

SPOKES

The Lothian Cycle Campaign

St. Martins Church, 232 Dalry Road, Edinburgh EH11 2JG 0131.313.2114 [answerphone] spokes@spokes.org.uk www.spokes.org.uk

If replying by email, please use... davedufeu@gmail.com

18 November 2009

Submission to Scottish Parliament Transport, Infrastructure and Climate Change Committee

Active Travel Inquiry

- 1 Background notes on Spokes and on this submission
- 2 Core of evidence and main issues
- 3 Questions posed by the Committee
 - 3.1–3.6 These sections refer respectively to questions Q1-Q6
 - 3.7 Equality and inclusion issues

References

- Appendix 1 Extracts from the introduction to *Making Cycling Irresistible*
Appendix 2 Benefits to pedestrians (and others) from cycle project investment
Appendix 3 Spokes competition – getting more people to use bikes for everyday trips
Appendix 4 Cycle infrastructure – some comments

1. BACKGROUND NOTES ON SPOKES AND ON THIS SUBMISSION

a. **Our submission concentrates largely on cycle use** rather than active travel in general. Spokes is very supportive of modal shift from car to walk and to public transport, but these are not our areas of experience or of expertise. We do, however, point out that much so-called 'cycle' infrastructure is of very considerable benefit to pedestrians [Appendix 2].

b. **We do not cover the benefits of cycling** - health, environmental, energy security, sustainable economic growth, congestion, etc. These are well known, are covered in other submissions [e.g Cycling Scotland evidence] and are in any case presumably reflected in the government decision to adopt the target of 10% of journeys to be by bike in 2020 - firmly announced by Stewart Stevenson MSP at the Scottish Government *Dreams on Wheels* conference, February 2009.

c. **Spokes, The Lothian Cycle Campaign**, is a voluntary organisation founded in 1977, with 1200 members in 800 households. Our members are concentrated in Edinburgh and the Lothians, but 5%-10% live elsewhere in Scotland, valuing their membership to use our ideas and research in their own local and national campaigning. Our formal objectives are..

(1) *To promote cycling, as part of a sustainable transport and access strategy, and to ensure that councils and government actively do the same*, and (2) *To publicise the benefits of cycling for the community and individuals - like walking, it is cheap, efficient, enjoyable, healthy, non-polluting and intrinsically safe.*

Our many lobbying and promotional activities include an annual survey of cycle project investment in Scotland from all main sources [7] (*"the most comprehensive analysis of funding for Scottish cycling projects"* according to the Scottish Parliament Information Centre, SPICe [4]) and highly praised cycle maps of Edinburgh, the Lothians and Glasgow, which in total have now sold over 100,000 copies.

For the avoidance of doubt, Spokes has no interest in cycle racing, mountain biking or other sports – these are largely irrelevant to our concern of sustainable and everyday travel, which is also the concern of this Inquiry. Nor are we aware of any convincing evidence that walking/cycling sport translates into increased active travel on a significant level, although obviously there will be individual examples. Of course, participative sports are valuable from a personal health perspective, though in terms of transport emissions sport may have a small negative impact due to extensive car travel to remote venues.

2. CORE OF EVIDENCE AND MAIN ISSUES

2.1 Research evidence

In tackling the questions posed by the Committee, we can do no better than quoting in full the abstract from the following comprehensive and highly referenced review and analysis of cycling statistics, policies and outcomes in Europe, the UK and USA over recent years and decades... ***Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany***, by Prof John Pucher and Ralph Buehler, July 2008 [1]. We recommend Committee members with a particular interest to read the full paper – but we have also included part of its introduction as Appendix 1.

Pucher and Buehler's conclusions fit closely with our own experience over many years. In their abstract below we have highlighted two sentences which we believe to be particularly relevant and useful.

ABSTRACT: *“This article shows how the Netherlands, Denmark and Germany have made bicycling a safe, convenient and practical way to get around their cities. The analysis relies on national aggregate data as well as case studies of large and small cities in each country. **The key to achieving high levels of cycling appears to be the provision of separate cycling facilities along heavily travelled roads and at intersections, combined with traffic calming of most residential neighbourhoods.** Extensive cycling rights of way in the Netherlands, Denmark and Germany are complemented by ample bike parking, full integration with public transport, comprehensive traffic education and training of both cyclists and motorists, and a wide range of promotional events intended to generate enthusiasm and wide public support for cycling. In addition to their many pro-bike policies and programmes, the Netherlands, Denmark and Germany make driving expensive as well as inconvenient in central cities through a host of taxes and restrictions on car ownership, use and parking. Moreover, strict land-use policies foster compact, mixed-use developments that generate shorter and thus more bikeable trips. **It is the coordinated implementation of this multifaceted, mutually reinforcing set of policies that best explains the success of these three countries in promoting cycling.** For comparison, the article portrays the marginal status of cycling in the UK and the USA, where only about 1% of trips are by bike.”*

2.2 Main Issues from the above

2.2.1 **It is a prerequisite for extensive cycle use for everyday journeys by a wide spectrum of the population that the road system looks, feels and is safe and welcoming for using a bike.** [For specific comments on infrastructure see appendix 4]. The more this is achieved, the greater the potential for heavy bike use. It requires funding which is *adequate* and *consistent* – neither of which have yet been seen in Scotland – and delivered through *effective funding mechanisms*.

