gateway	G
R.20.01.T		43	Lombard roundabout	J
R.20.02.B	Croydon	44	Wellesley Road and North End access to Croydon Town Centre	A,L

Barrier Reference	Borough Name	LCN+ Link	Barrier Location	Barrier Type
R.27.01.B		47	Church Road j.w Mandeville Road	J
R.27.02.B		47	Mandeville Road j.w. Eastcote Lane	J
R.27.03.T		47	Target Roundabout	J
R.27.04.B		47	Petts Hill Bridge (borders with LB Harrow)	W
R.27.05.B	Ealing	51	Southall High Street	С
R.27.06.T		249	A40 crossing at Lynwood Road (Hanger Lane by-pass)	S
R.27.07.T		249	A40 Hanger Lane gyratory	G
R.27.08.B		249	Ealing Broadway (The Mall to Windsor Road)	C,W
R.32.01.TB		52,53	A10 Southbury Road j.w A110 Great Cambridge Road	J
R.32.02.B	Enfield	53	A110 Slades Hill (Bridge over Salmon's Brook)	S
R.32.03.B		53	Enfield Town Centre	С
R.32.04.TB		54	Green Lanes j.w A406	J
R.06.01.B		57	Greenwich Town Centre	G
R.06.02.T	Greenwich	58	A20 j.w. Green Lane	J
R.06.03.B		61	Eltham High Street	С
R.04.01.B		66	Balls Pond Road crossing west of Kingsland High Road (borders with LB Islington)	J,W
R.04.02.T		69	Seven Sisters Road j.w Amhurst Road	J
R.04.03.T	Hackney	71	Seven Sisters Road j.w Green Lanes (Manor House junction)	J
R.04.04.B		250	Eastway (from Hackney Wick Station to j.w Osborne Road)	A,L
R.04.05.B	]	250	Cassland Road	A,L
R.11.01.B		73	Shepherds Bush Green gyratory	G
R.11.02.B		74	Hammersmith Broadway gyratory	G
R.11.03.T	Hammersmith & Fulham	73	Holland Park roundabout	J
R.11.04.T	α Fullidili	74	A4 corridor (LB Hounslow boundary to Hammersmith Broadway)	A,C
R.11.05.B		75	Hammersmith Bridge - north approach	A,C

Barrier Reference	Borough Name	LCN+ Link	Barrier Location	Barrier Type
R.31.01.T		84,85	Tottenham Hale Gyratory	G
R.31.02.B		83	Turnpike Lane j.w Green Lanes	J
R.31.03.B	Haringey	83	Green Lanes High Road (Haringey Green Lanes station to Wood Green station)	С
R.31.04.T		79	A10 j.w St Loys Road	J
R.29.01.B	Harrow	87	Petts Hill Bridge(borders with LB Ealing)	W
R.15.01.T	Havering	90	A12 j.w A127 - Gallows Corner	J
R.26.01.B	Hillingdon	93	Uxbridge Town Centre	А
R.25.01.T		99	A312 Hampton Road West j.w A316 Great Chertsey Road (Apex Corner)	J
R.25.02.T		100	B455 Ealing Road j.w A4 Great West Road	J
R.25.03.T		102	A312 The Parkway j.w M4	J
R.25.04.T	Hounslow	102	A312 The Parkway j.w Bath Road (Waggoner's Roundabout)	J
R.25.05.T		102	Bath Road j.w A4 (Henley's Roundabout)	J
R.25.06.B		102	Whitton Road j.w Hounslow BR Station	W
R.25.07.T		103	Kew Bridge - north junction	J
R.03.01.T		107	A503 - Camden Road/Parkhurst Road/ Seven Sisters Road/Isledon Road/ Tollington Road gyratory	C,G
R.03.02.T		107, 108	Rock Street gyratory and access to St Thomas's Road and Finsbury Park and Station	G,L
R.03.03.T	Islington	109	Upper Street/Charlton Place junction	L,S
R.03.04.T		110	City Road, Goswell Road and St Johns Street crossings	J,S
R.03.05.B		248	Balls Pond Road crossing west of Kingsland High Road (borders with LB Hackney)	J,W
R.12.01.TB	1/ 0 0	118, 244	Chelsea Bridge north junction (borders with LB Westminster)	J
R.12.02.B	K&C	117	Hyde Park access from Kensington High Street (Palace Gate)	А
R.23.01.B		121, 124	London Road j.w Cambridge Avenue	J
R.23.02.T	Kingston	121, 211	A3 Robin Hood j.w Kingston Vale	S
R.23.03.B		126	Victoria Street	С

