Appendix C: Evidence base



Royal Greenwich Draft Cycling Strategy

Setting out Royal Greenwich's aspirations for cycling in the Borough to 2026

This strategy shows how we will work towards achieving our vision of 'more cycling, more often and even more safely' in Royal Greenwich, ensuring that cycling contributes to our growth, anti-poverty, public health and transportation priorities.



RBG Draft Cycling Strategy Appendix C: Cycling Strategy Evidence Base

Contents

1.	Context	2
2.	Cycling in Royal Greenwich today	2
3.	SWOT analysis	10
4.	Detailed Policy Review	17

1. Context

This evidence base document is used to support Royal Greenwich's Cycling Strategy. It outlines the existing situation and the changes needed to encourage cycling in the Royal Borough based on a range of information and data sources, which have then fed into the principles, targets and actions of the Strategy. It also contains a detailed policy review to show how cycling fits within the wider strategic framework of the Borough.

2. Cycling in Royal Greenwich today

2.1 Cycling levels

Royal Borough of Greenwich recognises that we have currently have low cycling levels. The 1.1% mode share by bike (2009-2012 average) equates to around 4,000 trips by bike by residents of the Borough each day. Compared to all of London, Royal Greenwich currently has some of the lowest cycling levels, though broadly in accordance with many outer London Boroughs. Overall cycle trip rates are low, and progress in addressing this situation has been a challenge – necessitating the Cycling BVR and this Strategy. The most recent data available suggests that mode share by bike to work is also low – 2.4% of all work trips made by residents of Royal Greenwich are made by bike¹, although this has increased by around 1% between 2001 and 2011^2 . Cycling currently accounts for just 1% of all journeys to school (primary and secondary schools)³.

Figure 1: Cycling levels across all London Boroughs, 2008-2011 (source: TfL)



Annual traffic monitoring counts (including bike trips) made on Royal Borough of Greenwich roads are carried out. Across 29 count points (of varying levels of overall traffic), share of traffic by bike reaches 10% at one location (Creek Road)⁴, but at

¹ TfL Travel in London report 4, 2011

² 2011 Census data

³ Greenwich Council school travel data sets, 2010-2011

⁴ Greenwich Council data sets

most points cyclists make up 2% of the traffic flow or less. Such counts include those made by residents and non-residents of the Borough, and are 'snapshot' surveys taken on a particular day of the year at each location.



Figure 2: Location of automatic cycle counters/annual traffic monitoring points

Continuous cycle flow data is also recorded using automatic cycle counters (ACCs), which have been installed by TfL at 5 locations in the Borough (see green dots in Figure 2, above). Analysis of this data (see Figure 3, overleaf) shows that cycle flows have risen by, on average, 7% per year between 2007 and 2012 at these count points. Note that the counter at the best performing site (Greenwich South Street) had technical problems in 2011 and 2012 and so full year data is not available for those periods. Average cycle flows at the two counters based in Thamesmead, on Central Way, have increased by over 80% between 2007 and 2012, albeit from a low base level. Two further cycle counters are now also installed on the Thames Path.

Figure 3: Changes in average daily bike counts per year at automatic cycle counters, 2007-2012



2011 Census data confirms the pattern of higher cycle use in particular areas of Royal Greenwich compared to others. In the north-west of the Borough cycle to work levels reach as high as 12%, benefitting from a more favourable topography and shorter distances to central London. By contrast, sections of eastern and southern ends of the Borough have cycle to work levels of 1% or lower, as shown in Figure 4, below. Darker shadings represent lower cycle to work levels.

Figure 4: Cycle to work levels (2011 Census data)



2.2 Cycle accidents and thefts

Overall, cycling has become safer in recent years across Royal Greenwich, particularly on minor roads in the Borough. By 2012, all types of reported cycle accidents (killed, serious injuries and slight injuries) had decreased by 57% compared to the 1994-98 average. The number of serious injuries suffered by cyclists in Royal Greenwich has risen slightly from 2006 onwards, though this may be associated with overall increased numbers of cycle trips in London during that period. On minor roads through the Borough, cycle casualties have substantially declined in the last decade (for example, by over 55% between 1999/02 and 2009/11), following concerted efforts to reduce speeds and implementation of 20mph zones on quieter routes⁵.