Our submission concentrates on the funding and the political and professional commitment necessary for developing such an infrastructure, as our experience perhaps gives us most to contribute here. We see the main steps needed here as...

- a. **Increased and consistent levels of funding from government** – see 3.5.1.
- b. **Improved funding mechanisms** – see 3.5.2. These should (i) ensure a basic level of cycling investment in all parts of Scotland, (ii) provide opportunities for more substantial investment by councils who take cycling seriously as a form of transport, (iii) recognise and support the many existing and potential opportunities outside local authorities.

2.2.2 **The interaction and integration of other traffic and land-use policies is of critical importance.** The abstract above stresses the significance of compact land-use policies and urban-area car-restrictions in contributing to high cycle use. It is therefore vital that programmes to raise cycle use are not standalone – rather, all transport and land-use policies must understand and be integrated with achieving the cycling goal. Most obviously, if distances for everyday journeys are long, then cycling (or walking) are ruled out from the start. This is absolutely critical – we urge the Committee to explore it with other bodies such as Transform Scotland more experienced in general transport and land-use planning.

2.2.3 **Given suitable road conditions, a shift to cycling can be accelerated by a whole range of promotional or 'soft' measures** – provision of maps, individualised journey planning, training, events, and so on. However, this is very dependent on the prerequisite 2.2.1 and also to a considerable extent on 2.2.2. The safer and more welcoming the road conditions, the more people are likely to be attracted by promotional measures, and the more long-lasting their effects are likely to be. It may be too early to know definitively whether Smarter Choices lead to 'permanent' behaviour change, or whether such measures need repeated/reinforced every few years – or indeed every year. According to Pucher (2.1 above) they are most effective as part of a multifaceted infrastructure and land-use approach. Our submission leaves this area to other contributors with more experience in this area, such as Sustrans or the Smarter Choices analysts. It must be noted, however, that without a new approach to funding (2.2.1 above) the opportunities in this area will be greatly restricted.

3. QUESTIONS POSED BY THE COMMITTEE

3.1 Q1 *What more can be done to encourage people to change travelling habits and walk/cycle more?*

Our response to this question is covered by 2.2, 3.3 and 3.5.

As something of an aside, in addition to obvious infrastructure and promotional initiatives there is a wide range of innovative ideas and enthusiasm waiting to be unleashed, as was illustrated in our recent Spokes competition [14] “*How would you spend £1m to get more people cycling more often for their everyday journeys?*” A summary of the top entries is in Appendix 3. The Cycle Projects Fund proposed in our budget submission [8] could allow some of the more interesting ideas to go ahead – a small employer fund, station bike hubs, bike parking in all towns, etc.

3.2 Q2 *Is enough progress being made in improving the uptake of walking and cycling?*

Sadly, 'progress' is in the wrong direction! The Scottish household survey shows the % of adult commuter trips usually made by bike at 1.7% in 1999 but 1.6% in 2007 [cf. the Scottish government all-trips target of 10%]. The Sustainable Development Commission (Scotland) says “*Transport is the poorest performing area for sustainable development*” and within that poorly performing area, “*active travel is in relative decline*” [10].

Within this very distressing picture there are some positive glimmers - though the cross-Scotland figure clearly means cycle use is falling in many parts. However, in our own area, Edinburgh has grown cycle use from 1.4% of commuter trips in the 1981 census to 4% in 2006, with the bulk of the increase in the last 10-15 years during a period of consistent investment in onroad coloured cycling infrastructure - see [11] for discussion. Traffic counts by Spokes show continuing growth, reaching 20% of all rush hour vehicles on certain roads [12]. The City is now fortunate again to have a transport Convener and Director who appear committed to cycling as transport, and it has recently signed the **Charter of Brussels** [13] which includes a target of 15% of all trips to be by bike in 2020.

