



Creating a chain reaction

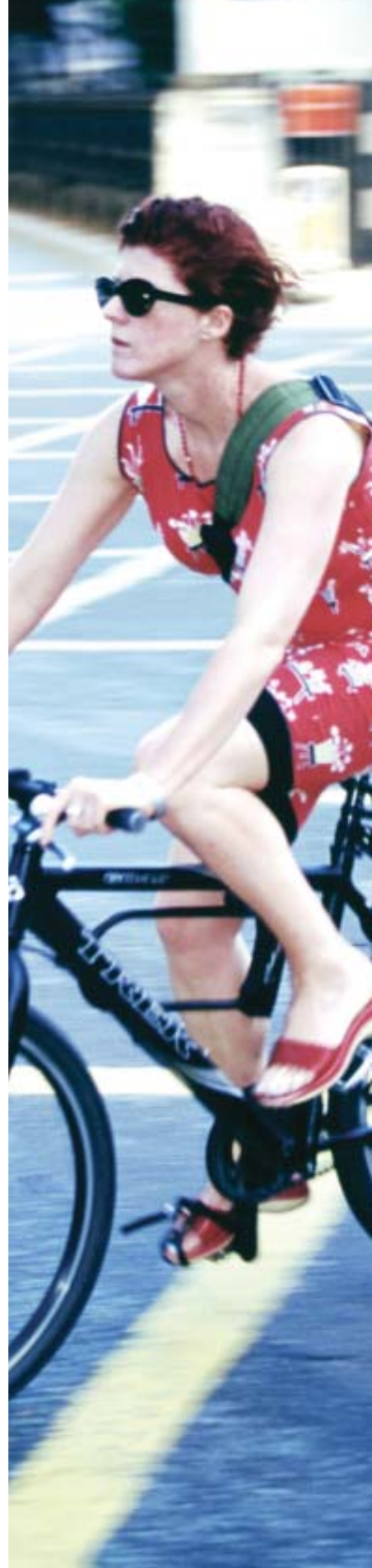
The London Cycling Action Plan

February 2004

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Foreword by Mayor Ken Livingstone

Cycling has an important part to play in making London more sustainable. It is a quick, healthy, affordable and non-polluting form of travel that has the potential to increase capacity on London's busy roads. More cycling will lead to less congestion by reducing the number of short car trips. It will also help reduce air pollution and bring improvements in London's street environment.

My long-term target, a 200% increase in cycling in London, reflects the important benefits that cycling can bring to the Capital, and by 2010 I expect to see an 80% increase in cycling.

At my request, Transport for London (TfL) established a Cycling Centre of Excellence to take forward a new dynamic strategy for delivering improvements in every aspect of the cycling environment.

Infrastructure works will concentrate on improving cycle safety, access, parking and implementing the London Cycle Network plus, a London-wide network, which has 900 kilometers of high demand strategic cycle routes.

This will be supported by promotional campaigns that will raise the profile of cycling and make sure Londoners have

access to good information and training resources.

Innovative projects such as a flagship 'bike station', will offer commuters an opportunity to combine cycling and public transport trips by providing cycle information, cycle hire and secure parking.

TfL will work to ensure that cyclists' needs are addressed in all transport projects. This will allow cyclists to share the benefits of projects such as area-wide improvements and bus priority schemes.

The London Cycling Action Plan provides a comprehensive and interlinked set of actions that will deliver significant benefits to London's cycling environment and encourage more Londoners to take to their bicycles. We have already been successful in encouraging Londoners to switch from car travel to public transport, and now we need to put in place the changes that will enable more people to take up cycling.

I hope that I can rely on whole-hearted support and co-operation from the many partner organisations in London who can make a substantial contribution in helping us deliver our ambitious cycling programme.



A handwritten signature of Ken Livingstone in black ink. The signature is written in a cursive style and reads "Ken Livingstone".

Ken Livingstone
Mayor of London



Part 1: About the Action Plan

1.1 Introduction

As a public document, the London Cycling Action Plan is available to anyone with an interest in cycling, particularly organisations who have a role to play in delivering the Mayor's vision for cycling in London.

Key organisations and sectors include TfL, other transport providers, London's local authorities, statutory agencies such as education establishments, the police, businesses and voluntary sectors.

During the comprehensive public consultation before the Mayor's Transport Strategy was published, many Londoners voiced concern about the difficulties of cycling in London. In particular, they supported measures to reduce traffic congestion and local initiatives that would encourage more cycling. The Plan identifies solutions to overcome many barriers to cycling in London, and establishes a framework for sustained growth.



1.2 Stating the vision

The Mayor's vision is to make London a city where people of all ages, abilities and cultures have the incentive, confidence and facilities to cycle whenever it suits them. Cycling is integral to the Mayor's vision to develop London as an exemplary sustainable world city.

In 2001, the Mayor released his Transport Strategy (GLA 2001a), providing a basis for changes and improvements in the way transport operates in London. Cycling is an integral part of this strategy and a key action has been the establishment of the Cycling Centre of Excellence (CCE) to coordinate the development of cycling in London.

The Plan builds upon the National Cycling Strategy (NCS) of 1996, which gave English authorities a strategic, coherent

framework for the development of cycling. The NCS included ambitious targets, a 100% increase over 1996 levels by 2002, and a 300% increase by 2012. The strategy was endorsed by the Government in the 1998 White Paper (DETR 1998). This gave rise to increased expenditure on cycling, including the introduction of the National Cycling Network, and was reflected in the Transport 2010: The Ten Year Plan (DETR 2000a). The National Cycling Strategy Board, established by

the Department of Transport in 2001, and the Cycling Forum for England now oversee progress.

The Plan sets out a balanced package of measures that will help achieve this vision and deliver all the lifestyle and economic benefits of cycling. The Plan addresses how cycling will contribute to achieving key priorities from the Mayor's Transport Strategy in a way that recognises London's cultural, geographical and social diversity.

The objectives

Objective 1: Introduce quality conditions on the London Cycle Network plus (LCN+)

The LCN+ is a 900 km London-wide network of routes for cyclists, due for completion in 2009/2010 (subject to available funding).

Objective 2: Increase cycle access, cycle safety and cycle priority

Priority locations for safety work will be identified and there will be increased technical support (subject to available funding).

include bike loan systems, encouraging off-highway cycling and new concepts and techniques in traffic management and policing.

Objective 5: Promote cycling and its status

London's cycle guides will be updated. Market research will underpin a Marketing and Promotion Plan that will provide a focus for promoting cycling. TfL will sponsor international and local cycling events.

Objective 6: Incentives and support for target groups

TfL will develop cycle training in London in partnership with boroughs and support measures to encourage a range of target groups such as children, women, commuters and disabled people.

Objective 3: Increase cycle parking provision

Gaps in provision for cycle parking at public spaces, schools, workplaces or in residential areas will be addressed (subject to available funding).

Objective 4: Support innovative cycling schemes

TfL will support the boroughs in developing an innovative approach to cycling that will increase the appeal and advantage of cycling. This will



Objective 7: Increase mutual awareness and respect between cyclists, pedestrians and other road users

Targeted activity will highlight the varying perspectives of different types of road users to create greater understanding of each group's needs.

Objective 8: Promote cycle links and interchange schemes

Bike stations with a full range of cycle facilities will be introduced (subject to available funding). Interchange guidelines will ensure that new or improved rail interchanges include good quality cycle access and facilities. Campaigns to encourage people to change

their mode of transport will include cycle information.

Objective 9: Optimise the contribution to cycling from other schemes

Guidance will be published on how cycling is affected by initiatives such as the congestion charge, and how cycling benefits can be optimised in bus priority schemes and new developments.

Objective 10: Improve co-ordination and partnership

This work will focus on ensuring effective working partnerships and the development of professional capacity and training.



Funding

Many of the actions contained in this Plan will be achieved through improved co-ordination. The level of activity, however, depends upon the provision of funding.

As part of the submission to the Government's Comprehensive Spending Review 2004, TfL has set out the case for additional resources to enable delivery of this Plan as part of the wider

case for delivering the Mayor's Transport Strategy. In order for the vision to be fully realised, it is necessary that these funds are secured, together with the support of the London boroughs and other partners for delivering key actions. The Plan will be reviewed to ensure that any available funds and resources are targeted at areas where the maximum benefits can be achieved.



Part 2: Cycling

The facts, benefits and barriers



2.1 Scope for change

London has a high potential for being a cycling city:

- Bicycle ownership is high with approximately 1.4 million bicycles owned in London (TfL 2002d).
- Around 32% of households in London own at least one bicycle (DfT 2002a).
- Most people know how to ride a bicycle. A recent survey of commuters at Waterloo station found that of 2000 individuals interviewed (all over the age of 16), only 3% had never ridden a bicycle (TfL 2002a).
- London's geography is ideal for cycling, as Central London and many parts of Inner and Outer London are relatively flat.
- LATS 2001 shows that 46% of all trips made by London residents are under a mile and nearly 85% are less than five miles (Table 1). 55% of all car trips are less than two miles long. There is clear potential for cycling to replace some short car and public transport trips.

Table 1: Percentage of journeys by distance and mode made by London residents (LATS 2001)

Mode	Under 1 mile	1 - 2 miles	3 - 5 miles	6 - 10 miles	10+ miles
Walk	92%	6%	2%	0%	0%
Bicycle	46%	22%	24%	7%	1%
Motorcycle	13%	10%	35%	28%	14%
Car/van	32%	23%	28%	12%	5%
Taxi/minicab	24%	28%	32%	11%	5%
Bus/tram	23%	32%	36%	7%	2%
Tube/DLR	3%	9%	38%	39%	11%
Rail	1%	2%	17%	49%	31%
All modes	46%	17%	21%	12%	4%

International comparisons with the Netherlands highlight two areas for changes in cycling patterns (Table 2). Firstly, there

is high potential for increases in cycling throughout all age groups, and secondly there is potential for the percentage of

journeys made by women cyclists to match levels of men.

Table 2: Percentages of all journeys made by bicycle in Britain and the Netherlands according to age group and gender (BMA 1990)

Age	11 – 15	16 - 20	21 - 29	30 - 59	60 - 64	65+	All
Male							
Britain	13.4	5.9	2.6	2.1	2.1	2.2	3.2
Netherlands	60.6	47.7	22.2	18.2	21.4	26.4	24.8
Female							
Britain	3.8	1.8	1.3	1.5	1.3	0.5	1.5
Netherlands	60.3	46.9	26.6	30.6	25.1	23.1	31.6

2.2 Why do Londoners cycle?

Londoners cycle for a range of different reasons, such as improving health, convenience or lifestyle.

A recent survey (TfL 2003c) shows that the main reasons for cycling were 'roads are too congested when driving a car' (mentioned by 23%), 'cycling is

healthy' (19%), 'public transport is unreliable' (11%), 'cycling is enjoyable' (10%), 'have friends/family who cycle' (6%) and 'cycling is cheaper than alternatives' (6%). Those who choose to cycle, do so because it is acceptable and convenient to their lifestyle.

The same survey also shows that more women and young adults are beginning to cycle compared with existing cyclists. This indicates that recent cycling improvements might be having an effect on the cycling profile.

The statistics above are supported by recent developments. For example, the early indication of the success of congestion charging suggests that Londoners are

ready to reconsider their transport choices and, with the appropriate encouragement, cycle more.

A survey found that cycle

journeys are the fastest mode of transport for both short door-to-door journeys between Central and Outer London, and for journeys entirely within Central London (DETR 2000b).

2.3 Who cycles in London?

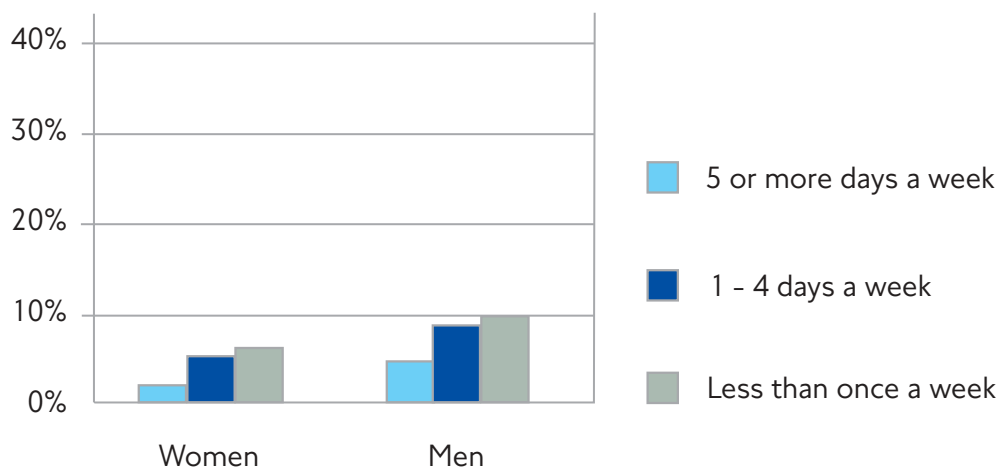
Gender

Cycling in London is more popular with men in line with the national trend (DfT 2002b). A survey of Londoners' travel

behaviour (LRTS 2001) showed that 5% of men cycle five or more days a week, compared to only 2% of women. 9% of men and 5% of women cycle one to

four days a week, while a further 10% of men and 6% of women cycle less than once a week (Figure 1).