Figure 5: Cycle casualties on minor Royal Greenwich controlled roads, 2009-2011

However, Royal Greenwich recognises that on major link roads and at major junctions cycle casualties have increased in recent years, and this points to requirements for improvements on such routes/junctions as part of this Strategy. Many casualties in the Borough are on the TfL managed 'TLRN' strategic road network, and we are working closely with TfL to identify the most problematic junctions for cyclists and look to solutions to rectify these issues. Areas currently being assessed in the Borough under TfL's Better Junction Review programme include the Shooters Hill/Stratheden Road junction, and the Rochester Way/Well Hall Road roundabout. Further junctions will be improved for cyclists along the alignment of a proposed Greenwich to Woolwich corridor link.

Accident statistics on our own road network reflect the proportions of cyclists on those streets. Parts of that network have a disproportionately high number of cycle accidents. This points to the need for improved safety measures at those locations. We continue to analyse road safety statistics for all road users on an annual basis and this analysis forms the basis of Local Safety Scheme works across the Borough each financial year.

⁵ Greenwich Council Road Safety Plan, 2009, 2010, 2011 and accompanying statistics

Figure 6: location of pedal cycle accidents between 1st April 2008 and 31st March 2011, main Borough-managed roads



Royal Greenwich recognises that a deterrent to cycling, as well as safety, can be high levels of cycle theft in particular areas. Research suggests that of those who have suffered cycle theft, 24% no longer cycle at all and 66% cycle less than beforehand.⁶ Police officers monitor and address cycle theft hotspots, and the Borough works closely with local police teams to provide bike security marking sessions, often linking in with wider promotional events. We will continue to work with the police to minimise cycle thefts going forwards, and provide safe cycle parking facilities to help with this goal.

2.3 Cycle networks and facilities

The main cycle routes through Royal Greenwich form part of the London Cycle Network, which has been developed in the Borough over a number of years. The 'LCN+' network has continued to expand in recent years, offering improvements to lead to the development of a convenient, continuous and safe set of routes.

The Borough's Local Implementation Plan provides funding for route improvements, new signage, cycle road markings and other benefits to develop the network.

In addition, Sustrans National Cycle Network route 1 runs along the Thames Path, in the north of the Borough, and has been the recipient of upgrades and improvements over a number of years. The Thames Path now provides an almost entirely traffic-free riverside Greenway through Royal Greenwich, with a high quality separated cycling path along large stretches of its length. New developments have facilitated substantial recent improvements, such as the bridge currently being developed across Deptford Creek to prevent a detour via Creek Road.

Notable exceptions to this continuous riverside path include the 'Missing Link' in Charlton Riverside and on the west of the Greenwich Peninsula. It is anticipated that both of these areas will be resolved as part of this Cycling Strategy and wider

⁶ City of London Cycling Plan, 2005.

Masterplan area work. These routes are shown in Figure 7, and can be found in more detail online via <u>www.tfl.gov.uk/cycling</u>.





Although none of TfL's Barclays Cycle Superhighways implemented to date run through Royal Borough of Greenwich, two which are proposed to be installed by 2015 - CS5 and CS4 - will affect the area. In particular, CS4 is proposed to run through key parts of the north of the Borough, between the border with Lewisham at Deptford and Woolwich.

Cycle parking is available at most stations and major visitor attractions in the Borough, and there are currently over 350 cycle parking points provided. A strategic review of cycle parking conducted as part of the Best Value Review has identified opportunities for further provision at key locations, which will be implemented over the course of this strategy.





2.4 Cycling Initiatives

A great deal of work has already been carried out by the Royal Borough of Greenwich to support and promote cycling, and is recognised as a context within which to place this Strategy. A mixture of infrastructure and behaviour change initiatives has been taking place for a number of years. These are summarised in Table 1, below. Most recently, to support the infrastructure improvements noted above, Royal Greenwich has implemented a number of behaviour change and travel awareness programmes. In addition, NHS Greenwich (now public health within the Local Authority) delivered a range of 'active travel' initiatives in the Borough under the Greenwich Get Active banner.