3.3 Q3 *If not, what are the barriers to progress? (for example, lack of policy development, lack of political leadership, lack of funding/investment, the lack of prominence given to active travel in transport policy development, project planning and construction etc.)*

3.3.1 **Safe and welcoming cycling conditions depend critically on funding.** This is essential [3.5.1] - though not sufficient [3.3.2, 3.3.3]. Funding is however a complex issue and the mechanisms by which it is made available can prove critical [3.5.2]. For example, in some councils the government's **CWSS** scheme [cycling, walking, safer streets] has in fact seen little allocated to cycling. Conversely, the former **Public Transport Fund** and the more recent **RTP capital funding** (until transferred by the new government to councils) provided unexpected yet substantial new cycling investment! *Thus, depending on local political and/or professional priorities, and views on cycling, specific funding streams will be diverted either towards or away from cycling as far as the rules allow.*

3.3.2 **Political and/or professional commitment is often lacking** – Spokes experience at both government and council level shows that relatively few politicians or senior professionals really take cycling seriously as transport – for many it is recreation or a hobby, not transport. This is critical. **Government example** – Sarah Boyack as transport minister amended PTF rules so that bids were more successful if they integrated cycling into PT schemes [eg Quality bus/cycle corridors] and she also set up the CWSS fund – both initiatives significantly boosted cycle investment, but one was lost when subsequent ministers scrapped PTF with no thought to cycle implications. **Local authority example** – in Edinburgh a committed politician/director combination such as Cllr David Begg/George Hazel brought major impetus to cycling projects, whilst some periods have seen cycling sidelined.

It is not easy to generate or require genuine commitment. However a solution may lie in funding mechanisms [3.5.2 below]. If money can *only* be used for cycling investment, then even sceptical politicians and senior officials are likely to use it. The evidence of the annual Spokes funding survey over the last 13 years makes it plain that availability of central funding for cycling projects – both in dedicated allocations and in wider biddable funds – does increase cycling investment through local authorities and sometimes other bodies. Our annual funding surveys show step increases in total Scottish cycling investment *only* as a result of the following national initiatives...

- introduction of the CWSS fund
- modification of Public Transport Fund rules to encourage councils to include cycling in PTF bids
- large allocations to Sustrans, mainly used in partnership with local authorities, British Waterways, etc
- introduction of capital funding for RTPs [several of which, though not all, took cycle travel seriously]

Conversely, there were major negative impacts on total cycle project investment at the following times...

- when the PTF fund was scrapped [with no thought to the consequent impact on cycle investment]
- when RTP capital was transferred to local authorities [who invest much less of it in cycling]
- when Sustrans funding was drastically cut, limiting their partnership investment with councils and others.

Alongside these ups and downs from new and lost national funding opportunities, cycle investment levels by local authorities from their own capital funds largely stayed static, at a low proportion of total cycling investment.

3.3.3 Lack of effective policy integration and implementation This is a reflection of 3.3.2 as it is what *happens* rather than what the policy *says* which matters. As a local example, **streetscape and public-realm policy and implementation in Edinburgh** have in reality been largely independent of cycling policy and implementation, and as a result have impacted badly on conditions for cycling and for encouraging people to use a bike (provoking many complaints from our members). The Streetscape Committee *says* it supports cycling but has scrapped some coloured surfacing, scuppered shopping and residential cycle parking opportunities and even removed a well-used dropped kerb to make the pavement look nicer!

3.3.4 An outdated understanding of 'safety.' Cycling is often presented as dangerous, with heavy emphasis on personal protection. However, since the public's stated main reason for not cycling is danger, further emphasis on the supposed dangers of cycling cannot be conducive to increased cycle use. *Indeed, where helmets have been made compulsory or very heavily promoted, cycle use often falls – and injury rates sometimes rise* [5].

Secondly, there is extensive evidence (between countries, between years, and between different towns in the same country) that the more people who cycle, the safer cycling becomes per cyclist [6]. Thus, by increasing cycle use, conditions for all cyclists become safer, encouraging more people to cycle. This virtuous circle appears to apply in countries of heavy cycle use such as the Netherlands, where there is little emphasis on danger or on personal protection, and where helmet use is very rare – yet where injury rates are low. Conversely Britain has perhaps seen a vicious circle, with heavy emphasis on the supposed dangers of cycling and on the need to 'protect' oneself – and if this keeps down cycling levels, that is likely to reduce safety for each remaining cyclist.

In summary, the primary 'safety' emphasis must be on making road conditions safer and more welcoming rather than telling individuals they must protect themselves in order to use a bike. Helmets must be there for those who want them, but heavy investment/emphasis on 'personal protection' could even impact negatively on cycling levels.

3.4 Q4 *Why do walking and cycling policies in national, regional and local transport plans not result in greater modal share for walking & cycling?*

The reasons are given in 3.3.1-3.3.4 above. Policies and targets alone are not enough – funding, commitment and political and professional understanding are essential.

