

Committee for Regional Development Inquiry into the Benefits of Cycling to the Economy.

Response from CTC, the national cycling charity

About CTC

CTC, the UK national cycling charity, was founded in 1878. CTC has 68,000 members and supporters, provides a range of information and legal services to cyclists, organises cycling events, and represents the interests of cyclists and cycling on issues of public policy.

This inquiry submission is dedicated to the memory of Tom McClelland, a truly exceptional CTC volunteer campaigner who played a major role in promoting cycling Northern Ireland prior to his untimely death in February 2014.

Summary

- There must be a strong, cross-departmental action plan to improve conditions for cycling through a wide range of policies. The action plan should also receive endorsement at the highest political level, with adequate revenue and capital expenditure to make a significant difference. Evidence from abroad suggests that annual funding of at least £10 per head, rising progressively to £20 as cycle use increases, is required to generate significant shifts towards cycling.
- National and local government should improve the collection of data relating to cycle use and cyclists' safety.
- The current road network is a major deterrent to getting more people cycling. Lower speed limits, measures to reduce motor traffic, better designed roads and junctions and traffic-free routes are crucial to establishing a more cycle-friendly environment.
- Road safety policy must acknowledge the health benefits of cycling. Actual and perceived danger are the biggest barriers to increasing cycle use and action must be taken to overcome these, in particular, badly designed road networks, high speeds, poor driving behaviour and the specific threat posed by large vehicles.
- Local authorities, employers, health bodies, schools and other organisations each have a role to play in encouraging and incentivising more people to take up cycling. Some of the measures these organisations can take often prove to be the most cost-effective means of increasing cycling levels in the short term.
- Roads policing is highly effective both for improving road safety and tackling other crimes. It should be boosted, together with tougher prosecution policies and greater use of driving bans in sentencing.
- Integration with public transport is crucial to ensure that cycling provides a realistic alternative to car travel. In particular, good parking and access to stations should be provided, together with adequate provision on trains for those who still need to carry their cycles with them.
- Policies should be put in place to maximise the funding opportunities for cycling improvements from the planning system and from road maintenance budgets.

A. Cycling's contribution to Departmental and Executive objectives

Cycling has enormous benefits across a wide range of policy areas.

Economic growth

- Cycling tackles congestion – a typical road lane can carry 7 times as many cycles as cars.¹
- Making town centres and residential areas cycle-friendly enhances their attractiveness, boosting property values and retail vitality².
- There are also economic benefits due to better health (see below), e.g. reduced health-care costs and absenteeism, and improved productivity. For more, see CTC's briefing *Cycling and the Economy*³.

Health and safety

- People who cycle regularly in mid-adulthood typically enjoy a level of fitness equivalent to someone 10 years younger⁴ and their life expectancy is two years above the average.⁵
- A population-wide study in Copenhagen found that, compared with those who cycled regularly to work, people who did not do so had a 39% higher mortality rate, regardless of whether or not they also took part in other physical activities.⁶
- Increased cycle use is associated with improvements in cyclists' safety: the 'Safety in Numbers' effect⁷. Moreover, cyclists have a very low rate of involvement in collisions where another road user is injured. Hence, more cycling is good not just for cyclists' safety but for other road users too⁸. For more information, see CTC's briefings on *Cycling and Health*⁹ and on *Road Safety*.¹⁰

The environment

- A person making the average daily car commute of 4 miles each way would save half a tonne of CO₂ by switching to cycling – 5% of the average UK carbon footprint.¹¹
- Doubling cycle use through switching from driving to cycling would reduce Britain's total greenhouse emissions by 0.6 million tonnes, about as much as switching all air travel between London and Scotland to the rail network.¹²
- Cycling is one of the easiest and cheapest ways for individuals to reduce their contribution to climate change on a day-to-day basis. For more, see CTC's briefing on *Climate Change*¹³.