Barrier Reference	Borough Name	LCN+ Link	Barrier Location	Barrier Type
R.09.01.T		131,134, 139	Westminster Bridge - south junction	J
R.09.02.T		132	Waterloo roundabout	J
R.09.03.T	Lambeth	133	Lambeth Bridge - bridge and south junction	A,C,J
R.09.04.T		136	Vauxhall Bridge	A,C
R.09.05.T		127, 128	Brixton Hill j.w Brixton Water Lane	J
R.09.06.B		129, 139	Westminster Bridge Road j.w Bayliss Road	J
R.07.01.B		140	Weirside Depot	Г
R.07.02.T		141, 142	Catford Bridge	J,W
R.07.03.T		142	St Mildred's Road (at rail bridge)	W
R.07.04.T	Lewisham	142	Catford Town Centre	G, L
R.07.05.T		143	Lewisham Town Centre and access to Station	Α
R.07.06.T		143	New Cross Road j.w Queen's Road	J, L
R.07.07.T		275	Deptford Bridge Station	А
R.22.01.B		148	Wimbledon Town Centre and access to Station	Α
R.22.02.B	Merton	149	Raynes Park Station to Kingston Road	L
R.22.03.B	Wichton	150	Mitcham Town Centre	G
R.22.04.T		152	London Road j.w. Central Road	J
R.17.01.T	Newham	155	Bow Flyover/Interchange (borders with LB Tower Hamlets)	J,S
R.17.02.B		155	Stratford Town Centre and High Street	A,C
R.14.01.B	Redbridge	160	Ilford Hill / Chapel Road gyratory	A,G
R.24.01.T		168	Hammersmith Bridge	A,C
R.24.02.B		168	High Street and Broad Street, Teddington	C,J
R.24.03.B		170	Petersham Road	C,W
R.24.04.T	Richmond	171	A316 Richmond Rd jw Clifford Ave (Chalkers Corner)	J
R.24.05.B		174	Richmond Bridge j.w. Hill Street	A,C
R.24.06.T		208	Rocks Lane j.w Queens Ride & Upper Richmond Road (borders with LB Wandsworth)	J
R.24.07.B		167	Kingston Bridge j.w Hampton Court Road	J

Barrier Reference	Borough Name	LCN+ Link		
R.08.01.B	Ivaille	177, 179		Type J
R.08.02.B	_	178	Bermondsey Street	L
R.08.03.T		178,183	London Bridge south side and access to Station	A,J
R.08.04.T	Southwark	181	Elephant & Castle gyratory	G
R.08.05.T	Journwark	183	Rotherhithe Tunnel roundabout	J
R.08.06.T		185	Blackfriars Bridge - south junction	A,C
R.08.07.T		188	Tower Bridge - south junction	A,C
R.08.08.B		182	Bermondsey South Station rail bridge	A,L
R.21.01.T	Sutton	191	A24 London Road crossing (North Cheam)	А
R.21.02.B	Oditori	191,193	Sutton Town Centre access	A,S
R.05.01.T		194	Aldgate gyratory (borders with Corporation of London)	G
R.05.02.T		194	Bow Flyover/Interchange (borders with LB Newham)	J,S
R.05.03.T	Tower	195	Tower Gateway gyratory and Links to the City (includes Tower Bridge approach)	G
R.05.04.T	Hamlets	196	A13 j.w Burdett Road	J
R.05.05.B		196,199	Old Ford Road/Grove Road roundabout	J
R.05.06.T		195	Tower Bridge	A,C
R.05.07.B		197	Hanbury Street (from Commercial Street to Greatorex Street)	L
R.05.08.T		200	A12 pedestrian and cycle bridge crossing	W
R.13.01.B	Waltham Forest	204	Whipp's Cross roundabout	J
R.10.01.T		208	Rocks Lane j.w Queens Ride & Upper Richmond Road (borders with LB Richmond)	J
R.10.02.T		208, 213	Wandsworth Town Centre	G
R.10.03.T	- Wandsworth	210	Battersea Bridge	C,W
R.10.04.T	vvariusworth	210	Battersea Bridge Road gyratory (between Prince of Wales Drive and Cambridge Road)	G
R.10.05.B		214	Putney Bridge approach	A,C
R.10.06.B		218	Wandle Trail - Earlsfield Link	L,S