3.5 Q5 *What further action is required by the Scottish Government, local authorities and other bodies to ensure that significant progress is made in development and implementation of walking and cycling, particularly if transport is to make a greater contribution to reduced greenhouse gas emissions?*

3.5.1 Government – *Increased and consistent funding*

The evidence is clear that cycling investment in Scotland is far below those countries which have already achieved and surpassed the cycling target of 10% of all trips which the Scottish government has set for 2020. The Spokes annual funding survey [7] shows total cycling investment in Scotland from all main sources at almost certainly under £20m - and falling. And that £20m is not even all government money – yet £20m represents well under 1% of the £2.5bn transport budget.

Direct comparison with other countries is fraught with difficulty, although we give some figures in our submission on the 2010-11 Draft Budget [8]. **It is important to note that some comparisons may give a falsely optimistic picture of the position in Scotland.** Funding for cycling investment in most countries (including Scotland) comes from a wide range of sources – government, regional or local; regular or special funding mechanisms; European or lottery money, and so on. *The annual Spokes survey of Scottish cycling investment [7] attempts to include all such main sources. However the figures we hear from European countries often relate just to particular funding mechanisms – e.g. a special government or city cycling initiative, and so fail to encompass all cycling investment.* Similarly a European observer might look at Scotland and take the CWSS fund as Scotland's investment in cycling, since it has the word 'cycling' in its title – whereas in fact it represents only a small element of total cycling investment [7]. To comprehensively assess cycling investment in another country would be a big task, including familiarisation with relevant political and administrative structures.

In view of political and immediately implementable realities the Spokes 2010-11 budget proposal [8] would only raise cycling investment to some 1.5% of the Scottish transport budget. However, **we urge TICC in its report on this Inquiry to propose that the Spending Review adopts the call by the Association of Directors of Public Health, Institute of Highway Engineers, Sustainable Development Commission, Royal Institute of British Architects, Royal College of Physicians and many other prestigious, professional and public bodies for 10% of transport funds to go to active travel and for full active travel integration into all relevant policy areas [9].**

3.5.2 Government - *Improved funding mechanisms*

This may be almost as critical as increased absolute funding. Our experience shows clearly that interest in and understanding of the role of cycling as transport varies drastically between councils, and also between different time periods in the same council. This is perhaps primarily dependent on the local politicians and professionals currently responsible for transport [3.3.2] though also affected by many other factors such as local lobbying. Funding streams which can potentially be used for cycling investment (e.g. CWSS, PTF, RTP, own capital) will be diverted towards or away from cycling investment depending on those local views [3.3.1]. Solutions to this dilemma need to...

- ◆ Ensure a basic level of cycling investment in all local authority areas.
- ◆ Provide opportunities for more substantial investment by councils who intend to take cycling seriously. Note that since the ending of the Public Transport Fund, and the transfer of RTP capital funding to individual councils, it is now extremely difficult to set up cycle projects requiring significant investment – say around £½m-£1m or over.
- ◆ Recognise and support the cycling investment and promotional activity that does and should happen outside local authorities (although often in partnership with local authorities) – for example, via Sustrans, British Waterways, ScotRail, community initiatives such as Edinburgh Bike Station, and many more.

Concordat issues – solutions on funding cycling investment may appear to clash with the Concordat and local authority autonomy. Our view is that if the government sets a target then it must ensure the mechanisms are in place to meet that target. However, our proposal (a) below, guaranteeing minimum levels of cycling investment, is just a re-jig of the existing CWSS fund; whilst (b)/(c) should not be seen as conflicting with the Concordat as they are to work with or fund a wider range of bodies than just councils, and even as regards councils they provide extra opportunities rather than extra duties.

We suggest that mechanisms (a)-(c) below are all implemented urgently – with a longer-term assessment, including (d), in the Spending Review. Methods (a) and (b) would ensure a minimum level of attention to promoting cycle use in all parts of Scotland, with (b) also supporting non-council initiatives, whilst (c) and (d) would provide for larger scale projects, for more enthusiastic local authorities, and to encourage innovation.