These schemes - including cycle training, led cycle rides, personalised travel planning (see Box 1), events, marketing and promotions - recognise the twin benefits of cycling for both individual health and as a means of transportation. Linking cycling to wider physical activity public health interventions, particularly in areas of high deprivation and associated health inequalities, has provided a new and important method of building bike trips (and physical activity) into daily lives. Funding for such schemes is drawn, at present, from both transportation and public health budgets.

Box 1: Focus on: Personalised Travel Planning in Royal Greenwich

Personalised Travel Planning (PTP) is a one-to-one conversation between a member of the community and a trained Travel Adviser and the provision of personalised travel information and incentives to encourage a mode shift from driving/public transport to cycling and walking.

PTP also provides local communities and individuals with an opportunity to improve their health and well being, and help secure access to employment and other opportunities – in so doing helping address inequalities in the Borough.

Previous DfT research has shown that PTP can reduce car driver trips typically by 11% (amongst the targeted population) and reduce the distance travelled by car by 12%, with participants switching to cycling, public transport and walking. PTP is currently offered to Royal Borough of Greenwich residents in the following way:

- one to one conversations at an event between the participant and the trained travel advisor to encourage and motivate a change in behaviour;
- the provision of information on how to travel sustainably (for example, local cycle route maps, local journey plans, cycle training information);
- the offer of incentives and materials to encourage the individual to cycle

Participants can also be offered information on safety and security when cycling from the Metropolitan Police Safety Team and cycle maintenance information from cycle mechanics. This support is tailored to the person to fill the knowledge gaps and provide information regarding actual travel times and distances by bike to help encourage changes in travel habits. In 2011/12 over 500 residents were engaged with the PTP service, and ongoing monitoring assesses the effectiveness of the programme.

Initiative	Description			
Initiative	Description			
LCN+	Continued development of routes including new links, improved signage			
	and wayfinding, permeability schemes, cycle lanes and cycle safety			
	initiatives			
Greenways	Opening up of new route through Hornfair Park in 2011, ongoing			
	assessment of other routes. Established routes through Greenwich			
	Park. New Greenways in Avery Hill Park (2013)			
NCN	National Cycle Network Route 1 runs through the north of the Borough,			
	alongside the Thames, and has been steadily developed and improved			
	over recent years			
School	Range of initiatives to encourage cycling to school, including cycle			
Travel Plans	parking, promotional activities, and road-safety education campaigns			
Bike It	Sustrans-run initiative aimed at promoting/increasing cycling in schools			
Active Travel	Range of behaviour change initiatives including marketing, high profile			
promotions	events and campaigns, led ride programmes and other community-			
	based initiatives, plus personalised travel planning (see Box 1)			
Cycle	Provided to schools and adults, aimed at reaching Level 2/3 of			
Training	Bikeability standards to allow for independent riding			
Workplace &	Cycle parking, showers, lockers and behaviour change initiatives in			
Residential	workplaces and residential developments selected either on a voluntary			
Travel Plans	basis or as required through the planning process			

Table 1: Summary of key cycling initiatives in Royal Greenwich

3. SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats)

3.1 This section provides an outline of the strengths, weaknesses, opportunities and threats for cycling in Royal Greenwich. The analysis is summarised below and a more detailed analysis is contained in Section 3.6.

3.2 <u>Strengths</u>

- Established cycling infrastructure
- Continued improvements to road safety results, including well established cycle training programme
- High levels of growth and development throughout the Borough and potential for associated cycling benefit
- New higher density developments in growth and Masterplans areas well served by public transport and associated lower car ownership levels/higher cycling levels
- Building on existing strong links between public health and other Local Authority departments

3.3 <u>Weaknesses</u>

- The Borough has several lower density population areas with less access to public transport and higher car ownership – consequently it is more difficult to convert trips to walking and cycling
- Several natural barriers exist, including topography (hilly areas) and as caused by the River Thames
- Further severance created by major roads and rail lines
- Lack of secure residential cycle parking facilities (especially in older housing Estates)
- Low existing levels of cycle ownership

3.4 <u>Opportunities</u>

- Low average car trip length creates potential for conversion to cycling
- North of the Borough has low car ownership levels
- Research carried out in Royal Greenwich shows strong demand for improved cycling infrastructure to facilitate greater cycling levels
- Significant areas of Parks and open spaces create opportunities for Greenway links
- Potential to use active travel to help address health inequalities
- Building on current high profile of Olympic and Tour de France cycling successes/popularity