Barrier Reference	Borough Name	LCN+ Link	Barrier Location	Barrier Type
R.01.01.B		223	The Strand	С
R.01.02.T		223	Victoria Gyratory (from Buckingham Palace to Victoria Station)	G
R.01.03.T		237	Vauxhall Bridge	A,C
R.01.04.T		238	Lambeth Bridge north junction	A,C
R.01.05.T		239	Westminster Bridge north junction	A,C
R.01.06.B		239	Parliament Square	G
R.01.07.T	Westminster	239	Hyde Park Corner	G
R.01.08.B		243	Bayswater Road (Lancaster Gate gyratory)	G
R.01.09.B		243	Grosvenor Square	G
R.01.10.B		243	Regent Street crossing	L,S
R.01.11.B		243	Noel Street, Hollen Street (Soho)	L
R.01.12.B		244	Waterloo Bridge north junction	A,C
R.01.13.TB		244	Chelsea Bridge north junction (borders with Royal Borough Kensington and Chelsea)	J

### Appendix A: Rating the Risk

To assess the identified barriers, a 'Risk Rating' methodology was developed. The risk rating is a subjective measure of how difficult it will be to overcome the barrier. It is a measure of the probability of non-delivery and the impact on the LCN+ if the barrier cannot be overcome and a scheme is therefore not implemented.

Risk Rating (R) = Probability of non-delivery (P) x Impact of non-delivery (I)

A **high-risk** (Red) rating will indicate a high potential for a barrier not being overcome by 2009/10 and it will have a high impact on the LCN+ network. To resolve these types of barriers by 2009/10 a high degree of attention is required and strategies will need to be put in place now. It may also not be possible to overcome these barriers by 2009/10 and if so, mitigating measures will be required until a permanent solution can be delivered.

A **medium-risk** (Amber) rating will indicate that network delivery by 2009/10 is probable though the impact on the LCN+ will be more manageable if the scheme is not delivered. These barriers will need to be identified now and proposals to manage them could include additional resources, forward programming or intervention at a higher level.

A **low-risk (Green)** rating is a barrier that can be overcome by 2009/10 with no major change in the current plan for delivery and it will be of minimal impact if the barrier is not addressed. There may be a need for additional resource or forward programming to be undertaken to mitigate any impact. These types of barriers are low risk and general strategies such as monitoring, LCN+ Project Management Team support, design options or promotion are some simple ways to ensure these types of barriers are managed.

#### **Below: Risk Rating Matrix**

The 'Risk Rating Matrix' illustrated below presents the combinations of risk depending upon the probability and impact of non-delivery.

Risk Rating (R)	Impact (I)			
Probability (P)	High	Medium	Low	
High	НН	HM	HL	
Medium	MH	MM	ML	
Low	LH	LM	LL	