- a. **Conversion of CWSS into a dedicated Walking/Cycling fund** - with a requirement to allocate at least 50%, over say 3 years, to cycling investment (this does not push walking under 50%, as cycling investment often also benefits walking – appendix 2). The scheme could possibly become match-funded, with any unused amounts being offered to other councils.
- b. **Restoration of substantial capital funding to Sustrans** - to work with councils and others. Being implemented through an organisation dedicated to greater cycling and walking, funding will be used for the intended purpose. We note the comment of former Transport Minister Nicol Stephen, after Sustrans completed over 70 projects Scotland-wide from its £3.5m 04/05 allocation, “*High standard, on budget and in tight timescales.*” Subsequently Sustrans funding was increased to £8m p.a. for 2 years, though that has now been cut by 50% under the present government.
- c. **A new bidding fund open to any relevant organisation in Scotland** - for example British Waterways, ScotRail, Sustrans, Councils, Transport Partnerships, etc. Its aims would be, first, to provide funding for large-scale projects and, second, to encourage innovation. How it could operate is discussed in the Spokes budget submission [8].
- d. **Cycling should be incorporated into all new transport funding mechanisms**. Scotland now has no sensible funding mechanism for local but large-scale public transport projects – previously covered by the Public Transport Fund and more recently by RTP funding. Undoubtedly this needs addressed, and when it happens provision for cyclists must be an integral part of any new scheme. When Sarah Boyack as Transport Minister modified the PTF rules to encourage bids to integrate cycling – and even to include major cycling-only bids – this made a big difference to total cycling investment in Scotland.

3.5.3 **Local authorities** – Councils must do much more on cycling policy implementation if the government target is to have any meaning. Experience suggests this will only happen sporadically and in occasional councils, where there happens to be commitment at that particular time [3.3.2 above]. The only *effective* solution across Scotland – essential if the national target is to be met – is for councils to be incentivised through government funding initiatives as in 3.5.1/3.5.2.

3.6 Q6 *What can Scotland learn from good practice/successful implementation in other countries?*

Our response to this question comprises paras 2.2.1, 2.2.2 and 2.2.3 above.

3.7 Equalities and Inclusion Issues - not covered in Q1-Q6

3.7.1 **Gender balance** – Cycle use in Britain (and the US) is very male-dominated - 72% of all UK cycle trips [1]. However, the European examples strongly suggest this is not a necessary fact, but is linked to cycling conditions and perceptions. Women make 45% of bike trips in Denmark, 49% in Germany, and a majority 55% in the Netherlands. This suggests that the best way to rectify the gender imbalance in our country is to make conditions for cycling feel and be safer and more welcoming. This conclusion is also borne out by recent research on this issue by Sustrans [15].

3.7.2 **Age inequality** – The common British perception that cycling is unsuitable for older people is quite wrong. The % of trips made by bike by over-65s is 12% in Germany and Denmark and 24% in Netherlands – Pucher [1].

3.7.3 **Social inequality** – Against common perceptions (at least in Edinburgh) Pucher [1] states that rates of cycle use are similar across income groups not just in Germany, Denmark and the Netherlands, but also in the UK. Clearly there are potential benefits for low-income groups, such as widening work-search areas where transport costs are a deterrent.

3.7.4 **People with disabilities** – Whilst some disabilities preclude use of a bike, in other cases (e.g. certain walking problems) suitably designed cycles provide increased mobility options. Some UK companies specialise in such equipment.

REFERENCES

INTRODUCTORY NOTE ON EVIDENCE

The inquiry will doubtless receive much personal, anecdotal and speculative evidence. Whilst this can provide useful insights, evidence-based research is particularly important. Even here, however, Pucher [2] points out that few studies of cycling issues are of an academic standard – and it is not easy to disentangle the many variables affecting bike use.

Another problem, which may sound esoteric but is important, is that rigorous studies tend to be of specifics that can most easily be measured – and therefore risk missing the overall picture. Thus you can find careful studies of the impact of a specific cycle facility, but not of the overall impact of a city-wide multi-pronged multi-year approach. This is critical, since Pucher [2] concludes that such coordinated long-term approaches add up to much more than the sum of the parts. This ties in with our view that Edinburgh's success in raising cycle use substantially (at a time of national decline) was not due to any specific cycle facility so much as to the *widespread presence of onstreet coloured cycle facilities* – seen every day by every road user, and we believe contributing to a changing consciousness about the possibility of using a bike [11].

The most useful evidence therefore comes from wide overviews, looking at a range of cases, across countries, across time periods, etc, and identifying overall lessons. We recommend as such overviews [1], [2] and [3] below.

[1] Pucher, John and Buehler, Ralph (2008) “*Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany*,” *Transport Reviews*, 28:4, 495 — 528. Available at <http://policy.rutgers.edu/faculty/pucher/> - publications

[2] Pucher, J., Dill, J., and Handy, S., “*Infrastructure, Programs and Policies to Increase Bicycling: An International Review*,” prepared for the Active Living Research Program of the Robert Wood Johnson Foundation, and tentatively scheduled for publication in *Preventive Medicine*, Vol. 48, No. 2, February 2010. Available as for [1] above.

[3] *Knowledgebase on Sustainable Urban Land Use and Transport* - Extensive comparative material on cycling policies and statistics, international and UK at www.konsult.leeds.ac.uk – enter - management - cycle lanes – evidence. Or use the direct link... www.konsult.leeds.ac.uk/private/level2/instruments/instrument046/12_046summ.htm

[4] *Cycling in Scotland* Briefing Document 09/48, Scottish Parliament Information Centre, SPICe.