3.5 <u>Threats</u>

- Lack of available guaranteed funding to carry out full range of measures over a number of years
- Limited ability to secure quality of routes beyond the Borough boundaries
- Local Authority is not the Highways Authority for the Borough's busiest roads and junctions (these come under TfL)

3.6 Detailed analysis of challenges and opportunities

3.6.1 Challenges

Establishing greater numbers of trips by bike in a part of London with a limited existing cycling culture represents a considerable challenge. A comprehensive analysis undertaken by TfL⁷ into potential motivators for cycling has helped form a list of seven population groups, showing which parts of London are most likely to be encouraged to take up cycling if targeted with the right mix of infrastructure and behaviour change techniques. Whilst some parts of Royal Greenwich contain areas with a higher 'propensity to cycle', large areas of the Borough are some of the most challenging to generate an uplift in cycling due to a variety of factors.

Low levels of bike ownership are a further challenge for the Borough. Despite an increase recently in ownership levels in Royal Greenwich (from 20% to 29% of households), bike ownership is still well below many other areas in the east and south-east sub-region of London.





⁷ TfL Analysis of Potential for Cycling, 2010

Figure 10: East and South-East London Sub-region – household access to bicycles (by Borough)



Low bike ownership could be linked to a number of factors, including relatively high levels of deprivation in the Royal Borough of Greenwich. Accordingly, there is a lack of bike shops – there are only three specialist bike stores across Royal Greenwich. All of these shops are located in the north of the Borough (see Figure 8), meaning few sales and ongoing maintenance/support facilities elsewhere.

Our BVR has also highlighted fear of road safety as a predominant barrier to cycling, and encouraging more trips by bike is noted as a challenge given the nature of many of the larger road routes through the Borough. Royal Greenwich has several key

radial routes feeding in and out of central London, as well as the Blackwall Tunnel Southern Approach, Rochester Way Relief Road, and South Circular routes. Some of these roads are not usable for cyclists, whilst others are suitable only for the most experienced riders. Many of these roads are managed by Transport for London, not the Borough, and close partnership working is conducted between all parties on these routes. Creating cycle routes away from these main roads has been achieved to some degree through the LCN+ network, but crossing points remain a considerable challenge.

Royal Greenwich recognises that many cycle movements originating from the Royal Borough of Greenwich will require cross-boundary movement into neighbouring Boroughs. Whilst the increased flexibility in funding arrangements



provided by TfL offers opportunities for local Borough cycling improvements, there is a risk posed by some areas providing more for cycling than others, and thus the potential for limiting cross-boundary trips. Working at a sub-regional level (and with TfL) may be the best opportunity for addressing this challenge.

Finally, the geography of the Borough can at times represent a challenge. Parts of eastern areas of Royal Greenwich, in particular, have a topography which does not immediately lend itself to high cycling levels, with steep hills that are a deterrent to beginner cyclists. To the north, the River Thames acts a considerable barrier for cycling trips, with the only available crossings by bike being at Woolwich (foot tunnel and ferry), Greenwich town centre/Cutty Sark (foot tunnel), and (as of 2012) the Cable Car between Greenwich Peninsula and Victoria Dock in Newham. Bikes can also be taken on commuter river services, and a trial to take bikes on the DLR at off-peak times is currently being trialled. The Blackwall Tunnel is not open to cyclists; any new road crossings proposed should include consideration of cycle movements.

3.6.2 Opportunities

However, there are considerable opportunities to develop cycling in the Borough. Research suggests that in more suburban areas of London, including many parts of Royal Greenwich, half of all car trips are less than two kilometres in length⁸. Combined with less comprehensive public transport networks than central parts of the Capital, there is scope to encourage cycling as more convenient alternatives to existing options. 32% of all trips in the Royal Borough of Greenwich are 'potentially cycle-able', with just 4% of those trips currently being realised⁹. Car ownership levels in the Borough are not high by national averages: 42% of households do not have access to their own car (an increase over the last decade), providing opportunities for promoting trips by bike¹⁰. Particular Wards in the Borough, especially in the north, have especially high percentages of households with no vehicles, allowing greater possibility of uptake of cycling as travel choice.