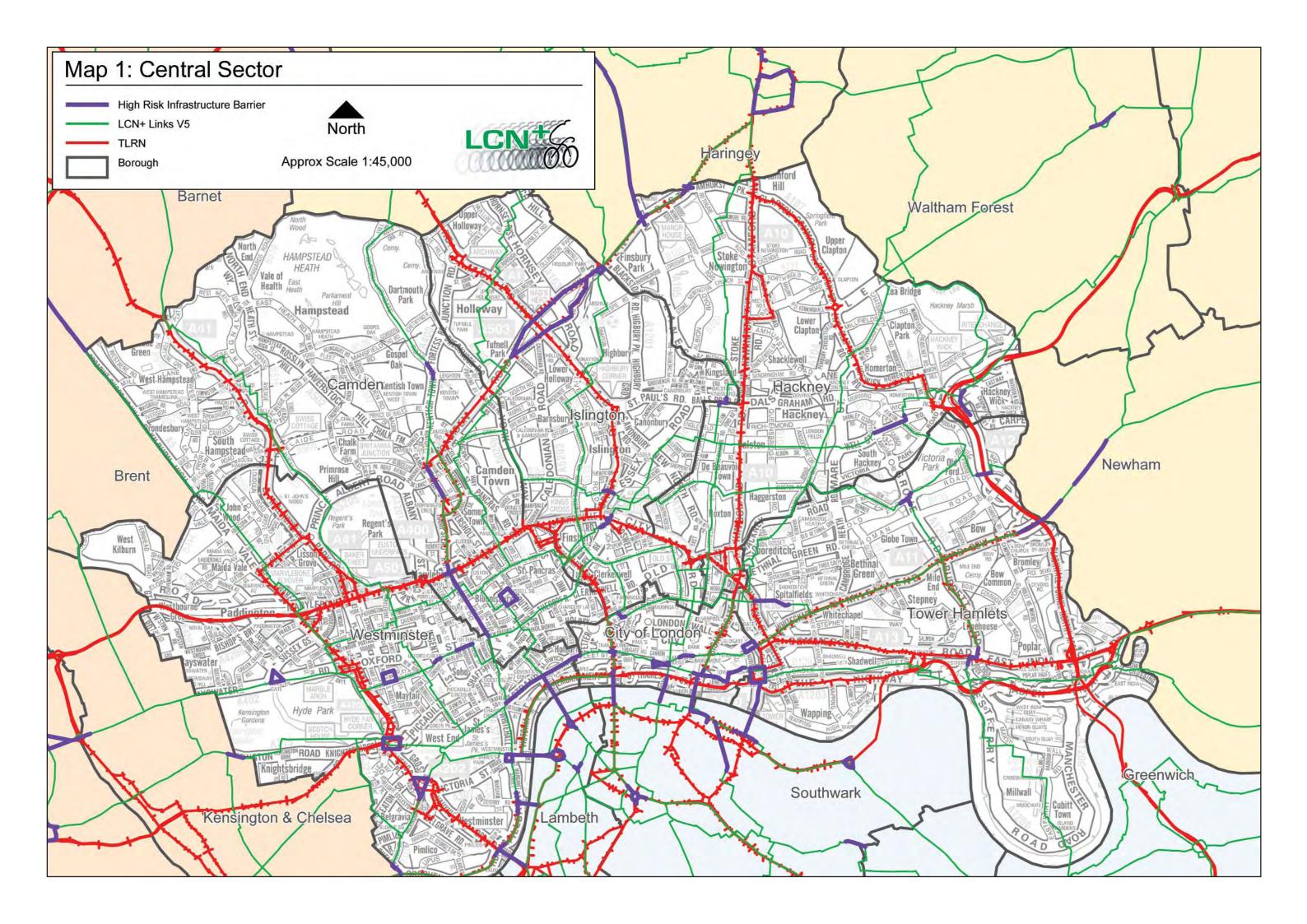
Risk Rating Category	(P x I)
1	HH
2	HM/MH
3	MM
4	LH/HL
5	LM/ML
6	LL