[5] For extensive evidence and papers on all aspects of the helmets debate, see www.cyclehelmets.org.

[6] Safety in Numbers. The original research appears in *Safety in Numbers*, Jacobsen, Injury Prevention September 2003. See also the *Safety in Numbers* review paper by Cyclists Touring Club, 2009.

[7] Spokes annual survey and analysis of investment in cycle projects from all main sources. Most recent survey [08/09] published in Spokes Bulletin 104. Available at www.spokes.org.uk/wordpress.

[8] Spokes submission on the Scottish Government's Draft Budget 2010-11, to the Transport, Infrastructure and Climate Change Committee. Available at www.spokes.org.uk/wordpress.

[9] *Take Action on Active Travel*, Association of Directors of Public Health and others, at www.adph.org.uk.

[10] *Review of Scottish Government Progress*, November 2008, Sustainable Development Commission, Scotland.

[11] Discussion of Edinburgh's rising cycling levels and safety-rates – Spokes Bulletin 105, p7, at www.spokes.org.uk/wordpress.

[12] Spokes traffic count results – see www.spokes.org.uk – downloads – technical.

[13] Charter of Brussels – at www.velo-city2009.com/charter-brussels.html.

[14] “*How would you spend £1m to get more people cycling for everyday journeys?*” www.spokes.org.uk/wordpress – downloads – odds-and-ends – competition.

[15] www.sustrans.org.uk/resources – research – *Route User Monitoring Report 2008*, pages 21 and 17.

APPENDIX 1 - Extracts from the introduction to *Making Cycling Irresistible*, Pucher and Buehler [1]

“For readers in many countries, the title of this article might sound so impossible as to seem absurd. Most Britons and Americans, for example, must find cycling quite resistible indeed, since they make only about 1% of their trips by bike. Cycling conditions in most countries—including the UK and the USA—are anything but safe, convenient and attractive (Pucher *et al.*, 1999; McClintock, 2002; Pucher and Dijkstra, 2003; Tolley, 2003). Bicycling in much of the industrialized world is a marginal mode of transport, occasionally used for recreational purposes but rarely used for practical, everyday travel needs. Moreover, the social distribution of cycling tends to be very uneven, with young men doing most of the cycling, while women cycle far less, and the elderly hardly cycle at all.

Thus, it may come as a surprise to sceptical readers that there are technologically advanced, affluent countries that have managed to make cycling a mainstream mode of transport, a perfectly normal way to get around cities. In the Netherlands, Germany and Denmark, cycling levels are more than ten times higher than in the UK and the USA. Dutch, German and Danish women cycle as often as men, and rates of cycling fall only slightly with age. Moreover, cycling is distributed evenly across all income groups. In the Netherlands, Germany and Denmark, cycling is truly for everyone and for all trip purposes.

Moreover, cycling in those countries is not viewed as requiring expensive equipment, advanced training, or a high degree of physical fitness. Nor are cyclists forced to muster the courage and willingness to battle motorists on streets without separate bike lanes or paths. On the contrary, Dutch, German and Danish cyclists ride on simple, inexpensive bikes, almost never wear special cycling outfits, and rarely use safety helmets. Even timid, risk-averse and safety-conscious individuals can be found cycling, unlike the many millions of Americans and Britons who are terrified by the mere thought of getting on a bike.

As documented in this article, cycling was not always thriving in the Netherlands, Germany and Denmark. Cycling levels plummeted in all three countries from about 1950 to 1975 (Dutch Bicycling Council, 2006). It was only through a massive reversal in transport and urban planning policies in the mid-1970s that cycling was revived to its current successful state. In 1950, cycling levels were higher in the UK than they are now in Germany: almost 15% of all trips. Just as in these other countries, cycling in the UK plummeted from 1950 to 1975, but British cycling never recovered. It continued to fall to its current level of 1.3% of trips, only slightly higher than the 0.9% bike share of trips in the USA (U.S. Department of Transportation, 2003; Department for Transport, 2007).

While history, culture, topography and climate are important, they do not necessarily determine the fate of cycling. Government policies are at least as important: transport policies, land-use policies, urban development policies, housing policies, environmental policies, taxation policies and parking policies. In many respects, the UK and the USA have given the green light to the private car, almost regardless of its economic, social and environmental costs. In sharp contrast, cycling has prospered in the Netherlands, Germany and Denmark over the past three decades precisely because these countries have given the red light, or at least the yellow warning light, to private cars. Instead of catering to ever more motor vehicles by expanding roadways and parking facilities, Dutch, German and Danish cities have focused on serving people, making their cities people-friendly rather than car-friendly, and thus more liveable and more sustainable than American and British cities.