Promoting education, access to employment and equality of opportunity

- Cycling provides independent mobility for many people who do not or cannot drive, including children, people on lower incomes, older and many disabled people. Cycling employees are more productive and suffer less absenteeism.¹⁴
- In addition to its health benefits, physical activity improves concentration and learning ability in children and adults alike. See CTC briefings on *Cycling to School*¹⁵ and *Cycle-friendly Employers*.¹⁶

Quality of life and a healthier natural environment

- When cycling replaces trips by motor vehicle, it reduces pollutant emissions and traffic noise. It also means that far less land needs to be allocated for roads and parking. It therefore has a much lower negative impact than motor transport on townscapes, rural landscapes and biodiversity. See CTC's economy briefing for information on the rural economic benefits of cycling-based recreation and tourism.³³

Promoting cycling is therefore highly relevant to the objectives of every NI Department:

- *Regional Development*: virtually all of its objectives.¹⁷
- *Office of the First Minister and Deputy First Minister*: economic growth, equality and sustainable development objectives.¹⁸
- *Environment*: emissions reduction, road safety and planning objectives.¹⁹

- *Health, Social Services and Public Safety*: public health and safety objectives.²⁰
- *Education*: educational standards objectives.²¹
- *Employment and Learning*: access to higher education and employment objectives.²²
- *Enterprise, Trade and Investment*: economic growth and tourism objectives.²³
- *Finance and Personne*: cost-effective public spending objective.²⁴
- *Justice*: strengthening policing and justice to improve road safety.²⁵
- *Social development*: objectives for united communities, sustainable homes and town centres.²⁶
- *Agriculture and Rural Development*: rural and forest access objectives.²⁷
- *Culture, Arts and Leisure*: recreation and sport objectives²⁸.

It is for this reason that we believe cross-departmental action is needed (see next section) in order to maximise cycling's benefits for our economy, environment and health, for communities and our quality of life.

B. Measuring progress: targets and monitoring

Targets for cycle use

Cycling in Northern Ireland accounts for less than 1% of journeys, a very low figure compared even with the rest of the UK, let alone with other countries in the EU. Despite welcome recent increases in cycle use²⁹, cyclists are the one group for whom the risk of cycling per mile travelled appears to have worsened in recent years³⁰. The laudable yet modest targets of the Northern Ireland National Cycling Strategy (namely to double cycle use by 2005, and to quadruple it by 2015, compared with levels in 2000³¹), have not been (or are not being) met.

CTC recommends that the Northern Ireland Executive adopts a cross-departmental cycling action plan, aimed at boosting cycle use to 10% of trips (approximately German levels) by 2025 and to 25% of trips (roughly Dutch levels) by 2050. These targets are in line with the recommendations of the 'Get Britain Cycling' report conducted by the All Party Parliamentary Cycling Group in the Westminster Parliament.³²

Targets for actual and perceived cycle safety

As for measuring progress on cycle safety, CTC argues that road safety strategies and targets should be based on an explicit recognition that:

- Cycling is a safe activity, posing little risk either to cyclists themselves or to other road users³³
- The health benefits of cycling far outweigh the risks involved³⁴
- Cycling gets safer the more cyclists there are: the 'Safety in Numbers' effect⁷.

The aim of cycle safety policies and initiatives should therefore be to encourage more as well as safer cycling, in order to maximise its health, environmental and other benefits, and to improve overall safety for all road users.

Increases in cyclist casualties may still mean cycle safety is improving if cycle use is increasing more steeply than cyclist casualties. Therefore targets and indicators for the effectiveness of road safety strategies should adopt 'rate-based' measures for improvements in cycle safety, e.g. cycle casualties (or fatal and serious injuries) per million km cycled, or per million trips. Simple casualty reduction targets should be avoided, as these merely create a perverse disincentive to promote increased cycle use.