	2001	2011	Change
No cars or vans in household	40.8%	42.0%	1.2%
1 car or van in household	43.3%	42.6%	-0.7%
2 cars or vans in household	13.2%	12.4%	-0.8%
3 cars or vans in household	2.1%	2.3%	0.2%
4 cars or vans in household	0.5%	0.7%	0.2%

<u>Table 2: Change in car ownership levels in Royal Greenwich, 2001 - 2011 source,</u> <u>Census 2011)</u>

The best available evidence points to a transformation in safety for cyclists as being critical to more Londoners starting to cycle, and for keeping those who do cycle on two wheels. Pan-London surveys have found that over half of current cyclists in the capital think that more dedicated space for cyclists should be a top priority for any

⁸ Mayor's Transport Strategy, 2010

⁹ TfL Analysis of Cycling Potential, 2010

¹⁰ Royal Borough of Greenwich Local Implementation Plan, 2011

elected London Mayor¹¹, whilst the re-design of London's most dangerous junctions also featured prominently amongst cyclists' wish lists.

Our BVR surveyed both those who currently cycle and those who do not – and highlighted the importance of infrastructure measures to address concerns over safety. Amongst all groups surveyed through the BVR (cyclists and non cyclists) the need for improved environmental conditions – whether better cycle routes, more cycle parking, improved junction designs or allowing cycling on pavements – ranked highest amongst all potential options to encourage more cycling.



Figure 11: BVR survey results of measures to boost cycling trips in Royal Greenwich

Amongst non-cyclists only, better infrastructure scored higher than all other factors in assessing what would 'seriously' encourage those individuals to start cycling either for pleasure or for utility purposes. 'Softer' measures, such as cycle training, better information and financial incentives such as the Cycle to Work scheme, were also supported as techniques to increase cycling, albeit to a lesser extent than 'hard' infrastructure programmes.

These findings are supported by additional research conducted at regular consultations and information gathering at events throughout the Borough. Between 2009 and 2012 over 1,200 survey responses have been received through these initiatives. The responses to factors that would encourage greater cycling again highlights the importance of the creation of safer cycling routes in the Borough, with over 50% of respondents identifying this initiative as being important in increasing their cycling levels. Evidence from a Times newspaper survey of 13,000 people suggested that segregated cycle lanes, in particular, are the most popular method of delivering these 'safer routes' to encourage increased cycling. Accordingly Figure 13 (aligning with the actions in the Cycling Strategy) highlights the potential cycle networks deliverable in Royal Greenwich by 2026.

¹¹ British Cycling, Survey of Cycling in London, 2012

Figure 12: Royal Greenwich Surveys: Factors to encourage more cycling



Figure 13: Indicative cycle network (by 2026)



A combination of the two types of potential interventions – 'hard' (infrastructure) and 'soft' (behaviour change) – has been shown elsewhere to be the best method of boosting cycling, and one we will follow in this Strategy. Research from the Smarter Travel Sutton project showed a 75% increase in cycling over a three year period by developing a packaged approach of infrastructure and behaviour change measures in targeted areas¹². This is also the model developed in outer London under the Biking Boroughs programme, and one endorsed through assessment of all the current available evidence on successful techniques to boost cycling¹³.

Further opportunities exist within Royal Greenwich specifically compared to many other London areas. The Borough has 550 hectares of parks and open spaces, with limited current opportunities for cycling. By creating new routes through these open spaces safe, traffic-free environments will be created in which to cycle. Royal Greenwich bye-laws allow a process to introduce cycling on permitted, signed routes through parks. And whilst our most recent surveys suggest that only 1% of children cycle to school in our Borough, 32% 'would prefer to'¹⁴ – an encouraging finding in itself – and further highlighting the opportunities and potential impact of creating safe cycle routes through Royal Greenwich.

Recognising the health implications of active travel, there are considerable opportunities for Royal Greenwich to further develop linkages between transport and health as a means of increasing both cycling and overall physical activity levels. This may mean additional ways of promoting cycling through NHS Health Trainers, Cycling on Referral or other schemes. The Borough also benefits from active and well-attended cycling clubs and organisations, such as Limited Edition and Greenwich Cyclists (a local branch of the London Cycling Campaign), which provide further opportunities for both leisure and utility cycling.