Figure 1: Frequency of cycling in London by gender (LRTS2001)



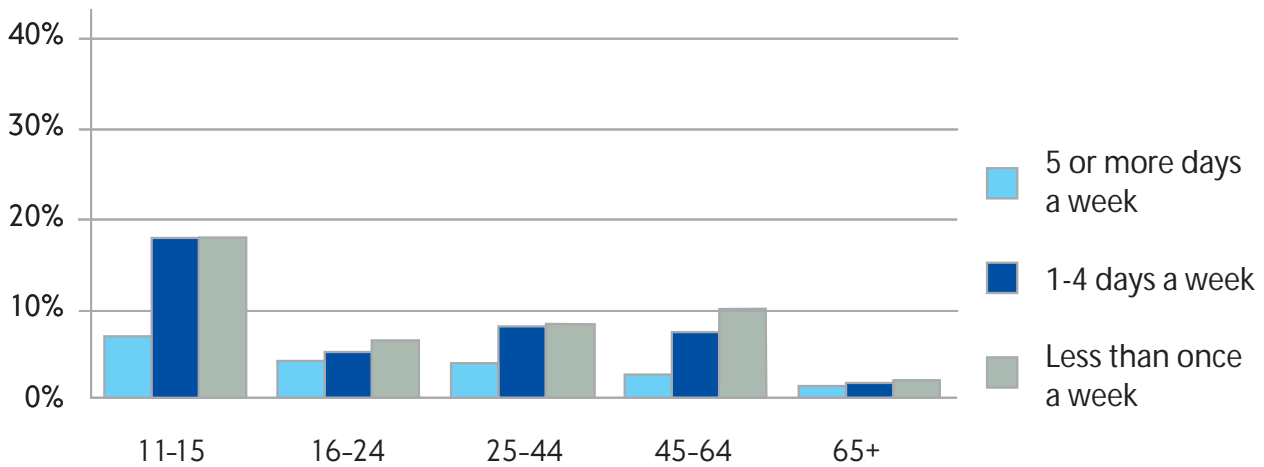
Age

Cycling is most popular in the 11-15 age group where 7% cycle five or more days a week and 25% cycle at least once a week.

There is a drop in cycling levels in the 16-24 age group, where 4% cycle five or more days a week and only 9% cycle at least once a week. In the 25-44 age

group, cycling levels pick up again, before consistently declining as the age groups increase (Figure 2).

Figure 2: Frequency of cycling in London by age (LRTS 2001)



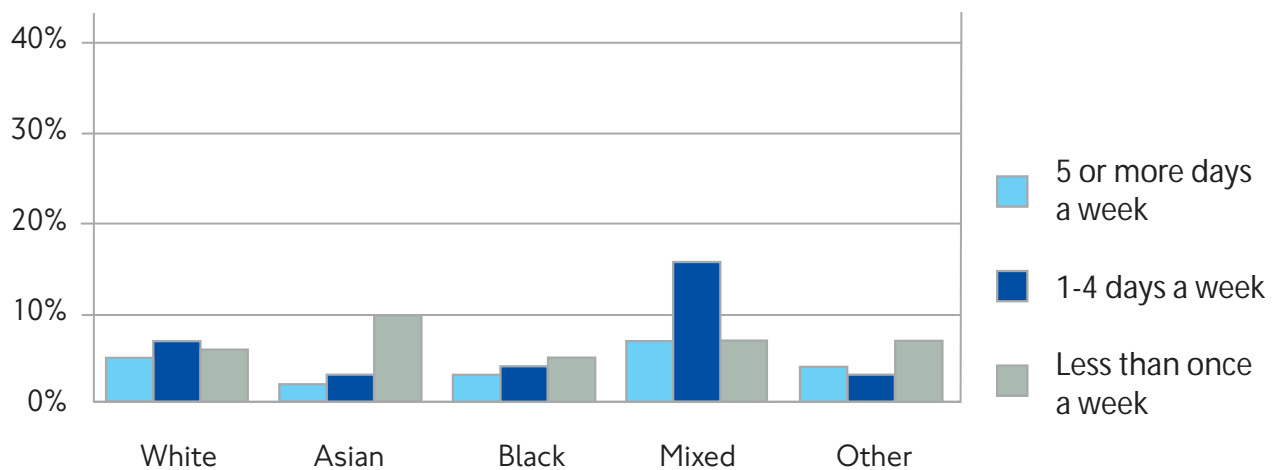
Ethnic background

There are no comprehensive studies on the connection between cultural background and cycling. However, there are relevant variations in the

frequency of cycling within different communities (TfL 2003c). Those of mixed ethnic backgrounds are the most frequent cyclists with 7% cycling five or more days a

week. Those from Asian backgrounds are the least frequent cyclists with only 5% cycling once a week or more (Figure 3).

Figure 3: Frequency of cycling by ethnic background (TfL 2003c)



Income

While cycling is a low cost form of transport, Londoners from households with lower incomes cycle less than those with higher incomes. In low-income households, 9% cycle at least once a week, compared with 14% in middle-income households and 17% in high-income households.

Possible barriers for low-income households could include the cost of bikes, lack of storage space and lack of security at home.

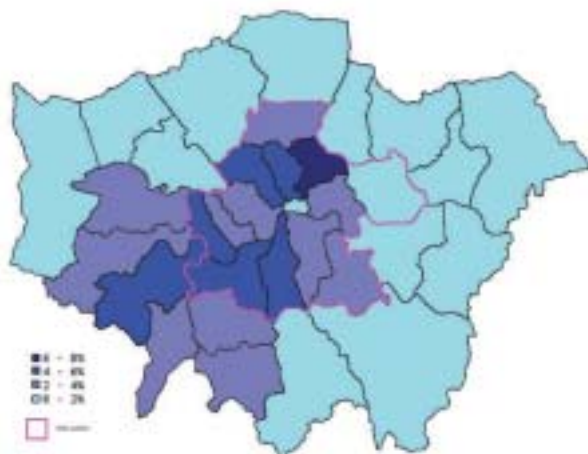
Geographic spread

11% of all trips are made in Central London, 41% in Inner London and 48% in Outer London (LATS 2001).

Figure 4 uses data from the London Census 2001 to highlight the geographic diversity of cycling to work. It maps out the percentage of people in employment cycling to work, borough by borough. Hackney contains the highest percentage of cyclists, at 6.8% of its working population.

Of the six boroughs with the next highest frequency of cyclists (4% – 6%), five are located within Inner London, the exception being Richmond-upon-Thames. Conversely, of the 15 boroughs with the lowest frequency of cyclists (0 – 2%), only two are in Inner London: the City of London and Newham. The figure also suggests that people in Central and West London generally cycle more than those in the east.

Figure 4: Proportion of residents in employment cycling to work, by borough (London Census 2001)



2.4 Trends

London has experienced a long-term decline in cycling since 1950.

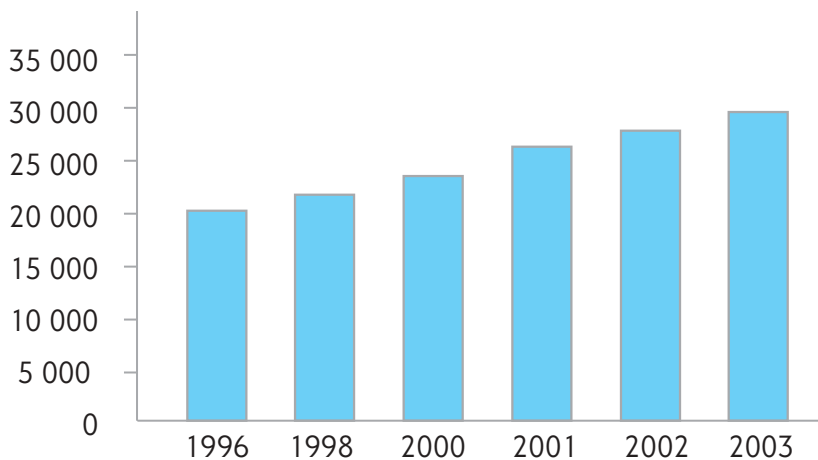


However, in recent years, particularly in Central and Inner London, cycling has been steadily increasing.

The number of cyclists making journeys across the River

Thames has risen by 40% within five years. Figure 5 plots the number of bicycles making journeys across the river from Hampton Court Bridge to Woolwich Foot Tunnel.

Figure 5: Number of bicycles crossing all bridges across the River Thames (7am to 7pm) (TfL 2003a)

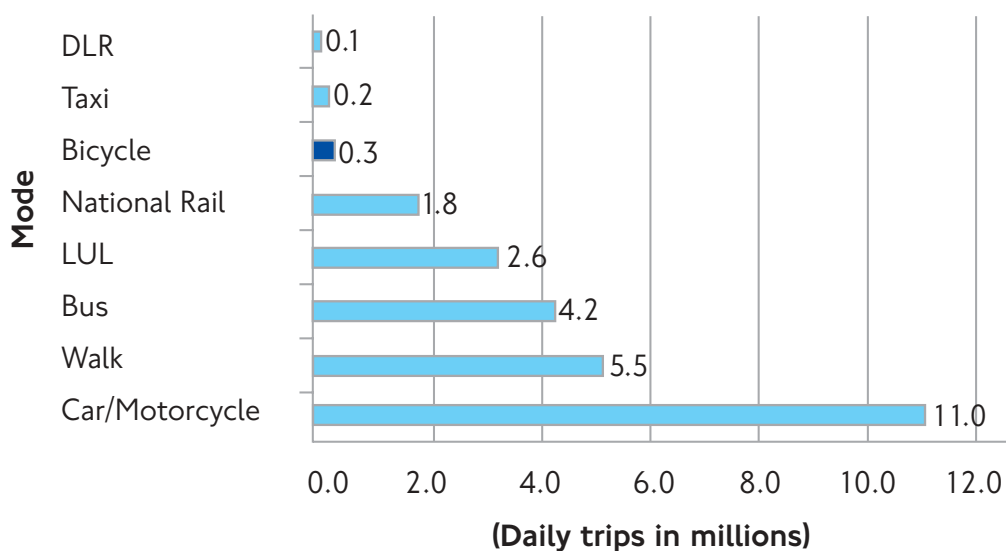


In addition, congestion charging has had a very positive effect on cycling levels in central London. Cycle flows into the charging zone have increased by around 30%.

Overall baseline data on cycling levels in 2000/2001 is limited. However, TfL's London Travel Report 2003 (TfL 2004) shows that of the 26 million journeys made every day in London, including people commuting,

300,000 are made by bicycle. Roughly the same number of journeys are made by taxis, minicabs and the Docklands Light Railway (DLR) together (Figure 6).

Figure 6: Daily trips by transport mode in London (TfL 2003a)



Comparing London with other parts of the UK reveals a more positive message. London had the largest increase in percentage of people cycling to

work between 1991 and 2001 (Table 3). Despite the recent rise, the level of cycling in London, less

than 2%, is low compared to other European cities (4.5% in Vienna, 10% in Berlin, 13% in Munich, 20% in Copenhagen and 28% in Amsterdam).