'Perception-based' indicators, which show whether public perceptions of cycle safety in a given area are getting better, can be used alongside 'rate-based' indicators, or as an interim substitute for the latter if necessary, given the difficulties of producing good local data on cycle use.

Monitoring

The Executive should ensure adequate monitoring regimes are in place locally and nationally to determine what measures have proved successful. A mix of count data and diary surveys is needed to provide adequate measures of cycle use. Good monitoring of specific interventions is important for informing future funding priorities, and to facilitate the spread of best practice.

C. Opportunities (1): improved physical infrastructure

CTC's vision is to see a massive step-change in cycle use, so that people of all ages, backgrounds and abilities feel able to cycle safely and confidently for all types of journey.³⁵

Our neighbourhoods, town centres and road networks should be fundamentally redesigned to be 'people-friendly', with cycling not only contributing to a reduction in car dependence, but also benefiting from it. Through-traffic should be channelled onto a limited network of main roads – which should have dedicated cycle provision on or alongside them – while traffic volumes and speeds are kept low on other streets or lanes. A recent overview of the evidence concluded that the most effective means of increasing active travel resulted from measures to deter motor traffic.³⁶

The cycle network should include the whole road network, supplemented by high-quality cycle routes away from the road network. Dedicated cycle provision should be safe and feel safe, showing that society positively values those who choose to cycle, and avoiding any impression that they are a 'nuisance' to be 'kept out of the way of the traffic.'

In general, CTC advocates:

- Dedicated space on busier urban or inter-urban main roads – this should normally be physically protected, especially on the fastest and/or busiest roads;
- 20 mph limits and/or through-traffic restrictions for most built-up streets (including villages), and the widespread adoption of 40 mph or lower limits for rural lanes;
- Traffic-free routes using parks and open spaces, or along canals, waterfronts and disused rail corridors. However these should complement (i.e. they should not merely be an alternative to) the creation of, safe pleasant and direct cycle routes using the road network.

Local-specific decisions on appropriate solutions will need to reflect local factors, such as junctions and junction layouts, and demand for parking or loading. In particular, we support high-quality segregated facilities on main roads where they: involve reallocation of road-space (rather than simply placing cyclists on pavements); avoid pedestrian conflict (especially at bus stops and pedestrian crossings); are of adequate width; are well maintained; and (vital) where they retain adequate cycle priority at junctions (this being where 75% of cyclists' injuries occur). This last factor may need changes to traffic law and driver behaviour for segregation to work as it does in countries like Denmark and the Netherlands. Where these criteria cannot be met, an on-carriageway solution may be preferable.

The Executive needs to establish clear policy, standards and funding to ensure the provision of high-quality cycle-friendly planning and design, both in the context of highway and traffic schemes, and in new developments. This ranges from basic guidance on best practice for the design and layout of roads and cycling infrastructure, to regulations covering signs, road markings and traffic signals – areas where Britain lags far behind our European neighbours.

Action is also needed to boost awareness and skills in delivering cycle-friendly policies and planning among those responsible for their delivery. This includes councillors as well as council officers and others responsible for promoting cycling, or for delivering highway, traffic or cycling schemes.

Opportunities 2: Improved safety

Encouraging more as well as safer cycling involves tackling factors that deter cycle use. These include high traffic volumes and speeds; irresponsible driver behaviour; the unfriendly design of many roads and junctions; and lorries. Meanwhile, the provision of cycle training to the 'Bikeability' national standard can also help people to cycle more, to ride more safely, and to feel safer and more confident while doing so. It can also help parents feel more confident about allowing their children to cycle.

Cyclist and driver awareness campaigns

It is important to raise driver awareness of what they need to do to respect cyclists' safety. Key messages include watching out for cyclists when turning at junctions (particularly roundabouts), leaving sufficient space when overtaking, and not assuming that cyclists should keep out of their way at the side of the road (i.e. there are good safety-related reasons why cyclists are trained to adopt a central position in the traffic lane in some circumstances).

