How can we get Britain cycling?

Response to the Inquiry by the All Party Parliamentary Cycling Group

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About me and my response

I research and teach in the area of transport, with a particular interest in cycling. I was invited to give evidence to the GLA's Cycling in London inquiry, and I have recently set up the cross-institutional and multi-disciplinary *London Cycling Research Group* bringing together researchers studying cycling in London. Current and recent funded projects include *Cycling Cultures in a Mass Motorised Society: a multi-method case study of four English urban areas* (ESRC), *Modelling on the Move: towards transport system transitions* (ESRC) and *Changing Commutes: Exploring the uptake of cycling to work through an agent-based model focusing on social interactions and social norms* (ESRC). Other work has covered cycling advocacy and activism, cycle training, cycling policy and HGV-cycle interactions.

This written response provides some initial evidence related to 5 of the 22 key topics listed by the Committee as being of interest. I focus on England when giving examples or calculating funding, but generally the issues discussed also apply to the rest of Britain. The other topics are important – I would be happy to provide oral evidence about many of them, if invited – but given time limitations I have chosen to focus on only a few issues.

My headline message is that we have historically massively under-invested in cycling, compared to leading countries such as The Netherlands, Denmark, and Germany. My research (e.g. Aldred 2012, 2012a, 2012b) has found that (a) cycling is often de-prioritised in transport policy, (b) cyclists often experience poor travel environments and a lack of care, sometimes even hostility, from other road users, and (c) unusually high levels of skill and knowledge are required to be a cyclist in the UK. Thus it is particularly important that cycling is prioritised (and funded) on a national level. A substantial effort is needed, yet currently most parts of the UK are not seeing the levels of investment needed.

This Inquiry should recommend that ongoing and ring-fenced funding is made available to authorities at a level commensurable with other modes of transport. The impacts of different strategies and policies adopted should be rigorously and independently evaluated to encourage healthy competition, protect value for money, and enable the swift adoption of best practice. Given the poor quality of much existing cycle infrastructure, it is particularly important to ensure its quality. I would suggest (a) revising DfT cycle design guidance to create standards that are in line with best international practice (i.e. inclusive, Dutch-standard provision), and (b) the appointment of local Cycling Commissioners tasked with approving schemes and ensuring compliance with best international practice.

Evidence on Specific Topics

1. Funding and the Local Sustainable Transport Fund

Copenhagen and The Netherlands spend approximately £20 per person on cycling, while in Germany the figure varies across cities between £6 and £15 (GLA 2012). Sloman et al (2009) found that in 2005, the average spend on cycling in the UK was £1 per person. Even in London, one of the few places where funding has increased substantially in recent years, current spending on cycling represents under 1% of Transport for London's total budget (GLA 2012), or approximately £10 per head. Given that the UK remains so far behind countries like The Netherlands in cycling levels and cycling provision, our spending needs (a) to be *greater* than those in The Netherlands and (b) to be sustained over many years, as a mainstream transport investment, rather than being part of a special time limited grant funding stream.

On 28th November the Government announced an extra £20 million fund for cycling in England outside London, supplementing an earlier announcement of £30 million. However, this approach is problematic in two respects. Firstly, the amount is far less than is needed: £50 million represents just over £1 per head – the amount Copenhagen or The Netherlands spend on cycling every few weeks as a matter of routine. Secondly, it is another ad hoc, time limited funding stream. This will no doubt improve aspects of cycle provision in various English villages, towns, and cities; but it does not represent the secure ongoing funding stream needed to overcome challenges to the creation of integrated, high quality cycling networks (long-term capacity or cultural obstacles and specific challenges, e.g. where land must be purchased or where new developments are under way.) With repeated small scale ad hoc schemes the risk is that 'quick wins' are pursued at the expense of more complex and expensive, yet potentially more transformative, projects.

In England (outside London) with its population of 45 million, £25 per head of recurrent annual funding might allow us to begin catching up with European best practice. This would mean £1.13 billion of annual spending on cycling. While much higher than current spending, this still amounts to less than (a) the annual Highways Agency budget (for maintaining and improving the Strategic Road Network, much of which is infrastructure from which cyclists are excluded in law or in practice), (b) the annual grant to Network Rail, or (c) the annual transport grant for London. (Additional large scale projects further increase spending on other modes; Crossrail and HS2 are each in the region of £16 billion, or over £250 per head across the country, most publicly funded). In London, the GLA recommended an initial core cycling allocation of £145m or approximately £18 per inhabitant, to increase in subsequent years; if this was adopted in the rest of England the initial allocation would be approximately £800m annually.

Cycling has many benefits and cost-benefit ratios for cycling and walking projects tend to substantially exceed those for other modes (e.g. Sælensminde 2004). Funding cycling at levels comparable to other modes would (a) provide greater benefits than our current portfolio of transport investments (b) allow the UK to start

improving its often poor cycling provision, and (c) send a clear signal that cycling is an important mode of transport to be planned and funded at a similar level to motorised road or rail travel.

Evidence shows funding makes a difference. Cycling England's last funding allocation, £140m, was provided in 2008 to cover a three year period. While this only represented 77 pence per person per year, Cycling England focused it in a limited number of areas (Cycling Cities and Towns, CCT) to achieve levels comparable to European best practice contexts. The CCT programme demonstrated that substantially increased spending can increase cycling levels, against the backdrop of cycling continuing to stagnate at a national level (Sloman et al 2009; Cycling England 2012). This suggests that CCT-level funding across the country could generate the national cycling revolution that still eludes us.