¹² Mayor's Transport Strategy, 2010

¹³ British Medical Association 'Healthy Transport=Healthy Lives', July 2012

¹⁴ RBG School Mode Share data, 2011/12

Finally, it may well be the case that the success of Great Britain's cycling teams at London 2012, plus British riders' achievements in recent Tour de France and other events, is providing further encouragement for residents throughout London (and elsewhere) in taking to two wheels¹⁵. RBG can play a key role in generating more cycling not only as a means of transport, but also through sport (which in itself may then lead to more cycling utility trips). The opening of the Hornfair Park BMX track, and associated cycle route improvements through that Park, is a good example of developing twin approaches to increasing cycling for all potential purposes. A regular weekend BMX club now operates at the new facility, as well as school trips.

4. Detailed Policy Review

A range of local, sub-regional and national policies have influenced this document.

Royal Greenwich's Cycling Strategy is a supporting document to the Local Implementation Plan (LIP) which sets out the strategic priorities for the Borough's transport improvements, having been produced in accordance with the Mayor's Transport Strategy. The LIP document also contains the core cycling targets noted in this Cycling Strategy. In addition to statutory policy documents, the Strategy draws on local stakeholder input from both inside and outside of the BVR process, and specifically Greenwich Cyclists' document, though published in 2002, never the less contains a number of useful tools and ideas for shaping the development of the Strategy.

a) Pan-London Strategies

The London Plan: Spatial Development Strategy for Greater London (2011)

According to the London Plan, the Mayor will work with all relevant partners to bring about a significant increase in cycling in London, so that it accounts for at least 5 per cent of modal share by 2026 (Policy 6.9). Our Royal Greenwich Cycling Strategy adheres to this over-arching pan-London cycle mode share target, The London Plan also sets out minimum cycle parking standards in different types of development depending on use class, numbers of staff, and whether it is in or out of town centre etc. (Table 6.3). Our planning processes ensure that these minimum standards are adhered to for developments in the Royal Borough of Greenwich.

Mayor's Transport Strategy (2010)

The Mayor's Transport Strategy places a heavy emphasis on cycling as a means of delivering the Mayor's London-wide transport vision. The Strategy specifically aims (p34) to 'promote...public transport, walking and cycling leading to further mode shift away from the car'; indeed 'encouraging more people to cycle is a key Mayoral priority' (p187). Cycling is seen as a critical pan-London mode to tackle health, environmental and congestion implications of current travel patterns in the capital; the Mayor's 'Cycling Revolution' of a mixture of infrastructure (Cycle Hire, current and proposed Cycle Superhighways) and behaviour change measures (training, marketing etc) will deliver the targeted increases in cycle mode share.

b) Royal Greenwich Strategies

¹⁵ British Cycling, 2012

The Greenwich Strategy

The Council's key policy document, the Greenwich Strategy, works toward achieving the Council's high level objectives of making Greenwich the place of choice to live, work, learn and visit, to develop a Greener Greenwich and a successful Olympic and Paralympic Games host borough with a lasting legacy. Cycling can contribute to each of the three key principles of the Councils' vision.

i) <u>Inclusion and Cohesion</u> - by providing access to opportunities and services, allowing all residents to take advantage of the benefits of living, working and learning in the Borough, as well as accessing its unique cultural sites both as residents and visitors. Cycling is a low cost, easily accessible activity. Increasing cycling levels can contribute to improved quality of life. Replacing short car journeys with cycle trips can contribute significantly to improving the sense of community, making it a safer, cleaner environment.

ii) <u>Sustainability</u> - to ensure Royal Greenwich's actions meet the needs of existing residents without compromising the ability of future generations to meet their own needs. The increasing dependence on cars is unsustainable from a number of perspectives. Increases in traffic levels can reduce safety, particularly for vulnerable users and can also impact on the health of residents by affecting air quality, and decreasing physical activity. Promotion of sustainable transport to mitigate the effects of climate change and to provide young people with knowledge, skills and a sense of independence to provide a platform for the future.

iii) <u>Prosperity</u> – Royal Greenwich will seek to make the Borough economically competitive, attract investment and provide an environment that allows wealth to be created. The economic benefits of an efficient and effective transport system are critical to assuring growth. Reducing cycling related casualties, improving health of residents and reducing congestion on local roads can all have a positive impact on the local economy.