Table 3: Cycle journeys to work as a percentage of journeys to work (Parkin 2003)

	2001 in %	1991 in %	Change in %
London	2.55	2.05	+0.50
North East	1.76	1.56	+0.20
South West	3.76	3.72	+0.04
West Midlands	2.47	2.50	-0.03
North West	2.48	2.64	-0.16
East Midlands	3.59	3.80	-0.21
South East	3.41	3.68	-0.27
Yorkshire and Humbs	3.17	3.45	-0.28
East	4.29	4.91	-0.62

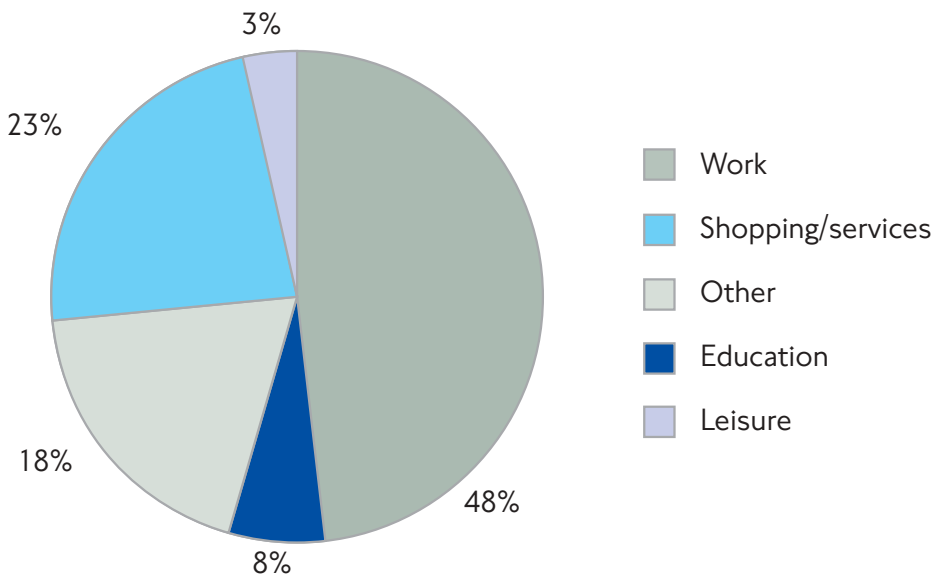
2.5 Journey purpose

In London, 48% of all cycle trips are commuter journeys or other work journeys but this

represents just 2.55% of all journeys to work.

Figure 7 shows the purpose of cycle journeys in London.

Figure 7: Cycle journeys in London by purpose (LATS 2001)



There is much potential for increasing the different types of trips, for example:

Work - Provision of cycle parking at rail, underground or bus stations can allow for combined cycle/public transport trips to replace longer car journeys. 25% of rail commuters would find it advantageous if cycle parking and access were improved to allow them to cycle from home to the station (CARN41 2001). 24% of employees say they would cycle to work if adequate facilities such as cycle parking were in place (LCC 1996). This would also help replace short car or public transport trips.

Shopping - Modern services such as online shopping and home delivery could reduce the dependency on cars and, together with an adequate supply of cycle parking, increase shorter trips to local shops and markets.

Education - Cities such as Oxford or Cambridge have a very high proportion of students cycling to their universities. Improved facilities at London universities and

colleges could encourage more students to cycle. Also, parents bringing their children to school by car accounts for up to 20% of traffic at the peak school travel time at 8.50 in the morning (DfES 2003). Therefore, cycle training for children and adults, safer routes and more secure cycle parking facilities can increase the number of children cycling to school significantly.

Leisure - Secure cycle parking facilities, good and comfortable cycle routes and adequate travel information such as maps and guides can increase the number of diverse local trips and encourage more cycling purely for leisure purposes.

Most trips include more than one purpose and these can be easily completed on a bicycle. For example, parents could cycle with their children to school and then cycle straight to work, shops or a public transport station. Similarly, cycling can be ideal for utility trips with several destinations such as shops or markets, as it allows the rider to go door-to-door.



2.6 Benefits to London and Londoners

Cycling is more than just a cheap and efficient form of transport. It contributes to making London a better place to live and work. As well as being an important part of the Mayor's Transport

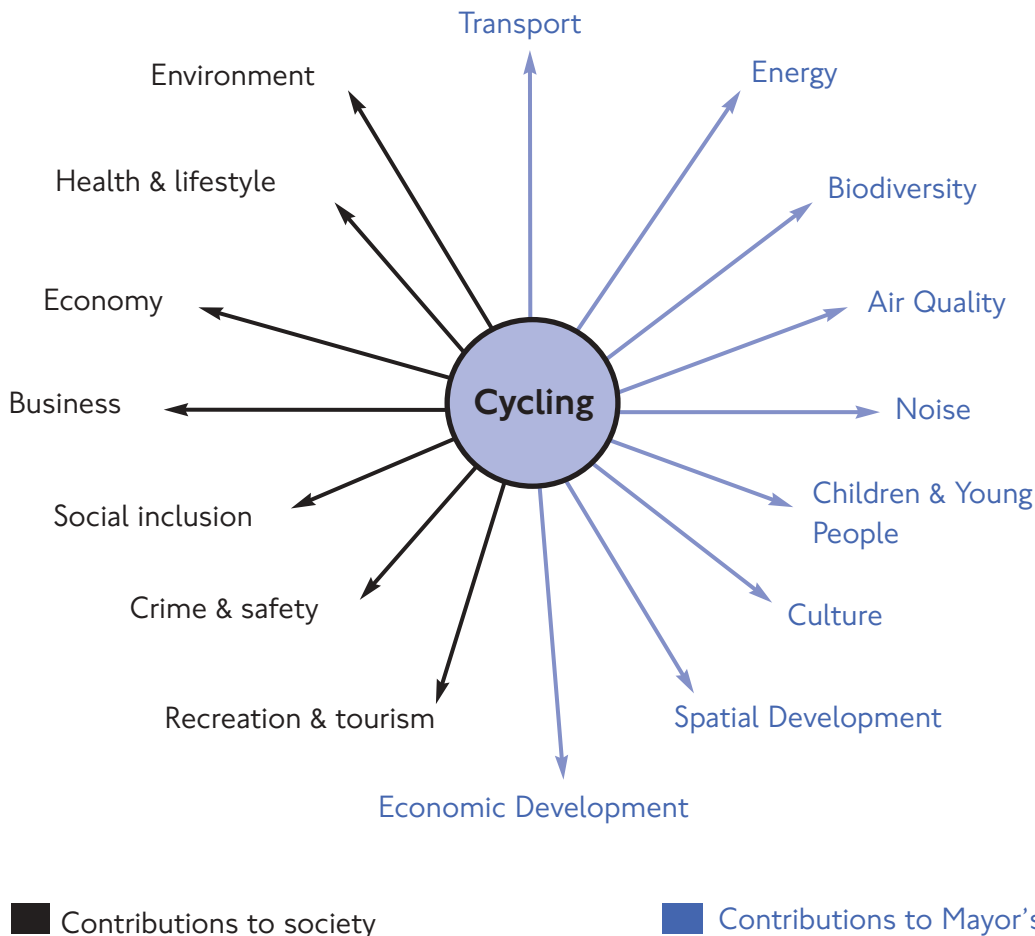
Strategy, cycling is integral to many of the Mayor's other strategies.

In light of London's forecast population growth over the next 10 years, encouraging more

cycling will provide real benefits to London.

Figure 8 shows some of cycling's contributions to society and to the Mayor's strategies.

Figure 8: Cycling's contributions to society and links with the Mayor's strategies



Environment

Cycling is a non-polluting form of travel that helps reduce congestion and contributes to better air quality. Increasing cycling is an important way of reducing carbon dioxide and other vehicle emissions. Additional environmental benefits include the minimal noise produced by cycling and the small amount of road and parking space required. For example, eight to sixteen

bicycles can fit in a single car parking space.

Road traffic emissions are the main cause of London's poor air quality, so increasing cycling can lead to cleaner air, supporting the Mayor's Air Quality Strategy (GLA 2002a). Additionally, cycling relies only on an individual's own energy supply and does not contribute to a build up of greenhouse gases and consequent climate change.

This helps fulfil the objectives of the Mayor's Energy Strategy (GLA 2003a).

The careful development and upgrading of cycle routes in designated parks and open spaces will promote accessibility to all. This will be done ensuring minimum disturbance in places supporting sensitive species, which will assist in fulfilling the Mayor's Biodiversity Strategy (GLA 2002b).

Health and lifestyle

Regular cycling has a positive effect on fitness and health. The link between regular exercise and good health has been established in research studies throughout the world including publications of the British Medical Association (BMA 1990). Health benefits from cycling range from maintaining a healthy heart to developing strength, stamina, and good posture. Cyclists generally have a greater sense of well-being and often have lower stress levels than those who do not cycle. These benefits far outweigh the potential exposure to pollution and danger on the roads.

Cycling could also help prevent the serious health consequences that face a large number of children who do not exercise. More children could be encouraged to cycle to school by developing safer and more appropriate cycle routes, along with training. This supports the Mayor's Children and Young People Strategy (GLA 2003b).

Cycling is highly time efficient, being faster than any other transport mode available for short to medium distances in London. It also offers flexibility, with individuals able to personalise the route their journey takes according to their specific needs. Cycling creates greater travel choices, as people do not have to cycle every day if it is not convenient.

Economy

Cycling is an economical mode of transport compared to car

travel. The initial cost of a bicycle is low and running costs are negligible. With no tax or fuel costs to pay, the cost of cycling is approximately 5% of the cost of car travel (Rough Guide 2003). It is necessary to consider not only direct costs, but also external costs of any type of travel. For example, cycle commuting can reduce business costs as employees spend less time in traffic queues and are likely to take less sick leave because of greater health (EC 1999). Cycling can increase London's transport capacity by making better use of road space, therefore reducing the need for investment in new transport infrastructure. On existing roads cycling has a lower physical impact on the road surface than motor traffic, reducing the need for road maintenance.

Business

Cycling makes good business sense. Cyclists are excellent consumers as they need minimal parking space and purchase the same quantity of goods as motorists (EC 1999).

Cycle courier companies take advantage of the fact that cycling is the quickest way to complete an average five mile radial door-to-door journey between Central and Outer London. Cycling can therefore help tackle congestion and unreliability where they act as barriers to London's economic efficiency and competitiveness, especially areas such as Central London, Canary Wharf and West London. In this way, cycling can make a direct impact on the Mayor's

Economic Development Strategy (GLA 2001b).

Social inclusion

As a low cost form of travel, cycling is accessible to most of the population. A national survey in 1990 found that 99% of adult men and 87% of adult women claimed they were able to ride a bicycle (Intel 1990). Another survey found that almost 55% of Londoners have access to a bicycle (TfL 2003a).

Cycling allows children, teenagers and adults to be independent and helps them to access education, jobs, shopping, leisure activities and entertainment. Furthermore, there are plenty of employment opportunities for those with cycling skills. This is in line with the Mayor's Spatial Development Strategy (GLA 2002c). According to the Mayor's Children and Young People Strategy (GLA 2003b), the cost of public transport is frequently cited as a barrier for children, hence cycling has the potential to enhance inclusion for children into society.

Cycling is often not considered as an appropriate form of travel for people with disabilities. However, work by the London Cycling Campaign (LCC) has



shown that bicycles can be easily adapted to give people with disabilities a way of travelling around London independently.

Crime and safety

More cyclists using London's roads on a regular basis can reduce the opportunity for unobserved crime contributing to safer streets. In particular, the presence of cyclists and cycling police officers on less frequented streets can help pedestrians feel safer. In other parts of Europe, work to encourage cycling by improving

street infrastructure has helped improve road safety by contributing to lower traffic speeds. In general, cities with higher levels of cycling have better road safety records than London. For example, both Copenhagen and Odense in Denmark have experienced an increase in cycling and a corresponding decrease in accidents involving cyclists (McClintock 2002).

Recreation and tourism

Cycling is a leisure activity for many individuals. Bicycles are often used for recreational

activities whether to improve personal fitness, to meet friends or simply enjoy a day out with the whole family. As cycling is faster than walking and more individually specific than public transport, it offers effortless access to many sights and cultural and social points of interest. Therefore, it presents an excellent way for individuals to explore local areas or to discover London. Consequently, cycling can contribute to the Mayor's Culture Strategy (GLA 2003d), where it cites that 'as more people can access an area, its cultural life can bloom'.

2.7 Barriers to cycling in London

Some of the areas where TfL and the Mayor believe there is great potential for increasing the level of cycling in London have been outlined in the first part of this section. It is important to understand the barriers that currently deter people from cycling. To maximise its success in encouraging more cycling, TfL needs to identify ways to overcome these barriers and release the potential for cycling to become an everyday form of travel for more Londoners. Seven barriers to cycling have been identified through various surveys:

- Danger
- Effort
- Weather
- Poor cycling environment
- Cycle theft
- Lack of information and skills
- Culture, attitudes and credibility

This has been reinforced by a recent survey of the near market of cycling in London (TfL 2003c), where danger, effort and poor cycling environment were stated as the main reasons for not cycling in London.

Work to overcome practical barriers such as lack of cycle parking has a clear physical solution but it is also important to overcome perceived barriers to cycling. Perceived barriers are factors that prevent people from cycling because they do not have access to information to show that cycling is a viable option for their trip. For example, infrequent cyclists often believe that planned journeys are too long to make by bicycle when in fact, the distance can be covered more quickly and conveniently than by other available modes.

The Plan includes measures that will address both actual and perceived barriers to cycling. The barriers are examined more closely below.