...

The Netherlands, Denmark and Germany have been at the forefront of policies to make cycling safe, convenient and attractive, while the UK and the USA have lagged far behind. Differences between these countries in cycling levels are enlightening because all five of them are democratic, capitalist, affluent societies with nearly universal car ownership. The success of cycling does not depend on poverty, dictatorial regimes or the lack of motorized transport options to force people onto bikes. This article shows how the Netherlands, Denmark and Germany have managed to make cycling a popular, mainstream way of getting around cities.”

The paper then compares Netherlands, Denmark, Germany, UK and USA in respect of...

- Variations in the nature of cycle use - amounts, purposes, types of cyclist, etc
- Variations and trends in cycling casualties
- Policies, programmes and funding

The paper concludes with an overall assessment - lessons to make cycling safer, more convenient and more attractive.

APPENDIX 2 – BENEFITS TO PEDESTRIANS (AND OTHERS) OF CYCLE PROJECT INVESTMENT

Whilst the term 'cycle facilities' is often used, such facilities in fact often have very significant benefits for other road users, notably for pedestrians.

ASLs [advance stop lines] - Better visibility of all and by all. Council officials have mentioned reduced casualties to all road users at ASL locations, though we don't know if there is hard data on this. Indeed, perhaps 'Cycle advance stop lines' might be better named 'Road user visibility zones'!

Cycle lanes – Can make pavements much more pleasant, giving pedestrians and pushchair-occupants 1m-2m extra protection from noise, particulate and other pollution, splashing and general traffic stress. Cycle lanes also keep heavy traffic away from road edges, thus almost certainly *reducing road maintenance costs* as this is the area where the relatively fragile drainage systems are installed. A picture demonstrating the benefits for both pedestrians and cyclists of an effective cycle lane can be found at www.spokes.org.uk – pictures.

Light-controlled road crossings – Total ped+cyclist numbers can sometimes justify a toucan crossing where there are insufficient pedestrians to justify a pedestrian-only crossing [this has happened several times in Edinburgh].

Offroad paths – shared-use path construction can sometimes be justified where there would be insufficient walker-only numbers to justify a pedestrian-only path.

APPENDIX 3 – GETTING MORE PEOPLE ON BIKES FOR EVERYDAY TRIPS

Spokes holds an annual summer competition, with a different topic each year. In 2009 we asked entrants to tell us how to get more people cycling for ordinary journeys more often in Scotland, now and into the future, using as a focus for responses a notional £1 million pot of money. The competition was open to all, and was promoted beyond the Spokes membership. The results make interesting reading in the context of our evidence on the low levels of cycle investment in Scotland [7], and our budget proposal for a £20m fund for major schemes to grow cycling [8].

The judging panel (including Tom Rye, Professor of Transportation at Edinburgh Napier University) considered each entry on its merits according to how effectively it might tackle the issue of getting more people on bikes more often, and in relation to the entrant's description of the proposal itself.

Three major themes emerged in the entries...

- ◆ infrastructure to improve safety, perceptions of safety and the visibility of cycling as a means of transport
- ◆ working directly with people, around leadership, demonstration, training and promotion
- ◆ integration with other transport options – buses, trains, park and ride etc.

All entries had a central concern of breaking down existing disincentives to cycling around actual / perceived dangers, with many also looking to promote the positives. Several specific problems were identified - missing links in cycle networks, ignorance by officials or others of cycling issues and needs, over-reliance on volunteers for training, storage issues, and constraints to combining cycling with other forms of transport. In particular, there were repeated calls for a continuous network of safe cycling routes – i.e. cohesive, fully-connected, clearly designated. Some recommendations focused on improving the training and awareness of cycling for transport planning and policy officials - cyclists have a legitimate place on Scotland's roads and should be officially welcomed rather than grudgingly tolerated.

A number of entries looked specifically at Edinburgh, with an ambitious take on the possibilities enhanced funding could bring. Special mention should be made of the very strong calls for a focus on safe and high-profile cycle routes across the heart of the city to allow cyclists of all ages, abilities and types to cross the city without current obstacles and hindrances.

A flavour of the winning entries is given below. The top three winners cover neatly first, the essential need to invest in infrastructure to improve safety and to promote cycling in a highly visible way; second, the 'people' factors of promotion, demonstration and leadership; and thirdly integrating cycling more into other forms of transport. The complete set of the entries are on the Spokes website at www.spokes.org.uk/wordpress – downloads – odds-and-ends – competition.

1st= **A £1 million fund for small employers** (e.g. under 100 employees), to provide facilities (secure parking, lockers changing facilities and showers) and promote cycling to employees to achieve a growth in cycle commuting.