Draft Core Strategy with Development Management Policies (2010)

Cycling is identified as being key to creating cohesive and healthy communities in the Spatial Strategy, where it is identified that walking and cycling will be encouraged as healthy travel options through a variety of programmes throughout the Borough. Access within the built environment will be improved through high quality design of new infrastructure, housing and public facilities (para 3.2.22).

Further to this, there are several policies contained within the document that relate to cycling, primarily C4 Sustainable Travel, C(b) Walking and Cycling, and C(c) Parking Standards. The policies of the Core Strategy demonstrate that the Council is committed to protecting and enhancing the Borough's cycle ways, and requires new developments to provide for the needs of cyclists.

Masterplans and Growth Agenda

Masterplans for four areas in Royal Greenwich were adopted in April 2012. These are: Charlton Riverside, Eltham Town Centre, Greenwich Peninsula West and Woolwich Town Centre. These Masterplans set out the scale and scope of the Royal Borough of Greenwich's ambitions for each of the four areas, ensuring that these key growth areas have strategic rather than ad-hoc development, and attract investment from both the public and private sectors.

These (largely) mixed use development areas, as well as the area of 'intensification' at Kidbrooke, will require an efficient and sustainable transport system in order to support the growth agenda that is planned and starting to be built. A key objective of the Greenwich Peninsula West development, for example, is to 'improve pedestrian and transport links into, out of and through the area'. Cycling (and walking) are important elements of transport ambitions, including features such as the Thames Path, whose high-quality completion is an important ambition of the riverside-based Masterplans. As a clean, relatively cheap and highly efficient mode of transport, cycling is ideally placed to support the development and growth of these Masterplan areas.

Royal Greenwich Climate Change Strategy (2011)

The RBG Climate Change Strategy outlines the approach to both mitigation and adaptation and aims to set stretching targets that accelerate the pace at which we will achieve and where possible exceed national standards.

Transport is a major contributor to the production of CO2 emissions. DECC statistics show that Royal Greenwich's transport emissions from private car use, public transport and freight totalled 302,670 tonnes per year in 2008 which contributed 25% of the borough's total CO2 emissions. This is broadly consistent with the national average (22%), and is mainly from private car use, which accounts for 43% of all journeys to work in the borough. It is projected that population growth in the borough will lead to an extra 47,000 tonnes per year of CO2 emissions from transport by 2050 unless there is a shift to more sustainable forms of transportation.

The Royal Greenwich Carbon Scenarios to 2050 report projects that if Royal Greenwich was to achieve an 80% CO2 emissions reduction by 2050 this would require an 11% CO2 reduction through a modal shift towards sustainable forms of transport. This can be achieved in a number of ways including modal shift from the use of private cars and taxis towards an increase in use of public transport, walking and cycling. An action plan for walking and cycling within the Climate Change Strategy endorses improvements to cycling routes, cycle training and cycling facilities in workplaces as measures to increase bike mode share.

Royal Greenwich Local Implementation Plan ('LIP', 2011)

Our LIP strategy, 'Keeping Royal Greenwich Moving', focuses on delivering a sustainable transport system that will satisfy the demands of the present and future population of the Royal Borough of Greenwich. 7 of the Strategy's 11 objectives relate either directly or indirectly to supporting cycling, including improving the health of residents by promoting active travel (walking and cycling), reducing the overall number of pedestrian and cycle casualties as part of wider road-safety objectives, and reducing Royal Greenwich's contribution to climate change and improving local air quality. The LIP references a wide range of additional policy influences (both local and regional) which relate to the production of that Strategy, and in turn this document.

Royal Greenwich Cycling Best Value Review (2010-2011)

Royal Greenwich conducts a variety of Best Value Reviews, designed to ensure Council services are always improving and providing value for money. The Best Value Review programme was set up to look at issues that the public said are important to them. The reviews challenge what we currently do by comparing our performance to that of other councils, consulting local people about their needs and aspirations, and making sure that its services are competitive with the best.