Driver awareness campaigns should be linked to enforcement activity – see next section. Experience in tackling drink-driving has shown that the combination delivers stronger results than the combined effect of awareness and enforcement activities conducted in isolation. Awareness campaigns create a climate of public acceptance for the enforcement activity, while the enforcement activity ensures that the message reaches those who would not otherwise be receptive to awareness campaigns alone.

It is also important to raise cyclist awareness of how they can maximise their own safety – particularly in dealing with lorries (see next page). However, in conducting these campaigns, care should be taken to avoid cycle safety awareness campaigns that make cycling appear unduly dangerous. This can deter people from cycling or allowing their children to cycle. This could be counter-productive to cyclists' safety by eroding the 'safety in numbers' effect, as well as undermining cycling's wider health and other benefits.³⁷ Given the degree to which these benefits outweigh the relatively low risks involved, it can be shown that ill-judged 'road safety' measures which reduce cycling by even just a few percentage points would shorten more lives than they could possibly save, however beneficial they might be for the remaining cyclists³⁸. The emphasis of cycle training and awareness campaigns should therefore focus on positive promotion. We therefore return to these issues in the 'positive promotion' section below.

Traffic law and the criminal justice system

CTC fears that inadequately resourced traffic policing, combined with failings in other areas of the criminal justice system, mean that many bad drivers are not being punished adequately, with their access to the roads restricted. There are many examples highlighted on the website of CTC's Road Justice campaign (www.roadjustice.org.uk). Proper enforcement of road traffic law must have a higher priority in national policy. It is highly effective not only for improving road safety, but also for detecting and preventing other forms of crime.

We are very concerned that, elsewhere in the UK, there has been a wholesale collapse of road traffic policing (a 29% fall in 10 years, while overall police numbers have remain virtually unchanged), and that this in turn may be linked to the worsening of cyclists' safety in recent years. We are also concerned that disqualifications for bad driving have fallen by 48% over the last 10 years – and even more steeply than that in the last 7 years. The recently created offence of 'Causing death by careless driving' (introduced in 2008) may have lowered the bar between 'dangerous' and 'careless' driving, despite no change in the legal definitions of these terms. For more, see CTC's overview briefing on Traffic Law and Enforcement, together with more detailed briefings on Roads Policing, Prosecutors and the Courts, and the Legal Framework and Sentencing.³⁹

It is perhaps linked to this that convictions for both serious and slight motoring offences have fallen concurrently, at a rate faster than the overall decline in road casualties, suggesting that more bad driving is going unpunished or receiving light sentences which fail to reflect the gravity of the offences.

Lorries

Lorries have a relatively low involvement rate in cyclists' injuries, but a very high involvement rate in cyclists' fatalities – i.e. a collision with a lorry is disproportionately likely to prove lethal. In Britain, lorries account for only 5% of vehicle mileage by around 20% of cyclists' fatalities (and around 15% of pedestrian fatalities), rising to over 50% of cyclist fatalities in London. Their involvement rate in cycle fatalities is far higher than that of buses. The difference is likely to be that lorry drivers sit high up and are surrounded by metal, whereas bus drivers are much lower, and are able to see cyclists both in front and to the side of them thanks to a much larger area of window. Most lorry-cyclist fatalities involve a left-turning lorry, with the cyclist generally being hit by the front (typically the front corner) of the lorry, rather than by the side.¹

It needs to be recognised that the lorry itself is an inherently dangerous machine, whose design is simply not appropriate for urban streets. According to the principles of risk management, the primary aim should therefore be to eliminate or reduce risk. Training people to avoid risks should only be deployed once the source of risk has been eliminated as far as possible.

Aside from improved cycling infrastructure (notably on main roads and junctions), the most appropriate solutions are therefore: (a) to redesign lorry cabs to improve drivers' visibility of pedestrians and cyclists; and (b) simply to reduce the numbers of lorries on busy streets at busy times.