Danger

The analysis of accidents and casualties in Greater London shows that 414 cyclists were killed or seriously injured in the capital in 2002 (LAAU 2003). This represents a decrease of 11% over 2001 and a decrease of more than 35% since 1990.

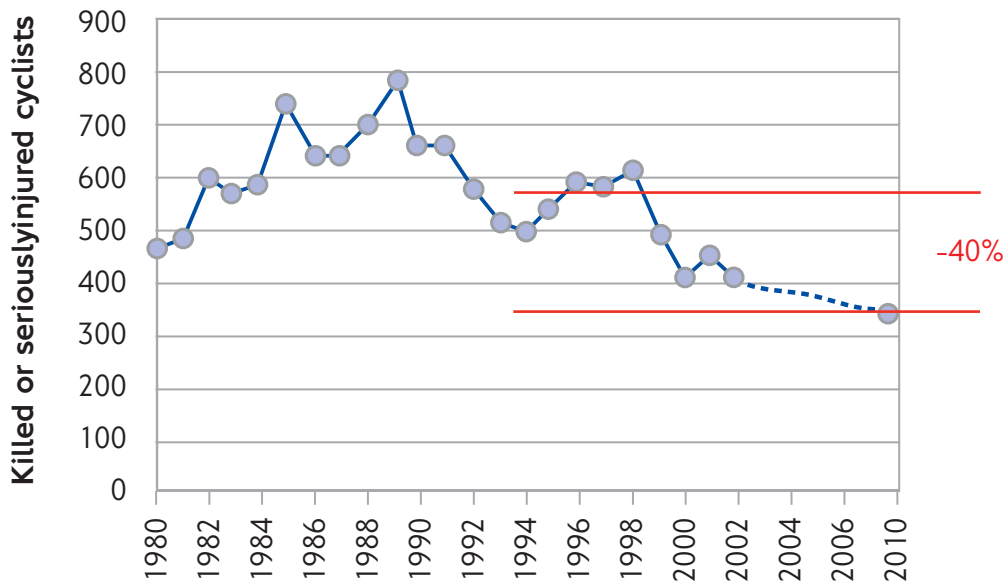
While cycling accounts for less than 2% of all trips in London, cyclists accounted for over 7% of all road casualties in 2001. Male cyclists are more likely to be killed or seriously injured and men accounted for three times more injuries than women in 2000.

In March 2000 the Government announced new targets for reducing casualties nationally. TfL adopted these targets and applied them for each category

of pedestrians, cyclists and powered two wheeler riders in its London's Road Safety Plan (TfL 2001). Figure 9 shows the cycle casualties in London over

the last two decades and the targets set for reduction.

Figure 9: Cyclists killed or seriously injured 1980 - 2002 (LAAU 2003)

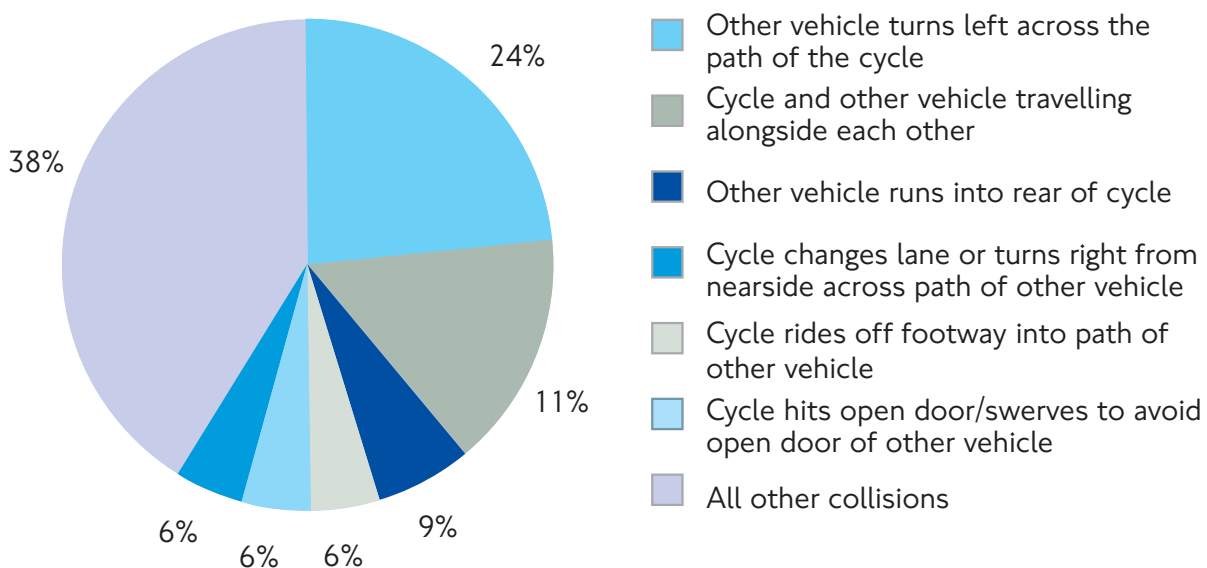


Certain types of collision are more common than others. Figure 10 shows that the most

frequently occurring collision resulting in the death of a cyclist from 1994 to 2002,

is when another vehicle turns left across the path of the bicycle (24%).

Figure 10: Cycle fatalities in London 1994 – 2002: Contributory factors (LAAU 2003)

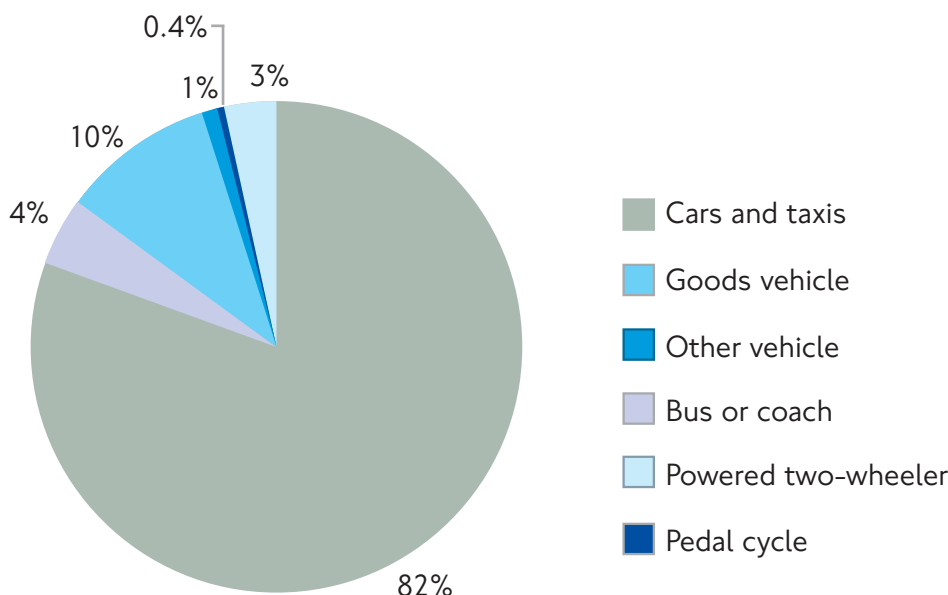


The type of vehicle which poses the biggest threat to cyclists (killed or seriously injured), is a heavy goods vehicle. Between 1980 and

2002, 48% of cyclists killed were involved in a collision with a goods vehicle. However, looking at the frequency of crashes, cyclists are most likely

to be involved in a crash with cars and taxis (Figure 11). Only 0.4% of cycle crash casualties involved a collision with other cyclists.

Figure 11: Cycle accidents by type of vehicle involved (LAAU 2003)



Minimising the risks of cycling in an urban environment could involve a combination of engineering (for example constructing more cycle routes), education (for example cycle training) and enforcement (for example fining motorists that park their cars in cycle lanes). In the city of York and many other European cities where there has been sustained investment in cycling, high levels of cycling have contributed to an overall

reduction in road casualties as well as the perception of a safer street environment. It seems the more cyclists there are, the lower the risk associated with cycling. This relates to the concept of critical quantity: as cyclists increase their presence on roads, it becomes safer to cycle (Wardlaw 2002).

Across Europe, higher modal share of cycling is associated with a lower rate of cycle casualties as well as a lower number of casualties for all road users. Odense in Denmark has seen an 80% reduction in serious injuries to children over ten years. At the same time, modal share for cycling more than doubled.

High volumes of motor traffic, illegal or inconsiderate driving

(and parking) all make cycling hazardous. Cyclists are likely to benefit from improvements in the enforcement of traffic and parking regulations. Although speed is not a direct contributory factor in cycling casualties, fast flowing traffic in close proximity is very intimidating and increases the risk of collision. Measures that lower vehicle speeds can make a significant contribution to increasing cycling.

Good road maintenance is particularly important for cyclists. Potholes, debris or uneven surfaces create additional hazards, which can be dealt with through a co-ordinated system of road maintenance.



Conflicts can also occur with pedestrians, although in 2002 only six incidents were recorded, of which two were classified as serious. The perceived safety issue of pedestrian and cycle conflicts is far more significant. Illegal and inconsiderate pavement cycling can be a major deterrent to

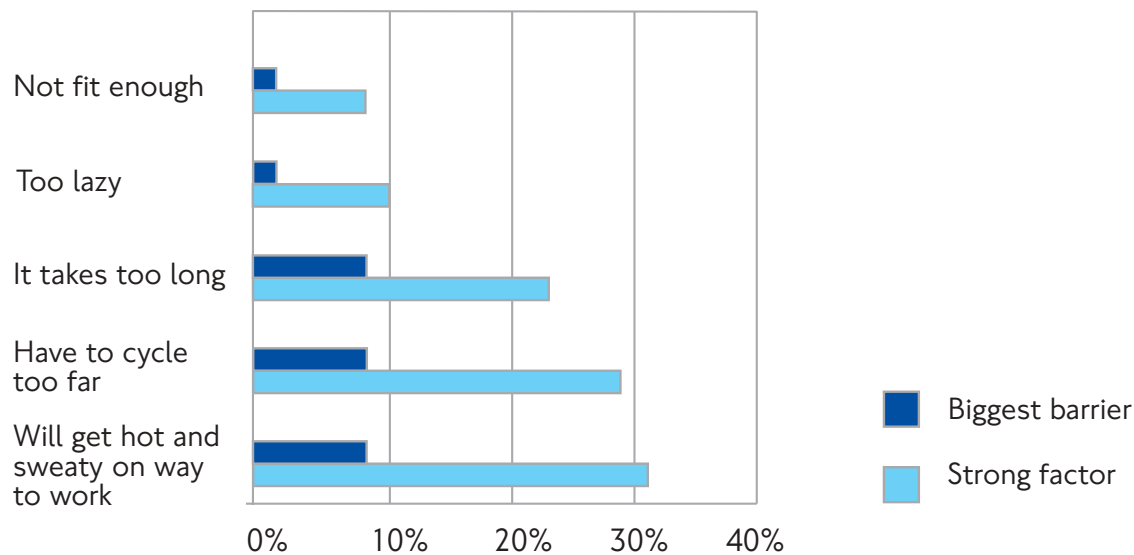
walking, particularly for older and more vulnerable pedestrians.

Effort

Cycling is very competitive for trips under two miles and often requires less effort than other modes for longer journeys. However, people who do not

cycle say there is too much effort involved. Figure 12 indicates some of the factors non-cyclists use in their decision not to cycle, and the proportion that indicated each of these reasons as being the biggest barrier to them cycling in London.

Figure 12: Effort-related barriers to cycling for non-cyclists in London (TfL 2002a)



However, new bicycles are lighter, faster and more comfortable to use and bike loan schemes allow the general public to try out different types of fast, modern bicycles to find

one that suits them. Using breathable clothing can reduce the effects of getting hot and sweaty on the way to work. Also, most cycle journeys are short. A survey of individual

attitudes to cycling shows that effort-related concerns are often of higher importance for non-cyclists than for active cyclists (Table 4).

Table 4: Effort-related barriers to cycling (TRL 2001)

Agree or very much agree	Cyclists	Non-cyclists
I am not fit enough to cycle	9%	35%
I am too lazy to cycle	26%	39%
There are too many obstacles preventing me from cycling	24%	65%

Nevertheless, for some people from socially excluded groups (people with a disability, older people and people with

children), effort will represent one of the most relevant barriers to cycling.

Extra resources may be needed to help them to overcome this barrier.

Weather

Poor weather is a factor that deters people from cycling. In a recent survey (TfL 2003c) 6% of non-cyclists say that weather is a reason for not cycling.

In fact, London is one of the driest places in the UK, with an average rainfall of 585mm a year. In practical terms this means that those who commute by bicycle every day can expect to experience heavy rain only once a month.