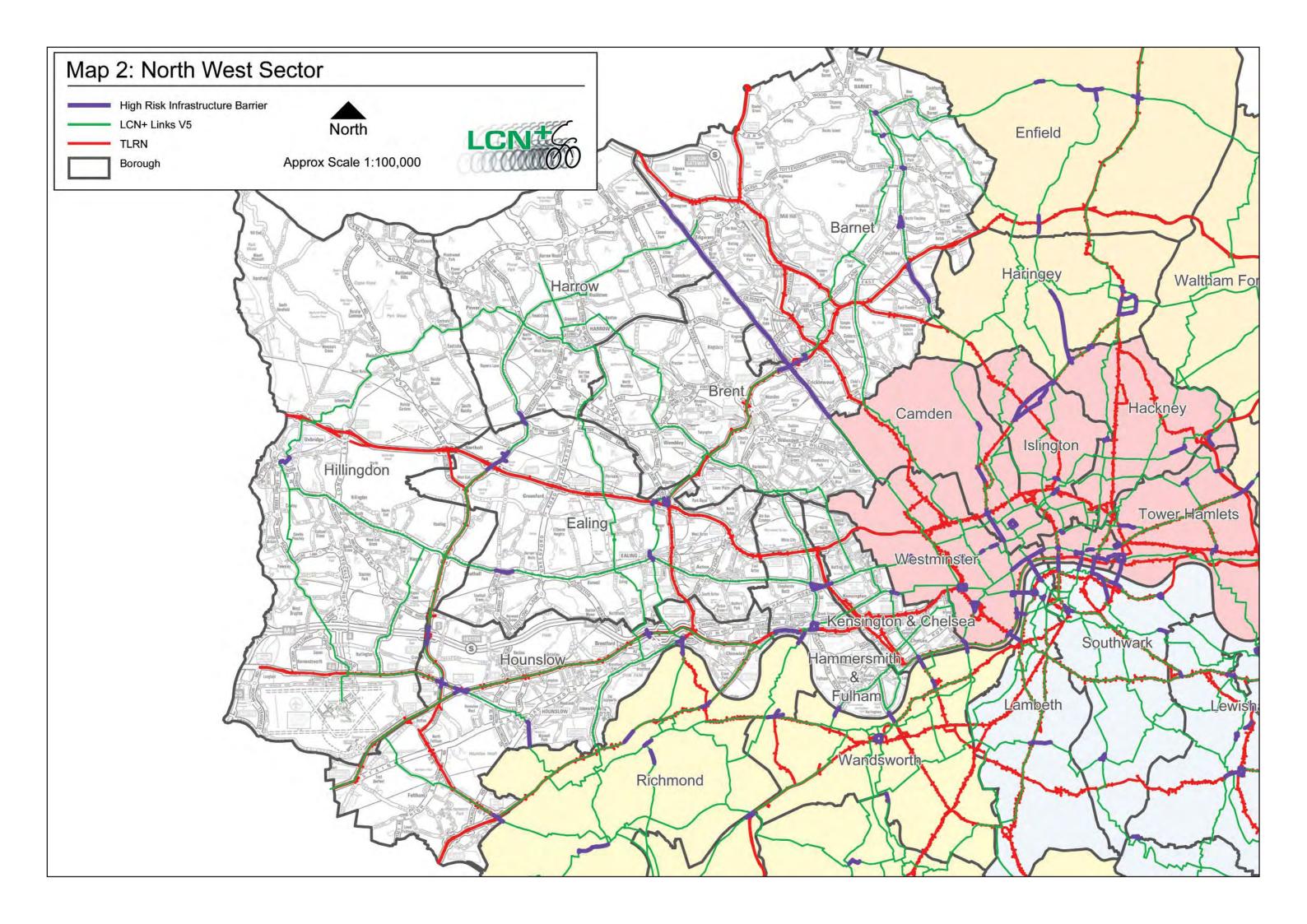
# Appendix B: Barriers Workshops Attendance List