1st = **Create/extend existing red cycle lanes**, plus advanced stop lines at junctions, on every A and B road in Edinburgh, to create a continuous network of cycle routes on every street throughout the city - and within existing greenways and on roundabouts. The lanes should be demarcated by rumble strips to discourage vehicle encroachment. Parking in cycle lanes should be banned and properly enforced. In conjunction, the speed limit on all other roads should be reduced to 20mph.

3rd **'Rack'n'Roll': equip 200 Scottish bus routes** with US-style bike racks, so each bus can carry two bikes securely. This provides commuter back-up, encourages leisure cycling, and is a highly visible reminder of the existence of bikes. Routes would lead from cities and large towns into surrounding commuter towns and countryside, e.g. Edinburgh-Melrose.

4th **Multi-pronged child-centred programme to promote cycling** – for school, with parents, at weekends. Promote with pregnant women or post-natally; promote cycling to and at school – e.g. subsidising bikes for children in schools. Giving cyclists who are parents time off to support school cycling activities. Promotion for older children (S3+) with community development workers helping design, fund and implement local (infrastructural) projects.

5th **A South-Edinburgh-to-Bush link** involving a new cycle path across farmland, pavement re-classified as cycle path, traffic calming measures, link with existing Edinburgh University path, and enlargement of the bypass tunnel. To encourage inexperienced and leisure cyclists as well as existing. Organisations on Bush estate would help promote the new route.

6th **Mainline rail station Dutch-style FietsPoint cycle hubs** – with staffed bike storage, repairs, hire, parts retail, etc – for commuters and visitors- also creating employment. e.g. at Edinburgh, Glasgow, Dundee, Aberdeen, Leuchars).

7th **Bike parking in towns and cities** - invite them to identify street locations for bike parking and bid for a share of the £1 m to fund their installation. Visible cycling facilities encourages more people to cycle, as in Edinburgh already.

8th **Introduce cycling in the driving test** - possibly an on-road cycling element under a qualified instructor, with relevant questions, and/or as a simulation. To raise awareness of cycling, encourage more cycling, and help normalize cycling.

9th **A social-enterprise Scottish cycle training network** employing and assessing qualified Bikeability cycle trainers at national standard. Children and adults in Scotland would be offered the three levels of Bikeability training, building on the Scottish Cycle Training Scheme but with higher investment and marketing to promote cycling as safe everyday transport.

10th **Three Bridges Roseburn Cycle Path to Union Canal Link** - a strategic missing link from the cycle network of north Edinburgh to the Union Canal and South Edinburgh. Cyclists and pedestrians could then make a seamless journey across busy rail, tram and road routes linking Route One from Roseburn to Route 75 at the canal. Signage from the integrated Haymarket Station and Tram stops, and cycle storage facilities here to encourage cycle/train/tram combinations.

APPENDIX 4 – SOME NOTES ON CYCLE INFRASTRUCTURE

As stated in 2.2.1, it is a prerequisite for extensive cycle use for everyday journeys by a wide spectrum of the population that *the road system looks, feels and is safe and welcoming for using a bike*. The more this is achieved, the greater the potential for heavy bike use. What does this mean in practice? We need to move towards...

- ◆ 20mph zones in all residential areas
- ◆ in 30mph+ streets (and possibly some 20mph main streets), high-quality cycle or bus/cycle lanes and advanced stop lines – all with surfaces coloured, car-parking prohibited, and adequate cycle-lane widths.
- ◆ other measures to increase convenience and reduce distances for cycling – cut-throughs, 2-way cycling in one-way streets, etc.
- ◆ where space allows, European-style physically segregated sections. That is not possible in the near future on a wide scale in our existing towns and cities due to road widths, but should be tried wherever possible, and particularly in area-based new developments.
- ◆ experimentation with European innovations like 'bicycle streets' where cyclists have priority – Pucher [1], p524.

Note that cycling infrastructure in Britain is often thought of as **offroad paths**. These can be very valuable, particularly for recreation and for novice cyclists, but in most towns and cities they cannot form the heart of cycling infrastructure for local utility journeys in the near future. The existing built environment does not allow the necessary space, offroad paths are often not direct, and offroad path networks are not usually visible from the roads - so the public has to be continually made aware of them through leaflets, signs and other promotion. In contrast, the road system already exists, is well known, links virtually every origin and every destination, is generally fairly direct, and is seen every day by every road user. A safe and welcoming road system thus has the huge advantage of being a 'self-promoting' cycle facility. Obviously every case must be considered on its merits, and some offroad paths (such as the Meadows paths in Edinburgh) are direct and highly visible. **However, the main priority - with funding in short supply and when the object is to get as many people as possible onto bikes for everyday travel – must be to make the road system safe and welcoming.**