In comparison, Copenhagen has a similar pattern of rainfall to London, yet the Danes make 18% of all their journeys by bicycle compared to just 2% in London (CIT 2001). Bicycles fitted with lights and mudguards and technical



clothing can help to make cycling a comfortable year round activity.

Poor cycling environment

People see London's cycling environment as unattractive because of pollution, traffic volumes and speeds, and poor quality on-street measures. There is also seen to be a lack of segregated routes and conflict with other vehicles over use of road space. Potential cycle commuters are also discouraged by a lack of shower/parking facilities at work and train operators' restrictions on carrying bicycles. Much of this reinforces the perception that cycling itself is not socially acceptable.

A study commissioned by TfL to establish top priorities of particular TLRN stakeholders shows that cyclists' top three demands are provision of uninterrupted cycle routes, better quality road surfaces and more cycle lanes (Outlook Research 2002). The Central London Partnership's Business Cycle study (CLP 2001) confirms the popularity of routes through parks and the importance of direct fast routes for the main part of a commuter journey.

Transport 2000's YouGov Survey from 2002 indicates strong support for cycle measures as a way of helping to reduce traffic congestion. It found that:

- 67% of Londoners say they want more cycle lanes
- 56% want to see road space converted to bus lanes, cycle and pedestrian use

- 73% think that reducing car traffic to improve streets and public spaces should be a medium to high priority.

Further evidence of the need for a better cycling environment comes from a London Cycling Campaign survey in which 24% of employees say they would cycle to work if adequate facilities were in place (LCC 1996).

It is imperative that planners address the needs of cyclists when considering all new transport projects, for example enforcing cycle parking standards in future developments.

Bicycle theft

Fear of bicycle theft has a direct impact on cycling levels. London-wide data from the Metropolitan Police shows that over 15,000 bicycles were reported stolen in 2002. The police believe this represents only around 25% of actual thefts.

Data from the Transport Research Laboratory shows that 17% of cyclists nationally had suffered bicycle theft in the past three years (TRL 1997). This has a dramatic effect on cycle levels. Some 24% no longer cycle at all and 66% cycle less often because of the risk of theft.

Metropolitan Police data shows that 33% of stolen bicycles were left unlocked, unattended and on-street. This illustrates the need for secure cycle parking at work, in residential developments and in public places.

Lack of information and skills

Cycling is often seen as a difficult option because too few people know how to access information about suitable routes, reliable parking, fitness required and acceptable distances/logistics for cycle trips. Many people also lack the confidence or road skills to cycle.

Studies to assess the impacts of recent initiatives such as The Rough Guide to Cycling in London or adult cycle training show that both new and experienced cyclists are finding the information provided helpful. They are more likely to consider cycling, more likely to have an enjoyable experience when cycling and are more likely to cycle further and more often.

Culture, attitudes and credibility

Many people see cycling as eccentric, heroic, socially unacceptable or of limited relevance. A national study by the Transport Research Laboratory indicates that 38% of non-cyclists worry that friends would laugh at them for cycling (TRL 2001). This compares to only 4% of existing cyclists. Concern that others see cycling as having a low social status is a deterrent that will only be overcome by a critical mass. This means that it will become an accepted and 'normal' form of transport when there are greater numbers of cyclists on the roads. The same report shows the importance of perceived barriers, as 65% of non-cyclists believe there are too many

obstacles preventing them from cycling, compared to just 24% of existing cyclists.

Perceptions about cycling vary from community to community. Cultural differences tend to reinforce and be reinforced by inequalities in the cycling environment. This can and has been successfully addressed through tailored initiatives for socially excluded groups, for example the cycle training programme explicitly for Asian girls (Southall Transport Exercise Project STEP).

Driver attitudes and behaviour can also be a deterrent to cycling. A survey in 2001 revealed that driver attitudes towards cyclists prevented 26% of cyclists from cycling more often (CIT 2001). Cyclists recognise that the attitudes of other road users are significant. Illegal and anti-social behaviour by cyclists intimidates and annoys pedestrians and reinforces negative attitudes towards cycling generally, as well as individual cyclists.





Part 3: The Action Plan



3.1 Policy into practice

The level of cycling in London is low compared to other cities in the UK and Europe. Delivering the Mayor's vision of reversing the long-term decline in cycling will need much work in many different areas to address actual barriers and alter perceptions and behaviour.

The value of cycling to London and Londoners provides an important stimulus for action. London needs an Action Plan to raise the status of cycling and overcome the problems experienced by cyclists and potential cyclists. Cycling must become an attractive and safe

travel option, available to everyone in London.

TfL and the Mayor believe there is clear potential to increase the level of cycling in London and in doing so, deliver substantial benefits to the Capital. The Mayor is committed to achieving a threefold increase in cycling over the 2000 levels.

TfL's priorities will be to address the needs of those currently cycling, encourage new people to cycle, raise the status of cycling in London, remove barriers to cycling, and promote equality and social inclusion.

3.2 Headline targets

London-wide targets

In order to measure and monitor progress, targets are an important tool and TfL

acknowledges the benefit in setting London-wide targets. These will provide guidance and direction to local authorities as

they implement their own cycling plans. TfL has developed the following headline target:

Headline target

To achieve at least an 80% increase in cycling levels by 2010 and a 200% increase by 2020 compared to cycling levels in 2000.

The short-term target is:

- To achieve measurable increases in cycling levels and to establish benchmarks.

The medium-term targets are:

- To increase the modal share of cycling trips.
- To increase the number of cycle trips per person per year.
- To increase the level of London's 'cyclability' and user satisfaction with London's cycling infrastructure and environment in terms of people's perceptions.

The long-term target is:

- 200% increase in cycling levels by 2020.

TfL has analysed success stories from several European and UK cities that have made a significant investment in cycling to assist in forecasting what might be achieved in London by 2010 and 2020. In particular, TfL has reviewed the policies and measures implemented, timescales and money spent on increasing cycling levels in these cities.

Analysis found that there is no single formula to increase cycling levels, rather every city implements a combination of measures that are tailored for their situation. However, some common activities in cities that successfully increased and sustained cycle use are:

- a cycling plan supported by a sustainable transport strategy
- coherent and attractive cycle route networks
- sufficient and secure cycle parking facilities
- traffic and speed reduction initiatives
- broad public support for cycling
- high profile, innovative projects such as city bikes, bike stations, bike bridges and flagship routes
- an integrated marketing strategy.



Table 5: Case Studies

City	From	To	Number of years	Baseline mode share	End mode share	Average annual increase in cycling flows
Strasbourg	1996	2002	6	8%	12%	+7.0%
Vienna	1986	1999	13	2%	4.5%	+6.4%
Graz	1979	1991	12	7%	14%	+5.9%
Munich	1980	2002	22	4%	13%	+5.5%
Hanover	1979	1990	11	9%	16%	+5.4%
Nottingham	1991	2001	10	3%	4.8%	+4.8%
Freiburg	1976	1992	16	10%	20%	+4.4%
Munster	1981	1992	11	29%	43%	+3.6%
Berlin	2002	2015	13	10%	15%	+3.2%
Zurich	1981	2001	20	7%	11%	+2.3%
Delft	1979	1985	6	40%	43%	+1.2%

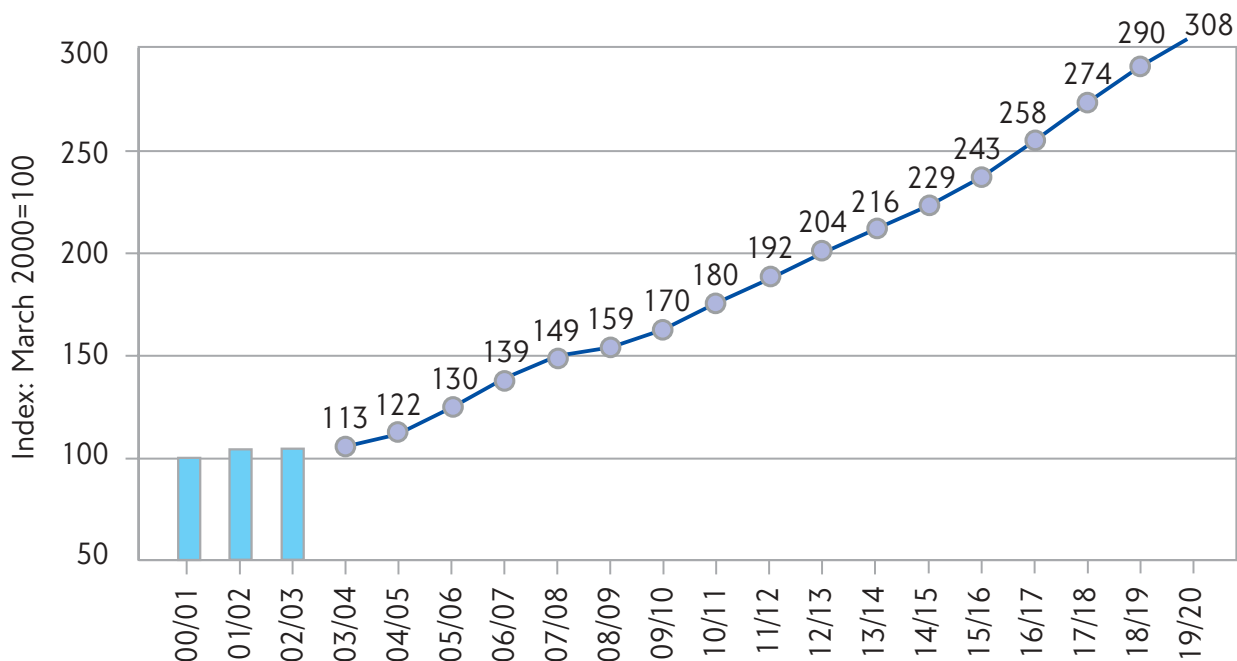
There is a clear relationship between investment and increased cycling levels. Data on the achieved and forecast increases in cycling flows per million pounds of expenditure in Vienna, Munich, Munster and Berlin have been compared with London data

and used to produce TfL's forecasts.

An average increase in cycling levels of 0.35% per million pounds spent has been derived from Berlin and Munich figures and the current London development. Based on the

planned expenditure levels for London set out in a business case for cycling in London an increase of 80% in cycling levels by 2010 has been forecast. Figure 13 shows the expected increase in cycling.

Figure 13: Forecast increases in cycling



Local level targets

In order for the Plan to be successful, it is crucial that local authorities translate the broad London-wide targets outlined above into meaningful local targets, as it is recognised that local circumstances vary greatly across London. Some local authorities have already established cycling strategies with local targets,

others are still in the early stages. Local authorities may wish to consider setting specific targets for journey types (for example trips to work or trips to school) or for specific times (peak hours or weekends). It is essential that local targets are reliable and take full account of the inter-relationships between cycling and the other transport choices.



3.3 Objectives and actions

Beneath these broad headline targets are 10 objectives that are supported by a set of corresponding actions. The objectives all support:

- Improving London's **cycle infrastructure** to deliver a better quality, safer and more convenient cycling environment.
- **Marketing and promotional activities** to provide people with information, skills and positive examples or role models that will build the popularity of cycling.
- Improving **public transport-cycle links** to make cycling feasible as part of longer journeys.

- Maximising the **shared benefits** to cyclists from other programmes and initiatives.

A set of objectives has been developed to achieve the overall target set out above. Each objective is then broken down into detailed actions, to be delivered by TfL, the London boroughs and other organisations.

Objectives and actions need to be 'SMART', which means:

- Specific
- Measurable
- Attainable
- Realistic
- Targeted.

There are links and overlaps between work areas, objectives and actions, so each must contribute to the overall impact of all planned measures. For example, other cities like Vienna have found that introducing new cycle facilities without adequate information or promotion has little effect on levels of use, particularly if other transport initiatives have a negative impact on cycling.

Partnerships with the London boroughs, cycling groups and further stakeholders will contribute to the monitoring and review process of the targets and actions.

3.4 Delivering the Plan

TfL takes an innovative approach to delivering the Mayor's vision for cycling. This follows a year-long review in walking, cycling and area-based schemes (TfL 2002d).

A strategic approach

A key aim is to create a strategic cycle programme that clearly identifies and meets people's needs. Too often in

the past cycling provision was opportunistic and planned in isolation without a clear appreciation of the impacts on others.

TfL's approach is to learn from world best practice and ensure that measures, which support a growth in cycling, are built into all transport schemes. Similarly, it is important to recognise the

potential benefits for cycling that can accrue from other programmes and initiatives, for example national campaigns to tackle the school run. By recognising changes that will encourage more people to cycle and by delivering these changes in a planned and consistent way, London can create conditions that will make cycling an attractive and

convenient travel option without having a large negative impact on other road users or pedestrians.