Although these are the 'big wins', it must be admitted that neither of them are 'quick wins'. Progress can be made meanwhile (a) by making it standard to fit cameras and sensors onto all lorries operating on urban streets, (b) by providing actual cycle training (not just cycle awareness training) for lorry drivers, and (c) by raising cyclist awareness of the risks of overtaking lorries on the left hand side, e.g. through stickers on the rear of lorries, through cycle training and through 'Exchanging Places' events (where cyclists get to sit in lorry cabs to see the extent of the driver's 'blind spot').

Opportunities 3: Positive promotion

Measures that provide encouragement, incentives and opportunities to try out alternatives to the private car are known as 'smarter choices'. Smarter choices to encourage cycling must go hand-in-hand with improving cycling conditions on the highway. If anything, however, smarter choices are more cost-effective in terms of congestion, yielding on average £10 of benefits to every £1 spent.⁴⁰

Smarter choice measures include: elements of travel plans, advertising and promotional campaigns, cycle maps, marketing directly to individuals, tax incentives, cycle training, rides, events and activities for specific groups in society. CTC has also produced guidance for schools and colleges, workplaces and the health sector, summarised below.

¹ For references, see CTC's briefing on goods vehicles – link as above.
CTC, the national cycling charity

Schools and colleges

Cycling to school or college helps pupils develop their physical health and fitness; their confidence, independence and sense of self worth; and their navigational and roadcraft skills. It also helps tackle local congestion, pollution and road danger created by the school run.

Travel for education contributes significantly to peak time traffic at about 29% of trips between 8 and 9 am in Great Britain, with an additional 18% escorting others to education. Only around 1% of trips for education purposes are cycled.

Involving pupils, parents, teachers and school governors in constructive joint action to make the trips they generate more sustainable can unite a school community and provide a learning experience in social and environmental responsibility and project management.

Cycling is a skill for life. Encouraging as many children as possible to see it as viable transport helps ward off car dependency later in life, and contributes to reducing future traffic volume.⁴¹

Cycle-friendly employers

Encouraging employees to commute by cycle and to cycle on business, can result in a healthier, more productive workforce and lower transport costs. Dutch research has shown that employees who cycle to work take on average one day less in sickness absence than non-cyclists. Aggregated, this has the potential to offer huge productivity savings.⁴²

Workplaces that encourage cycling help mitigate their negative impact on the local and wider environment. If employees are encouraged to cycle rather than drive, congestion is less severe at peak times, which is good for business and the economy. CTC's Workplace Challenge programme has proved successful at increasing take-up of cycling over a short period, with behaviour change maintained in 3 month follow up surveys.⁴³

The role of the health sector

Health sector bodies potentially have roles to play in shaping local transport and planning policies, and promoting active travel both for health patients and their populations more generally. As a major employer, the health service also has a role in promoting active travel for its own employees⁴⁴.

Integration with public transport

It is important to ensure that cycling can be easily integrated with public transport provision. Doing so reduces dependency on cars, promotes realistic alternatives for long distance travel, improves access to employment and leisure activities while gaining the benefits of cycling – such as improved health and reduced congestion and pollution.

A whole package of improvements is necessary in order to improve the integration of cycling with public transport. It is no good simply focusing on only one aspect of provision – for example: there is little use in providing cycle parking provision at a station if access to the station feels unsafe and deters people from cycling there in the first place. Furthermore, provision of parking should not be used as an excuse to reduce carriage on trains.

While CTC applauds the additional funding that has been granted in recent years to enhance parking (and, in some cases access) to stations, we fear that under new franchising regimes, train operating companies are losing the incentive to provide adequate space for cycles to be carried on trains. CTC believes that all new and refurbished rolling stock must be equipped with both dedicated space for cyclists (which can be reserved) and some flexible space which can be used to accommodate cycles, push chairs, and in peak hours, standing passengers.