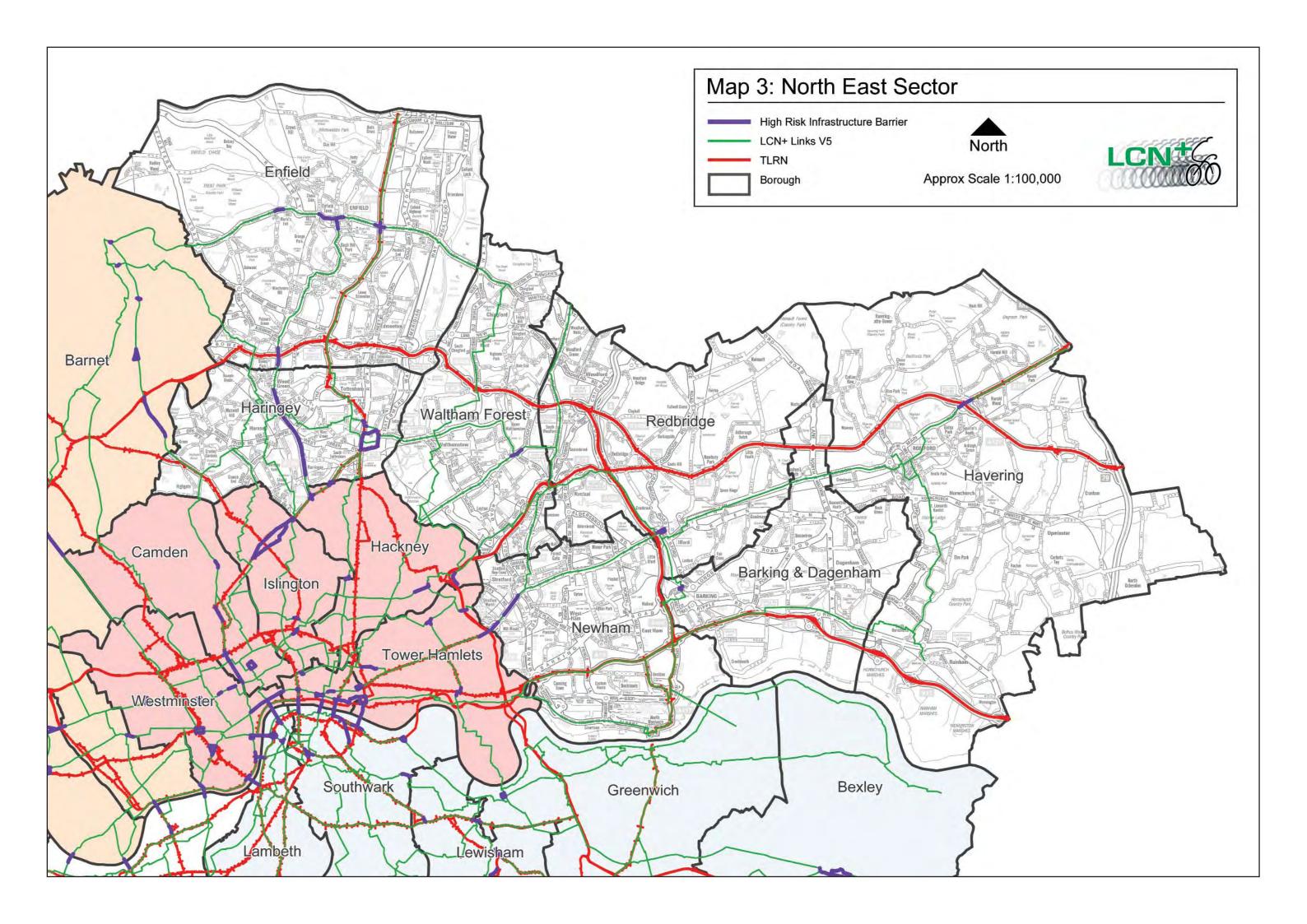
North Workshop 21st September 2005	South Workshop 28th September 2005	Central Workshop 5th October 2005
Peter Treadgold	Peter Treadgold	Peter Treadgold
TfL/CCE	TfL/CCE	TfL/CCE
Nick Chitty	Nick Chitty	Nick Chitty
TfL/CCE	TfL/CCE	TfL/CCE
John Lee	John Lee	John Lee
TfL/CCE	TfL/CCE	TfL/CCE
Felicity Chandler TfL/North East Area Team	Dominic Green TfL/South Area Team	Parshang Nazokkar  TfL/RND Camden
Lynette Ellis	Brian Dalton	Jerry Behl
LCN+	TfL/South Area Team	TfL/RND Islington
Chris Williams	Dave Edser	Chris Williams
LCN+	TfL/RNM Area Engineer	LCN+
Brad Hamilton	(Kingston and Merton)	Brad Hamilton
LCN+	Lynette Ellis	LCN+
Steve Cardno	LCN+	Steve Cardno
LCN+	Chris Williams	LCN+
Simon Franklin		Robert Curtis