The approach also includes a focus on changing attitudes towards cycling, for example building credibility and providing the necessary information and skills to make Londoners feel confident about cycling in London, in a manner that will attract public respect.

Consistent quality

The quality of cycle schemes built in the past has been variable. In part this has been due to a lack of co-ordination between the many agencies with responsibility for design, building or maintenance of cycle schemes.

A deficiency of quality has created conditions in London where those who cycle occasionally lack confidence

in schemes designed to help them. TfL's aim is to apply and maintain consistently high standards to all new schemes that can be used with confidence by everyone, regardless of their experience or journey purpose. Schemes should offer benefits to cyclists whether they are making a short trip to the shops or commuting to work every day.

Business approach

Cycling has economic benefits as a low-cost, healthy and pollution free mode of travel that contributes to reduced congestion in London. Initial work to quantify the benefits of investment in cycling has been completed and further work is planned.

To ensure that cycle schemes help reduce transport and other social inequalities, a systematic analysis will be undertaken of Londoners' attitudes towards

cycling; the impacts on other road users, particularly socially excluded target groups; focused activities for people with special needs such as children, parents, older people or minority ethnic people; and the development of design and delivery standards. Close attention will be given to feedback from users. Annual reviews of progress towards the set targets will allow TfL to direct resources towards the areas that are delivering the greatest increases.

This business focused approach to finance, planning and measuring the effectiveness of schemes, including the likely impacts on others, will help ensure that cycle schemes deliver genuine benefits for cyclists and that the economic benefits of cycling as a mode of travel are fully realised.

3.5 Links to local authority cycling plans

TfL has an ambitious plan for cycling in London, which offers benefits to a wide range of stakeholders. Success depends on developing positive partnerships, improving communication and co-operation around shared objectives.

The London boroughs and the Association of London Government (ALG) have a vital role in developing cycling in London. The boroughs will be responsible for implementing many elements of the London Cycling Action Plan, from planning and building new cycle schemes to delivering cycle training and local marketing.

Boroughs will be involved both as individual organisations and as stakeholders in sub-regional partnerships. Their responsibilities include ensuring accessibility, successful service

delivery and responding to local needs. TfL will be available to support boroughs in carrying out these responsibilities, and the output from delivery of these schemes will directly impact on achieving targets to make the cycling environment safer and more convenient, attracting increased use and reducing social and economic inequalities.

Regular liaison is key to TfL's role in supporting boroughs and improving co-ordination. TfL's CCE has hosted one-to-one meetings with borough cycling



officers to establish local baselines and priorities for action. Regular meetings with Camden as the leading borough for the LCN+ have already been established and good progress has been made in ensuring successful programming, delivery and monitoring of the network.

The CCE and boroughs will work together to deliver cycle improvements, including those outside the scope of the LCN+, and are developing systems to improve co-ordination of local initiatives and the LCN+ programme across London. Monitoring will be essential, providing boroughs with a clear indication of what has been achieved. It will also help identify priorities for future activity. TfL will provide extra funding for monitoring where required.

The boroughs are encouraged to deliver their own cycling action plans, which should take into account the objectives in the Plan. The borough plans will also need to reflect local characteristics and make sure local needs can be identified and met while still delivering broader strategic improvements that will benefit everyone who chooses to cycle. TfL's funding priorities will be for schemes that closely match the strategic objectives set out in this Action Plan and for projects that have clear stakeholder involvement and local support. TfL is in discussion with the NCSB and the DfT to provide additional support for the development of action plans and local benchmarking.

The boroughs will also have a critical role in ensuring cyclists' needs are met in new building



developments and regeneration projects. When aiming for growth, it is essential that existing cycle parking standards be strictly enforced, both in commercial and residential developments. Boroughs are encouraged to include cycle parking standards into their Unitary Development Plans.

3.6 Review and monitoring

Clear, measurable monitoring procedures and performance indicators (PIs) are essential to establish whether progress is made towards meeting the overall targets and action-specific targets. Relevant data and procedures include:

- surveys of current cycle traffic volume
- an asset and condition survey of all cycle schemes
- methodologies and surveys for measuring cyclists' satisfaction
- information on bicycle ownership and usage from the LATS 2001 survey

- an inventory of existing cycle education programmes and other community based projects
- methodologies and surveys to measure cyclists' attitudes to other road users and vice versa.

TfL will develop PIs in conjunction with London boroughs to ensure a common commitment to reporting progress. To implement this, the CCE will work with borough representatives to discuss and agree data requirements and appropriate targets for each borough, programme and project.

This approach aims to ensure that realistic and relevant targets are set for each area, which will combine to ensure steady progress is made each year towards achieving the Mayor's vision for cycling by 2010.

A Review and Monitoring Group will be established in 2004. This will include representatives from TfL, ALG, project partners and user groups. The NCSB will also be kept advised of progress.

3.7 Funding

In 2003/2004, a business case for cycling in London was developed. To achieve a target increase of 80%, £147 million will be required. In addition, a positive contribution from other programmes will be needed to meet these targets. For example the impact that congestion charging brought to increasing cycling levels in central London.

The level of activity is dependent on the provision of funding from TfL to enable their delivery. Boroughs are granted funding to develop LCN+

schemes annually. Further financial support for non-LCN+ schemes can be bid for through TfL's annual Borough Spending Plan (BSP) process. TfL also finances new cycle facilities on the TLRN and invests directly in high-profile projects. In addition, TfL will seek increased financial contribution towards cycling projects through partnerships with private organisations.

As part of the submission to the Government's Comprehensive Spending Review 2004, TfL has set out

the case for additional resources in order to enable delivery of this Action Plan (as part of the wider case for delivering the Mayor's agenda for transport). In order for the vision to be fully realised, it is necessary that these funds are secured, together with the support of the London boroughs and other partners for delivering the key actions. The Action Plan will be subject to ongoing review to ensure available funds and resources are targeted at areas where the maximum benefit can be achieved.

3.8 Objectives

Objective 1: Introduce quality conditions on the London Cycle Network plus (LCN+)

Improving London's infrastructure for cyclists will have a significant and positive impact on the level of cycling. Well-designed cycle routes, reduced traffic speeds,



designated road space and more parking facilities will encourage more Londoners to cycle. Measuring cycle flows before and after cycling improvement work was undertaken in London shows that partially isolated cycle schemes deliver average cycle flow increases of 10%-30% per year (TfL and borough cycle figures). Higher increases can be expected as a result of a coherent network, implemented and maintained to a consistent level of service.

Much of the work to improve London's cycle infrastructure will be carried out as part of the LCN+. The LCN+ is a planned 900km network of radial and orbital routes for cyclists

covering the whole of London, which will be completed in 2009/2010. This follows the recommendations of a year long review of investment in walking and cycling undertaken by a specially convened Task Force and involving cycling stakeholders (TfL 2002d). Figure 13 shows the planned extent of the LCN+. Also, additional routes need to be identified and developed for regeneration areas and introduced as transport demand increases.

Figure 14: The London Cycling Network plus



Quality

This major project is being developed and implemented by TfL and the London boroughs. The LCN+ will be characterised by:

- a socially inclusive cycling environment where high quality standards are maintained
- routes that are continuous, fast, safe, comfortable and easy to use
- clear guidance on surface treatment and road markings where there is potential conflict between cyclists and other road users.

LCN+ Network Plan

The LCN+ Network Plan will be a detailed technical framework, bringing together all the elements of TfL's new approach. In developing and implementing the LCN+ Network Plan, TfL aims to involve cyclists, ensuring their

needs are reflected in new cycle schemes.

As different areas of London may require different measures to suit local conditions, the LCN+ Network Plan will not aim to impose one standard engineering solution. However, while an emphasis on local needs is important, it must be developed within a consistent London-wide framework that ensures quality schemes and quality programme management. This framework and the process for designing and implementing effective cycle schemes will be set out in the Network Plan.

Advice on cycle scheme design is widely available, but the LCN+ Network Plan will provide a whole-life project management approach to cycle schemes for the first time. It will cover how to:

- identify people's needs and design creative, high quality schemes to meet them
- communicate scheme benefits to users and stakeholders effectively to improve attitudes towards cycling
- set standards for ongoing design, maintenance, enforcement and monitoring of schemes
- Ensure good programme and project management skills so schemes are co-ordinated and delivered on time and within budget.

The overall costs of the LCN+ are expected to be around £140m, with around £30m already spent by the end of 2003/04. The London Borough of Camden has been appointed as the leading borough for LCN+ and is responsible for liaising with, and supporting, all other boroughs.

Case study: New cycle facilities on Cable Street/Royal Mint Street



The segregated cycle tracks along Royal Mint Street and Cable Street were finalised in 2002/3. This provides nearly 2 km of LCN+ route. User surveys performed in 2003 (TfL 2003e) show that four in five cyclists are very satisfied with the new facilities and feel much safer now. 54% say they now cycle more in the area and 64% state they have improved their journey time. In addition, around 25% say they have replaced journeys made by other modes with cycling because of the new facilities.

Objective 1 actions	Lead agency & key partners	Delivery
<p>1.1 London Cycle Network +:</p> <p>Provide cyclists with fast, safe and comfortable conditions on key high demand routes.</p>	<p>TfL, LCN+, LB</p>	<p>200 km complete by end of 2006 500 km complete by end of 2008 900 km complete by end of 2010 (subject to available funding)</p>
<p>1.2 Programme and project management:</p> <p>Improve resources and procedures for co-ordination, programme and project management and delivery of the LCN+ and individual links.</p>	<p>TfL, LCN+, LB, LoTAG, LCC</p>	<p>Network Plan complete by end of 2004 Annual report and review CRISP studies on all appropriate links complete by end of 2008, (subject to available funding)</p>
<p>1.3 Maintenance, enforcement and monitoring:</p> <p>Develop consistent maintenance, enforcement and monitoring plans of LCN+ links.</p>	<p>TfL, LCN+, LB LoTAG, project partners</p>	<p>Review during 2004/05 Establish by end of 2005</p>
<p>1.4 Design standards:</p> <p>Establish performance standards for LCN+ infrastructure that will meet the needs of cyclists, attract higher flows and reduce threats of cycling to pedestrians.</p>	<p>TfL LoTAG, NCSB</p>	<p>Agree London Cycling Design Standards by end of 2004 Review standards during 2006</p>

Objective 2: Increase cycle safety, access, and priority

Case study: Roundabout safety schemes



New traffic lights and a network of on-street and off-street cycle routes can significantly reduce casualty rates at roundabouts. An analysis of accidents at 10 standard roundabouts before and after signal implementation showed an 80% decrease in collisions involving cyclists. In the 36 months before the changes, there were 70 accidents involving cyclists compared to 14 in the 36 months after the changes.

Objective 2 actions	Lead agency & key partners	Delivery
<p>2.1 Remedial safety:</p> <p>Agree priority locations for a rolling programme of remedial safety work on the TLRN and encourage the boroughs to undertake a similar programme.</p>	<p>TfL, LB</p>	<p>Programme starts 2004, (subject to available funding in future years)</p>
<p>2.2 Audits and checklists:</p> <p>Publish and promote audits and checklists of cyclists' needs and ways to minimise the negative impacts of cycling upon pedestrians and other road users.</p>	<p>TfL LB, LoTAG, project partners</p>	<p>Publish in spring 2005</p>
<p>2.3 Hotline:</p> <p>Establish a technical cycling advice hotline</p>	<p>TfL</p>	<p>Set-up mid 2005</p>
<p>2.4 Advanced stop lines:</p> <p>Investigate the effectiveness of existing advanced stop lines (ASLs) and in collaboration with the boroughs install ASLs at signalled junctions where appropriate.</p>	<p>TfL, LB</p>	<p>Research into effectiveness completed in summer 2004</p> <p>Installation ongoing, (subject to available funding in future years)</p>
<p>2.5 Legislation:</p> <p>Review current legislation to simplify procedures for giving greater priority to cyclists.</p>	<p>TfL DfT, ALG, NCSB</p>	<p>Start in spring 2004</p>

Objective 3: Increase cycle parking provision

Appropriate and good quality cycle parking is a key element in the development of cycling. However, a variety of cycle parking facilities is required to meet the different convenience and security needs of cyclists. For example, short-stay parking on-street is needed for

personal, leisure and shopping purposes, while medium-stay to long-stay parking is needed for education, business, commuting and at stations. There is also a need for secure overnight parking facilities in residential areas. Theft figures show that more than 50% of

reported bicycle thefts occur in and around the owner's home (TRL 1997). Cycle parking facilities need to be fitted with good lighting, in order to assure safe and secure access for everyone and to reduce opportunities for anti-social or criminal activity.