E. Funding

Long-term funding should be made available for delivering increased cycle use and improved cycle safety, as recommended by the 'Get Britain Cycling' report (i.e. at least £10 per person annually, rising to £20 as cycle use increases)

In most places, the main priority for significant capital spending in the years ahead will be to redesign larger junctions to be cycle-friendly, or to open up links for cyclists across (or avoiding) major barriers to safe and convenient cycle travel.

The planning system should support the aim of encouraging cycle use and other sustainable transport choices. It should avoid locating new developments in locations which exacerbate car-dependent journey patterns.

Opportunities should also be sought to maximise the funding for cycling improvements both from the planning system and from road maintenance budgets. New York City has delivered some major cycle schemes at relatively marginal cost by integrating their cycling and road maintenance programmes. In the UK, Plymouth City Council is also pursuing this approach.

CTC, the national cycling charity
March 2014

References

- ¹ Botma & Papendrecht, *Traffic operation of bicycle traffic*. TU-Delft, 1991.
- ² M Andersen and M L Hall. *Protected bike lanes mean business*. People for Bikes and the Alliance for Biking and Walking, 2014, see www.peoplepoweredmovement.org/site/images/uploads/Protected_Bike_Lanes_Mean_Business.pdf
- ³ See <https://www.ctc.org.uk/campaigning/views-and-briefings/cycling-and-economy>
- ⁴ Tuxworth W et al. *Health, fitness, physical activity and morbidity of middle aged male factory workers*. British Journal of Industrial Medicine vol 43. pp 733-753, 1986.
- ⁵ Paffenbarger R et al. *Physical activity, all-cause mortality and longevity of college alumni*. New England Journal of Medicine, vol. 314(10) pp 605-613, 1986 (for abstract see www.ncbi.nlm.nih.gov/pubmed/3945246).
- ⁶ Andersen L et al, *All-cause mortality associated with physical activity during leisure time, work, sports and cycling to work*. Archives of Internal Medicine, 160: 1621-1628, 2000 <http://archinte.ama-assn.org/cgi/reprint/160/11/1621.pdf>
- ⁷ See CTC's "Safety in Numbers" brochure and report: www.ctc.org.uk/safetyinnumbers.
- ⁸ CTC, *Safety in numbers*, op cit. www.ctc.org.uk/safetyinnumbers
- ⁹ See <https://www.ctc.org.uk/campaigning/views-and-briefings/health-and-cycling>
- ¹⁰ See <https://www.ctc.org.uk/campaigning/views-and-briefings/road-safety-and-cycling-overview>
- ¹¹ Calculated on the basis of 170 gm/km for an average car, around 200 trips per year.
- ¹² Committee on Climate Change. *Building a low carbon economy*. p. 291, 2008
- ¹³ See <https://www.ctc.org.uk/campaigning/views-and-briefings/climate-change>
- ¹⁴ TNO Quality of Life. *Reduced sickness absence in regular commuter cyclists can save employers 27 million euros*. Feb 2009. www.tno.nl/downloads/reduced_sickness_absence_kv1_09_02_978Em_laag.pdf
- ¹⁵ <https://www.ctc.org.uk/campaigning/views-and-briefings/cycle-friendly-schools-and-colleges-ctc-views>
- ¹⁶ <https://www.ctc.org.uk/campaigning/views-and-briefings/cycle-friendly-employers-ctc-views>
- ¹⁷ <http://www.drdni.gov.uk/index/aboutus.htm>
- ¹⁸ <http://www.ofmdfmi.gov.uk/index/about-ofmdfm/about-the-department.htm>
- ¹⁹ http://www.doeni.gov.uk/index/about_us.htm
- ²⁰ http://www.dhsspsni.gov.uk/index/about_dept.htm
- ²¹ <http://www.deni.gov.uk/index/about-the-department/department-of-education.htm>
- ²² <http://www.delni.gov.uk/index/about-the-dept.htm>
- ²³ <http://www.detini.gov.uk/deti-about-home.htm>
- ²⁴ <http://www.dfpni.gov.uk/index/about-dfp.htm>
- ²⁵ <http://www.dojni.gov.uk/index/about-us.htm>
- ²⁶ http://www.dsdni.gov.uk/index/about_dsd.htm
- ²⁷ <http://www.dardni.gov.uk/index/about-dard.htm>
- ²⁸ http://www.dcalni.gov.uk/about_us.htm