Hammersmith and Fulham	Brett Duncan  LCN+	LCN+
Nigel Coates	Ray Puddy	Richard Joslin
Hillingdon	Merton	Corporation Nigel Kent
Maurice Richards	Malcolm Harris	Hounslow
Haringey	Bromley	Nick Bell
Ed Jefferson	Rob Parsey	Barnet
Enfield	Kingston	Jane Shipman
Jack Redman	Colin Poore	Barnet
Redbridge	Sutton	Willem Strydom
Colin McKenzie	Simon Wood	Islington
Ealing	Wandsworth	Aldo Strydom
Sonny Adegun	Derek Stidder	Islington
Barking and Dagenham	Croydon	Roger Stocker
Lisa Fenn	Don Anyiam	Southwark
Richmond	Greenwich	Nigel Butterworth
Colin Roberts		Westminster
Newham		Muhammad Farooq
Olu Soyoye		West One
Hackney		Vasil Vasilev
		Brent Stunell
		Peter Stunell Lewisham
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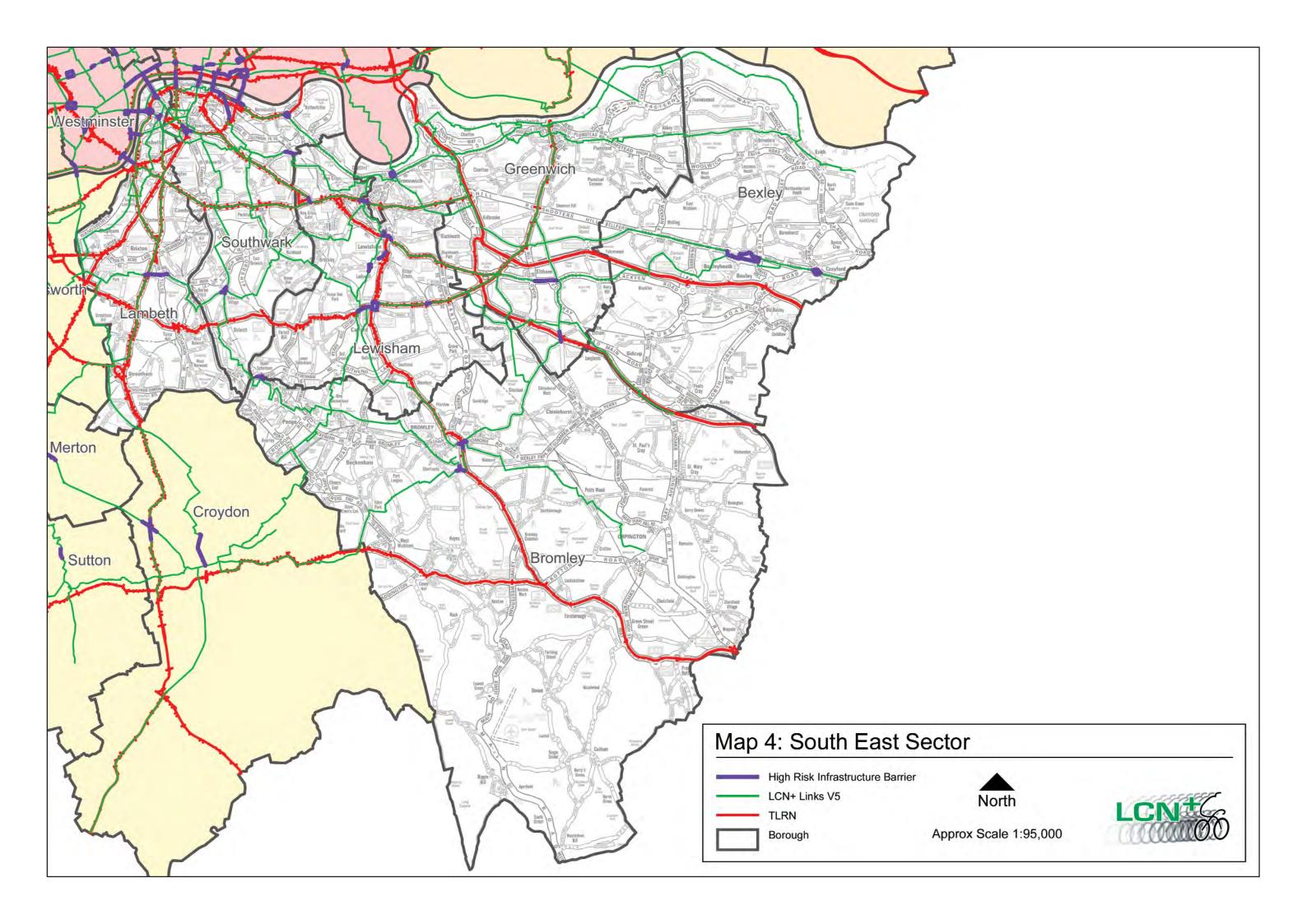
# Appendix C. Barrier Maps