The Cycling Best Value Review is referenced throughout this Strategy, and it set out to examine what has worked well and what could be improved for cycling in the Borough. An important objective of the process was to obtain the views of noncyclists, as well as cyclists, to understand the barriers which prevent take up or how we could improve the cycling environment. This was achieved through the completion of an on-line survey issued to residents and Royal Greenwich staff. The main findings are published in this document.

Five cycling objectives were established within the final BVR report to direct the course of cycling improvements over the next five or so years. These have been noted for inclusion in this strategy as presented in the main document. Further details of the Cycling BVR and latest reports can be found through this link:

http://www.royalgreenwich.gov.uk/info/200123/cycling/1290/cycling_policies_and_plans

Active Travel, Physical Activity and Health

The Royal Borough of Greenwich and NHS Greenwich (now public health team in the Local Authority) Public Health & Well Being Directorate have joined together to encourage partnership working to promote cycling, through the formation of a Walking and Cycling Steering Group and the recruitment of an Active Travel Development Officer.

Royal Greenwich is a deprived borough, ranking the 28th most deprived local authority in England and the 9th most deprived borough in London in terms of 'extent' of deprivation (DCLG Index, 2010). The most deprived areas are located in the east of the Borough in Thamesmead, Abbey Wood and Woolwich, with some pockets of deprivation in Eltham. Higher levels of deprivation are typically associated with higher rates of illnesses and poor health.

Consistent with UK trends, cancer and cardiovascular diseases are responsible for the bulk of mortality in Royal Greenwich. Research has identified that physical activity is a priority area to save a predicted 200 lives each year that are lost from preventable causes and to address the health inequalities in the borough.

The rates of people who are obese and overweight are increasing in Royal Greenwich as in the rest of the country. Obesity is highest amongst the over 55 year age group, with similar rates being seen in women as in men. It is estimated that nearly 60% of the UK population could be obese by 2050, with direct health costs as high as £50 billion (at 2007 prices) (Sustrans, 2009). The rise in obesity is largely due to a significant decline in energy expenditure over the past 30 years or so, rather than an increase in calories consumed, as evidence from ongoing dietary surveys found that average energy intake has declined by 20% between 1974 and 2004 (NHS, 2006).

Physical inactivity is a major cause of obesity and is one of the ten leading causes of death in developed countries. It is associated with increased risks of developing many of chronic diseases such as type II diabetes, obesity, cardiovascular diseases, certain cancers, depression, osteoporosis. Physical inactivity also has significant impacts on mental well-being, including increasing the risk of depression, tension,

fatigue and insomnia. It is recommended that adults undertake at least 30 minutes of moderate intensity activity at least five times per week.

The Greenwich Strategy 2006-2015 aims to continually build on successful programmes signed to encourage more people to take part in physical activity, with a target of achieving a 1% annual increase in the number of people participating in regular physical activity. In Royal Greenwich, as with the rest of the country the majority of the adult population across all population groups fail to meet the nationally recommended levels of physical activity needed to maintain a healthy life, with 85.2% people in Royal Greenwich exercising for less than 3 hours per week. (Health Survey for England London Boost 2006). Levels of inactivity are higher in women than men and fall as people age. Levels of physical activity are lowest in South Asians and highest in the Irish and Black Caribbean populations. The amount of physical activity undertaken was significantly related to household income among men and physical inactivity is highest in the lowest income quintile. (Health Survey for England 2006).

Greenwich Public Health & Well Being Directorate: Greenwich Physical Activity Action Plan (2011-2012) forms part of a wider strategy to promote healthy weight and reduce the prevalence of obesity. This report sets out the actions being led by the Greenwich Public Health & Well Being Directorate to increase levels of physical activity using additional investment allocated in 2011-12. The aim of the 2011-12 Physical Activity Action Plan is to significantly increase the numbers of people in the borough who are supported to increase their levels of physical activity as part of their everyday lives, including through Active Travel (walking and cycling) or participation in structured physical activity. The project has the following aims:

- To increase levels of physical activity across the adult population by 1% year on year as measured by the Active People Survey.
- To increase the numbers of people participating in walking and cycling for recreation and travel as measured by the Active People Survey and Transport For London.