Case study: Cycle parking at Barking, Havering and Redbridge NHS Trust



TfL has funded the installation of covered, CCTV monitored parking for 40 bicycles on two sites owned by Barking, Havering and Redbridge NHS Trust. The stands will be promoted via the Trust's Environmental Travel Plan and at public information points in the two hospitals.

Objective 3 actions	Lead agency & key partners	Delivery
<p>3.1 On-street parking:</p> <p>Review and publicise existing provision in each borough, identify deficiencies, develop costed programmes and accommodate demand.</p>	<p>LB LCC</p>	<p>Additional 3000 to 5000 stands by end of 2010, (subject to available funding)</p>
<p>3.2 Cycle parking at schools:</p> <p>Implement a programme to introduce quality cycle parking at London schools and further education establishments</p>	<p>TfL LB, schools</p>	<p>Starts 2004 5000 spaces installed by end of 2005, (subject to available funding)</p>
<p>3.3 Cycle parking at workplaces:</p> <p>Examine impacts and set-up a programme to support provision of good quality and secure cycle parking to meet commuter and workplace needs</p>	<p>TfL LB, business partnerships, LCC</p>	<p>Programme starts in spring 2004, (subject to available funding)</p>

Objective 3 actions	Lead agency & key partners	Delivery
<p>3.5 Cycle parking at home:</p> <p>Encourage provision of good quality and secure parking for residents (particularly in regeneration areas and new developments), targeting places with known demand, a high proportion of people on low incomes.</p>	<p>LB</p> <p>TfL, LCC</p>	<p>Ongoing, (subject to available funding)</p>

Objective 4: Support innovative cycling schemes

There are many opportunities to develop cycling by extending it into new areas. Innovative and high profile cycling infrastructure such as new bridges and routes alongside canals or through parks, motivate people to cycle. It is essential to ensure that pedestrians also benefit and

that, where it is a matter of space, sufficient width is build in at the outset. Each scheme will be assessed in terms of demand and benefit.

Other types of schemes such as ‘city bikes’, pedicabs or emergency services on bikes are likely to require start-up

funding, new regulations and other practical support. The impact of the schemes will be reviewed in terms of their effect on public attitudes, contributions to other mayoral strategies and public policy objectives, as well as for their contribution to cycling.

Case study: Cycling in the Royal Parks



Two of the main pedestrian paths within Kensington Gardens were converted on a trial basis to pedestrian/cycle shared use in spring 2001. A user survey taken before and after the scheme’s introduction showed that there was a large increase in the proportion of cyclists, from an average 2% to over 13%. There has been a substantial reduction in the number of pedestrian/cycle accidents and near misses, and a reduced opposition of other users. As a result, cyclists will be allowed to use the two paths on a permanent basis.

Objective 4 actions	Lead agency & key partners	Delivery
<p>4.1 Off-highway routes:</p> <p>Encourage the development of cycling through parks and green corridors</p>	<p>TfL, LB, RPA LCC, Sustrans</p>	<p>Ongoing</p>
<p>4.2 Using bicycles for work:</p> <p>Support the greater use of bicycles for work, initially targeting the emergency services, health sector and local government</p>	<p>TfL, Metropolitan Police, LAS</p>	<p>Annual 999 London Cycling Awards start in early 2004</p>
<p>4.3 Transport for freight and people:</p> <p>Investigate the potential for licensing pedicabs and promote use of bicycle for freight and delivery services and by couriers</p>	<p>TfL Pedicab, delivery and courier companies, LB</p>	<p>Licensing pedicabs to be examined by end of 2004</p>
<p>4.4 Bike loan systems:</p> <p>Investigate the development of bicycle loan and pool bike schemes</p>	<p>TfL private suppliers, LB, project partners</p>	<p>Viability to be determined by end of 2004. Scheme introduced by end of 2006, (subject to available funding)</p>

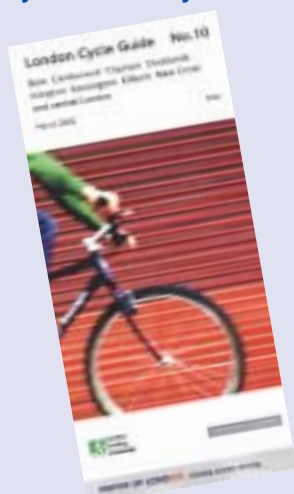
Objective 5: Promote cycling and improve its status

Marketing and promotion are central elements of TfL's commitment to optimise

investment in cycling and secure lasting improvements in the level of cycling.

There are a number of aspects to TfL's marketing activity to promote cycling as a viable

Case study: London Cycle Guides



In April 2002, TfL and the London Cycling Campaign launched the new London Cycle Guides – a series of 19 free maps for cycling in London. Almost 2 million copies have been distributed to date and a second edition is planned for 2004. Some 25% of the map users consider themselves to be beginner or occasional cyclists, almost half confirm that they cycle more often and 80% state that they have changed routes as a result of the maps. Overall, 90% of the map users found the maps very useful or useful.

mode of transport. It will include practical cycling and route information and publicising advantages, support for London based events and facilities such as cycle parking and campaigns

that take cycling to the wider community.

Current and potential cyclists often criticise the lack of cycling information. Cycle facilities are likely to be

under-used if they are not promoted adequately.

Organised cycling events will increase publicity and highlight cycling as part of a London lifestyle.

Objective 5 actions	Lead agency & key partners	Delivery
<p>5.1 Cycling information:</p> <p>Develop, update and make widely accessible route, parking, trip planning and other practical cycling information through mapping, print and electronic media.</p>	<p>TfL</p> <p>LB, LCC, Rough Guides, NCSB, project partners</p>	<p>London Cycle guides (2nd edition) in spring 2004 Rough Guide ebook and TfL cycling website in summer 2004</p>
<p>5.2 Market research:</p> <p>Conduct market research into cycling to fill knowledge gaps and provide information to ensure effective targeting of investment</p>	<p>TfL</p> <p>LB, LCC, Sustrans</p>	<p>Research strategy complete by end of 2004</p>
<p>5.3 Marketing and promotion plan:</p> <p>Marketing and promotion plan to provide a focus for those who are promoting cycling in London. This will include 'taking' cycling to the wider community</p>	<p>TfL</p> <p>ALG, Sustrans, NCSB LCC, LCN+ project partners</p>	<p>Publish in summer 2004</p>
<p>5.4 Flagship events:</p> <p>Investigate the feasibility of international flagship events and sponsorship and support local initiatives</p>	<p>TfL, GLA, LB, LCC</p> <p>Project partners</p>	<p>Large central London event starts in 2004 and annually International flagship cycling event by end of 2008</p>
<p>5.5 Role models, culture and lifestyle:</p> <p>Identify and promote positive cycling role models and relevance of cycling to achieving individual Londoners' lifestyle aspirations</p>	<p>TfL</p> <p>GLA, project partners</p>	<p>Major campaign starts in spring 2004</p>

Objective 6: Provide incentives and support for target groups

Widening the appeal of cycling in London is essential to achieving the benefits of this programme. In addition to infrastructure and information, it is important to help people to gain the confidence to cycle in an urban environment. Cycle training for children and adults can lead to significant benefits both for road safety and take-up of cycling.

London's cyclists are currently disproportionately made up of adult males in employment. To make cycling more socially inclusive, a range of carefully targeted initiatives is required to meet the needs and concerns of those seeking support. In particular, cycle training for children and teenagers will be made a priority and promotional work

will aim to persuade them to continue cycling in London throughout their active life.

In addition, groups such as employers, schools, colleges and clubs all offer a context for incentives and support.

Case study: Cycle training and bicycle support team in London Borough of Ealing



In 2002/03, the London Borough of Ealing provided high quality cycle training for 36 adults and 480 children. Around 30 primary and secondary schools and four community groups were trained in on-street cycling, especially along routes to school. A Bicycle Support Team has been established to extend cycle training into local communities and businesses (and provide maintenance checks and information).

Objective 6 actions	Lead agency & key partners	Delivery
<p>6.1 Cyclist training:</p> <p>Support a rolling programme of cyclists' training for children, teenagers and adults that will meet London's needs. This will build upon the work currently undertaken by the London boroughs and cycling organisations and link to developments in curriculum and quality control, supported by the National Cycling Strategy Board.</p>	<p>TfL, LB</p> <p>CTC, NCSB, RoSPA, LARSOA, BC</p>	<p>Set standards, curriculum by end of 2004</p> <p>Costed five year plan by end of 2005</p> <p>Completed by end of 2010, (subject to available funding)</p>

Objective 6 actions	Lead agency & key partners	Delivery
<p>6.2 Support for disabled people:</p> <p>Support a programme of measures to promote inclusion and encourage disabled people to cycle. This will include provision of all-ability cycling information, acceptance of standards for cycling infrastructure and full inclusion in cycling events and opportunities.</p>	<p>TfL</p> <p>LCC, Disability groups</p>	<p>E-guide early 2004</p> <p>Annual programme of events and standards by end of 2005</p>
<p>6.3 Children and schools:</p> <p>Work with partners to develop cycling within schools. This will include support for cycle parking facilities, developing incentives, training and marketing materials.</p>	<p>TfL, GLA</p> <p>LB, schools, Sustrans, NCSB, BC</p>	<p>Starts in spring 2004</p>
<p>6.4 Employers:</p> <p>Encourage London employers to facilitate cycling by staff, visitors and contractors. This will include TfL's Bike and Business programme and support for travel plan co-ordinators.</p>	<p>Business partnerships</p> <p>TfL, LB, LCC, NCSB</p>	<p>Review of business requirements in spring 2004</p> <p>Costed plan by end of 2005</p> <p>Completed by end of 2010, (subject to available funding)</p>

Objective 7: Increase mutual awareness and respect between cyclists, pedestrians and other road users

Road safety campaigns and travel awareness programmes are successful in increasing understanding and improving behaviour between road user groups. TfL will develop campaigns and work with partners to manage conflict between users.

Cycling in London involves a great deal of interaction with other people. Cyclists are subject to traffic law and requirements (the Highway

Code, local by-laws and other legislation), but this does not provide a comprehensive code of rights and responsibilities. There is direct evidence that improved enforcement of traffic law would reduce the number of cycling casualties. Furthermore, anti-social behaviour by cyclists undermines other efforts to develop cycling in London and creates conflict with other road users.



Case study: Cycling-HGV road safety campaign



In 2002, TfL launched a road safety campaign in partnership with the boroughs, London Cycling Campaign and the Freight Transport Association. The campaign aimed to raise mutual road safety awareness among heavy goods vehicle drivers and cyclists. It addressed both points of view and informed drivers and cyclists on their respective behaviour at junctions.

Objective 7 actions	Lead agency & key partners	Delivery
<p>7.1 Road safety campaigns:</p> <p>Develop road safety campaigns and supporting material. This will include extending the Cycling/HGV campaign, a cyclist/motorcyclist and a 'car-door' campaign.</p>	<p>TfL LCC, project partners</p>	<p>Cyclist/HGV in summer 2005 Cyclist/motorcyclist by end of 2005 Car-door by end of 2006</p>
<p>7.2 Mutual awareness campaigns:</p> <p>Develop guidance and awareness campaigns that promote respect towards pedestrians and other vulnerable road users. This will include developing of a series of fact sheets and locally targeted campaigns.</p>	<p>TfL, Sustrans LB, LCC, project partners</p>	<p>ASL awareness campaign by end of 2004 Respect campaign by end of 2005</p>
<p>7.3 Enforcement:</p> <p>Develop effective measures for addressing problems caused by cycling on the pavement and other offences and fully integrate cycling into enforcement regimes.</p>	<p>TfL, MET, LB LCC</p>	<p>Complete scoping study in summer 2004</p>

Objective 8: Promote cycle links and interchange schemes

TfL aims to make cycling a viable travel option to more Londoners by linking cycling with public transport use. By providing convenient cycling links, people will be able to cycle to train and main bus stations, improving the viability of off-peak services and complementing other measures such as congestion charging.

Cycling can only combine with public transport to become a real alternative to longer car journeys if there is:

- adequate secure cycle parking
- facilities for carrying bicycles on Tube and train journeys outside peak flows
- access to back-up services such as bicycle storage or repair at stations
- fully integrated travel information.

A TfL survey at Waterloo railway station showed that more than 10% of travellers had considered using a bicycle to continue their journey

(TfL2000a). Newly built 'bike stations' have been introduced in a number of European cities and have been very successful in increasing cycling use and status. A TfL flagship scheme is to develop 'bike stations' with a full range of cycle facilities. Stations under initial consideration include Waterloo, Finsbury Park, Wimbledon, Clapham Junction and Surbiton. In addition, TfL intends to make cycling an integral part of all rail and interchange improvement programmes.