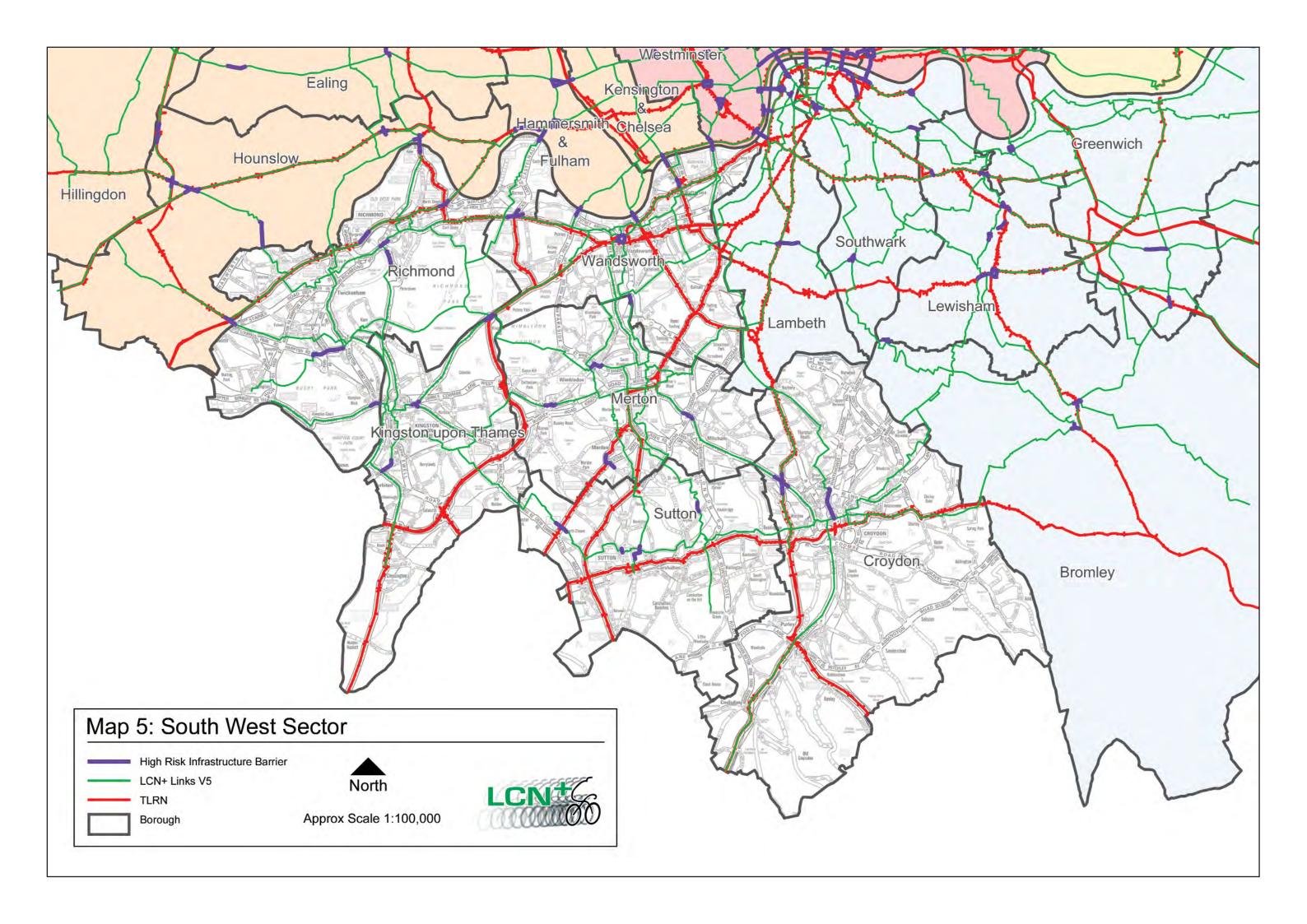
- Map 1: Central Sector
- Map 2: North West Sector
- Map 3: North East Sector
- Map 4: South East Sector
- Map 5: South West Sector











#### Camden Consultancy Service | LCN+

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