-
- ²⁹ DRD. Regional Transport Strategy for Northern Ireland: monitoring report 2007-2012 (www.drdni.gov.uk/rts_monitoring_report_2007-2012_v2.pdf).
- ³⁰ <http://nigreenways.wordpress.com/2012/10/06/northern-ireland-cycling-injury-rates-rising/>.
- ³¹ DRD. *Northern Ireland Cycling Strategy*. 2000. http://www.nidirect.gov.uk/ni_cycling_strategy_for_web.pdf
- ³² See www.ctc.org.uk/campaign/get-britain-cycling
- ³³ Mindell JS, Leslie D, Wardlaw M. 2012. "Exposure-Based, 'Like-for-Like' Assessment of Road Safety by Travel Mode Using Routine Health Data." PLoS ONE 7(12): e50606. doi:10.1371/journal.pone.0050606 <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0050606?imageURI=info:doi/10.1371/journal.pone.0050606.t003>
- ³⁴ CTC's policy briefing on the health benefits of cycling can be found here: <http://www.ctc.org.uk/campaigning/views-and-briefings/health-and-cycling>
- ³⁵ CTC's policy briefing on cycle friendly planning and road design, including details on when and where different infrastructure can be found here: <http://www.ctc.org.uk/campaigning/views-and-briefings/cycle-friendly-design-and-planning-overview>
- ³⁶ Mackett RL and Brown B, *Transport, Physical Activity and Health: Present knowledge and the way ahead*. 2011. <http://www.ucl.ac.uk/news/pdf/transportactivityhealth.pdf>
- ³⁷ CTC's policy briefing on road safety and cycling can be found here: <http://www.ctc.org.uk/campaigning/views-and-briefings/road-safety-and-cycling-overview>
- ³⁸ See <http://www.cyclehelmets.org/1249.html>. Although the paper described here relates to cycle helmets, the underlying mathematical argument would apply equally to other road safety measures which deterred cycle use.
- ³⁹ These are all accessible via <http://www.roadjustice.org.uk/information/legal>.
- ⁴⁰ CTC's policy briefing on smarter choices can be found here: <http://www.ctc.org.uk/campaigning/views-and-briefings/smarter-choices>
- ⁴¹ CTC's policy briefing on cycle friendly schools and colleges can be found here: <http://www.ctc.org.uk/campaigning/views-and-briefings/cycle-friendly-schools-and-colleges-ctc-views>
- ⁴² TNO Quality of Life. *Reduced sickness absence in regular commuter cyclists can save employers 27 million euros*. 2009. www.tno.nl/downloads/reduced_sickness_absence_kv1_1_09_02_978Em_laag.pdf
- ⁴³ CTC's policy briefing on employers can be found here: <http://www.ctc.org.uk/campaigning/views-and-briefings/cycle-friendly-employers-ctc-views> 3 months after the Workplace Challenge, of the participants who had responded to the survey, 37% of people who did not cycle before the survey were cycling to work at least once a week, while 35% of occasional cyclists were cycling more than before the Challenge.
- ⁴⁴ CTC's briefing on cycling and health is at http://www.ctc.org.uk/file/public/health-and-cyclingbrf_1.pdf. A specific briefing on the health sector's role as a cycle-friendly employer is at http://146.101.137.229/resources/Campaigns/1104_Promoting-Cycling-in-the-Health-Sector_.pdf