Case study: Bike Station in Munster, Germany



In 1999, Munster in north-west Germany (pop 280,000), built a large bike station facility at the city's main railway station. The facility provides secure parking for 3,300 bicycles for a daily fee of 40 pence or £40 per annum. Integrated in the bike station is a bike repair shop, bike hire facilities, lockers and a tourist office. Every fourth rail customer now cycles to or from the station. Over 80% of all users are very satisfied with the facilities, the service and the price.

Objective 8 actions	Lead agency & key partners	Delivery
<p>8.1 Cycle parking and cycle access at stations:</p> <p>Support the introduction of improved cycle facilities and cycle access at stations, through Borough Spending Plan and TfL interchange programmes</p>	<p>TfL, LB LCC, Project partners</p>	<p>Improved access and parking at main rail stations by end of 2006</p> <p>Adequate cycle parking facilities at all Tube and rail stations by end of 2010, (subject to available funding)</p>

Objective 8 actions	Lead agency & key partners	Delivery
<p>8.2 Bike stations:</p> <p>Develop the concept of bike stations with a full range of cycle facilities to provide first class cycle parking and cycle hire at main interchange points.</p>	<p>TfL</p> <p>Project partners</p>	<p>Bike station at Finsbury Park in spring 2005</p> <p>Four bike stations at major rail stations by mid 2007, (subject to available funding)</p> <p>10 bike stations at major rail stations by end of 2010, (subject to available funding)</p>
<p>8.3 Interchange guidelines:</p> <p>Ensure cyclists' needs are being addressed in the planning and development of new schemes. This will include development and review of current guidelines and schemes and revision as necessary</p>	<p>TfL</p> <p>Project partners</p>	<p>Review by end of 2005</p>
<p>8.4 Cycling as part of longer journeys:</p> <p>Actively promote cycling as an integral component of longer journeys involving rail or underground. Incorporate cycling into the marketing of the Overland Network (ON) and provide information at stations and on-line in TfL's web based journey planner about local routes, cycle parking, other local facilities and carriage on trains.</p>	<p>TfL</p> <p>Project partners</p>	<p>Distribution of cycle maps at tube and rail stations</p> <p>Web-based publication of information starts in summer 2005</p> <p>Comprehensive 'journey planner' by end of 2006</p>

Objective 9: Optimise the contribution to cycling from other schemes

Successful cycling cities all have a range of complementary programmes that indirectly support cycling. Achieving an 80% increase in cycling in London, will be dependent on the positive contribution from other integrated transport and regeneration initiatives.

All TfL, borough, highway and development work and plans, should aim to make the cycling environment safer and more attractive by using pro-cycling design criteria. This includes improving road maintenance, reducing traffic volumes and decreasing vehicle speeds, by encouraging planners and

engineers to design for growth in cycling.

In London, a wide range of initiatives are planned over the next ten years. This will affect cycling as a practical transport choice. They can contribute in a variety of ways, for example:

- remove barriers to cycling
- offer advantages in terms of infrastructure, access, safety, comfort, journey time
- affect attitudes and perceptions about cycling
- offer incentive to change mode.

There is scope for engineers to be more creative in incorporating cycle improvements into improvement schemes, for example, including upgraded cycle lanes in bus priority projects.

Integrating cycling improvements into other schemes has the added advantage of reducing disruption and costs by making sure works are carried out simultaneously.

Case study: Congestion charging



The introduction of the congestion charge has had significant effects on cycling levels in Central London. Pedal cycling into the charging zone has increased by around 30%. Analysis shows that the large increase is strongly focused on the morning and evening peak periods, suggesting an increase in commuting by bike. It has also shown that there has been a 17% reduction in the number of cyclists involved in road accidents within the zone since the implementation of the congestion charge, despite the increase in the number of cyclists in this area.

Objective 9 actions	Lead agency & key partners	Delivery
<p>9.1 Implication of new initiatives on cyclists:</p> <p>Research and publicise the implications for cyclists of new transport initiatives such as congestion charging or new tram links.</p>	<p>TfL ALG, project partners</p>	<p>Ongoing</p>
<p>9.2 Town centre, local area schemes and major developments:</p> <p>Ensure that cycling objectives are achieved in town centre and local area schemes and major developments.</p>	<p>LB TfL, LCC, Sustrans, project partners</p>	<p>Publish list of planned schemes in spring 2004</p> <p>Review and auditing tool to assess quality of cycling environment by end of 2005</p>

Objective 9 actions	Lead agency & key partners	Delivery
<p>9.3 Cycling, traffic and bus priority schemes:</p> <p>Seek synergies between cycling, traffic and bus priority schemes through co-ordinated planning and impact assessment.</p>	<p>TfL LB, ALG</p>	<p>Procedures agreed in spring 2005 Monitoring impacts in summer 2006</p>
<p>9.4 Cycle parking standards:</p> <p>Update and further develop cycle parking standards.</p>	<p>TfL, GLA LB</p>	<p>Research use of standards end of 2004 Revision complete by end of 2005</p>
<p>9.5 20mph limits and zones:</p> <p>Support the introduction of 20mph limits and zones and other conflict mitigation measures such as traffic calming at side roads and surface treatments.</p>	<p>TfL LB, project partners</p>	<p>Research and publication of benefits in summer 2005</p>
<p>9.6 Cycling promotion within other schemes:</p> <p>Support the boroughs and other stakeholders to maximise opportunities for cycling growth, promotion and consultation where there is scope for cyclists to benefit from other schemes.</p>	<p>TfL, LB LCC</p>	<p>Review current arrangements for assessing demand, securing the views and feedback from cyclists, and dealing with complaints complete by end of 2005</p>

Objective 10: Improve co-ordination and partnership

Many individuals and organisations have a role in developing cycling in London. Groups such as the NCS, LBCOG and the LCN+, are already in place at a local and sub-regional level, to improve co-ordination between stakeholders involved in cycle promotion. These stakeholders cover a wide range of disciplines including retail, leisure, sport, health, tourism, engineering, planning, crime prevention, community

development and the environment. TfL will support and assist such groups where possible to explore opportunities for innovative partnerships, to meet the needs of specific projects and local areas.

TfL will also support measures to share information and best practice, as well as develop synergies between projects and programmes. This is likely to be achieved through different

media such as websites, newsletters and events. Understanding cyclists and their needs is a new concept for many. Developing and delivering professional training for planners, engineers, travel plan co-ordinators and road safety officers on cycling issues will improve cycling's priority status.

TfL values the partnerships it has developed with the ALG, the London boroughs, and

particularly Camden as project managers of LCN+. TfL also values its close relationship with the voluntary sector, particularly the London Cycling Campaign – a partnership that has already successfully delivered a range of initiatives such as a series of free,

award-winning London Cycle Guides and the launch of the All Abilities Cycling Group. An effective partnership has been forged with the Metropolitan Police and London Ambulance Service. Officers are trained to use bicycles as part of everyday operations.

To take its plans forward, TfL will work to establish new partnerships, for example with health, education and tourism bodies, the business community, train and bus operating companies and the voluntary sector.

Objective 10 actions	Lead agency & key partners	Delivery
<p>10.1 Develop partnership working:</p> <p>Develop and facilitate partnership working at all levels of the Plan's delivery.</p>	<p>TfL</p> <p>Project partners, LCN+</p>	<p>Borough plans from 2004/05 Annual partnership award and networking event starts in spring 2004</p> <p>Partnership process for review monitoring and reporting in spring 2004</p>
<p>10.2 Partnership projects:</p> <p>Develop new and existing partnership projects with a wide range of organisations around common objectives. New projects will focus on marketing, training and education and meet the specific needs of target groups.</p>	<p>TfL</p> <p>Project partners</p>	<p>Ongoing</p>
<p>10.3 Professional development:</p> <p>Develop London's capacity to deliver this Plan. Ensure that professional training courses reflect the needs of the cyclists in London.</p>	<p>TfL</p> <p>LoTAG, NCSB</p>	<p>Starts in summer 2004</p>
<p>10.4 Business case and monitoring framework:</p> <p>Develop qualitative and quantitative business case and monitoring framework to ensure the efficient and timely delivery of the Plan's objectives and targets.</p>	<p>TfL</p> <p>Project partners</p>	<p>Starts in spring 2004</p>



Appendices



Appendix 1: Supporting organisations & glossary

Development of the London Cycling Action Plan has been a cumulative process, led by TfL with valuable input from the National Cycling Strategy Board, Cycling Scotland, Mairie de Paris and many key London stakeholders.

The process began late in 2001 when key stakeholders responded positively to TfL's challenge to 'reconceptualise' cycling. The final report (Walking, Cycling and Area-based Schemes Review – TfL 2002d), attracted broad support from across the stakeholder spectrum. In addition, TfL took part in the CTC benchmarking scheme (2001/02), hosted the national cycling campaign conference (2003) and held a series of one-to-one meetings with London Cycling Campaign, Sustrans, CTC, Association of London Government, London Transport Users Committee and borough officers.

The benefits of a collaborative approach – sharing expertise and best practice – and co-ordination of projects and programmes wherever there is common ground, cannot be emphasised enough.

Finally, TfL would like to acknowledge the considerable contribution that many organisations and individuals have made to the development of this plan and in particular, to recognise the generosity of everyone with an interest in cycling in giving of their time and experience.

Consultation list:

- Greater London Authority
- London Transport Users Committee
- London boroughs, Association of London Government
- London Cycling Campaign
- CTC, National Cycling Strategy Board, English Regions Cycling Development Team, Sustrans
- British Cycling Federation, Sport England
- Confederation of British Industry, London First, London Chamber of Commerce and Industry, TEC's local and regional business partnerships (CLP, Sweltrac, Kings Cross Partnership, Thames Gateway, etc)
- London Tourist Board, British Tourist Authority
- London Schools Commissioner
- Department for Transport, Environment Agency, Department of Trade and Industry, Department for Education, Department for Health, Health Development Agency, Royal Parks Agency
- All Party Parliamentary Cycling Group
- Groundwork London, WWF, Greenpeace, Friends of the Earth
- Transport 2000, Environmental Transport Association
- British Medical Association, British Heart Foundation, King's Fund
- Living Streets, London Walking Forum
- British Motorcycle Federation, The Automobile Association, Freight Transport Association
- Greater London Forum for the Elderly, Age Concern London, London Older People's Strategies Group
- Joint Committee on Mobility of Blind and Partially Sighted People
- Greater London Action on Disability (GLAD)

Glossary

ACC	Automatic Cycle Counters	LATS	London Area Transport Survey
ALG	Association of London Government	LB	London Boroughs
ASL	Advanced Stop Line	LBCOG	London Borough Cycling Officers Group
BMA	British Medical Association	LBI	London Bus Initiative
BC	British Cycling	LCC	London Cycling Campaign
BSP	Borough Spending Plan	LCN+	London Cycle Network plus
CARN	Countryside Agency Research Note	LoTAG	London Technical Advisers Group
CCE	Cycling Centre of Excellence	LRTS	London Residents Transport Survey
Central London	The area bounded by London's mainline railway stations	LTUC	London Transport User Committee
CIT	Commission for Integrated Transport	LUL	London Underground Limited
CLP	Central London Partnership	NCS	National Cycling Strategy
CRISP	Cycle Route Implementation Study Process	NCSB	National Cycling Strategy Board
CTC	Cyclists' Touring Club	ON	Overground Network
DETR	Department of the Environment, Transport and Regions (now DfT)	Outer London	19 Boroughs of Barking & Dagenham, Barnet, Bexley, Brent Bromley, Croydon, Ealing, Enfield, Haringey, Harrow, Havering, Hillingdon, Hounslow, Kingston upon Thames, Merton, Redbridge, Richmond upon Thames, Sutton, Waltham Forest
DfT	Department for Transport	PCO	Public Carriage Office
DLR	Docklands Light Railway	PI	Performance Indicator
GLA	Greater London Authority	RAC	Royal Automobile Club
GLAD	Greater London Action on Disability	RoSPA	Royal Society for the Prevention of Accidents
Inner London	Corporation of London and 13 Boroughs of Camden, Greenwich, Hammersmith & Fulham, Hackney, Islington, Kensington & Chelsea, Lambeth, Lewisham, Newham, Southwark, Tower Hamlets, Wandsworth, Westminster	RPA	Royal Parks Agency
LAAU	London Accident Analysis Unit	TfL	Transport for London
LARSOA	Local Authority Road Safety Officers' Association	TLRN	Transport for London Road Network
LAS	London Ambulance Service	TRL	Transport Research Laboratory
		UDP	Unitary Development Plan

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