Considering levels of spending in best practice contexts, it can be seen that the LSTF provides nowhere near the level of investment in cycling needed (£560m over four years, so averaging £140m per year, covering all modes of local transport - e.g. park and ride, rail improvements, local bus infrastructure, as well as cycling), and the failure to target cycling is problematic. Government argues that localism means that funding for cycling should not be ring-fenced; however, this argument does not apply to the 'strategic road network' or rail network and the small amounts made available for cycling in recent months have been ring-fenced.

The few LSTF projects focused around cycling give a sense of what is needed, on a longer-term, national basis. Coventry hosts one such project, others being Bike North Birmingham and Greater Manchester Commuter Cycle Project. This means Coventry, unlike most LSTF-funded areas, has been able to plan investment in cycling at levels that could redress our historic underinvestment (the bid area covers 47,000 people and the total package cost is £5.7 million over three years, or around £40 per head, per year). With respect to current cycling infrastructure, the bid document notes that (2012: 9-10) 'Although good progress has been made in a limited number of areas, existing routes are not continuous, are generally unsigned, and do not operate as a true cycle network.' The same may be said about much of the country, yet in most areas cycling represents only a small part of the overall LSTF bid alongside for example rail improvements, electric vehicles, and smarter ticketing schemes.

It is sensible to allow authorities substantial discretion in *how* they invest in cycling; this will allow researchers to evaluate different strategies and policies; comparing different types of infrastructural provision and different promotional strategies. Yet to allow authorities to choose *whether* to make the necessary investments in cycling (and most LSTF projects do *not* involve the Dutch-level funding for cycling needed to spark a cycling revolution) sends the message that while motorised road and rail travel are of national and strategic importance, cycling remains discretionary.

2. Leadership, commitment and capacity in local government

The *Cycling Cultures* research project examined four English urban areas where cycling levels are relatively high and/or rising, providing insights into issues of local leadership, commitment and capacity. In those places we studied, commitment and capacity are relatively high; often key people (at varying levels of seniority) had taken leadership at important times.

The local contexts made it easier for these people to emerge; in Cambridge for example, we were told that officers and councillors generally accepted that cycling was a 'good thing', and that this was not necessarily the case in other areas. National commitment was perceived as enabling local commitment to be effective; so for example where an area was a Cycling City or Town, potentially controversial policies (such as reallocating road space for cycling) could be seen as more acceptable because there was a clear overarching strategic objective of increasing cycling. Towards the end of the *Cycling Cultures* project (in 2011) it was worrying to hear about people working within local authorities in cycling and 'sustainable transport' (e.g. travel planning) more broadly losing their jobs, implying that these areas were not seen as key ones to be protected in a difficult context.

The *Cycling Cultures* project found many examples of the impact stakeholder commitment (including that of local employers) could have on policy. However, in all four areas, stakeholders would often point to a range of problems that still existed, signalling that cycling is still not integrated and prioritised as it is in the best European contexts. For example, one stakeholder expressed her frustration that a new development was being built with poor pedestrian and cycle facilities because motor traffic flow was being prioritised over connectivity for walking and cycling; another spoke of the poor cycle facilities in the local authority building in which she worked; another expressed concerns that little money was now being spent on cycling and that the (incomplete) cycle network was stagnating.

One barrier to change is represented by negative attitudes towards cyclists, expressed for example in the belief that they are more likely to break road rules than are motorists (Aldred 2012a; DfT 2010). This prejudice against cyclists (who, like pedestrians, are particularly vulnerable to being injured by motorists) is linked to a continuum of poor driver behaviour, which regularly leads to tragedy (e.g. when drivers pass cyclists too close, open their doors without checking for cyclists, or cut in front of cyclists before turning). Cyclist interviewees in all four of the *Cycling Cultures* areas cited experiences of injuries and even deliberate harassment and intimidation, and spoke about friends and family who did not cycle because they feared or had experienced hostility or dangerous behaviour. For me one of the lessons from the project has been that local commitment can only go so far; it needs to be matched and supported by government to a greater extent than has hitherto been the case. This would encourage drivers to see cycling as a legitimate transport mode, as is the case in high-cycling countries with better safety records.

3. Health

There is much evidence of the beneficial effect of cycling on health at a population level; see for example the 2012 and 2008 National Institute for Health and Clinical Excellence (NICE) guidance related to cycling. Some participants in *Cycling Cultures*, particularly older men in Hull, cited health benefits as encouraging them to cycle, while health benefits were perceived as less important for younger people. Thus, health is a motivator for some people but not others; and despite cycling being perceived as healthy, this will not motivate people to cycle unless they feel it is safe, as well as enjoyable and convenient - and for most people this is not currently the case (DfT 2011, 2012; TfL 2010). For example, TfL research (2010:45) found that: "For all groups, including frequent cyclists, safety was the most significant barrier to cycling in general and for specific trips."

The greatest health benefits can be achieved by increasing cycling levels for older people. In The Netherlands it is striking that many older people continue to cycle into their sixties, seventies and even eighties. However, for many in this age group concerns about safety are likely to be particularly prominent; according to the British Social Attitudes Survey 2011, only 12% of over-65 year olds said they felt confident to cycle on the roads (DfT 2012: 18). Unless cycling environments become more subjectively safe it is unlikely that the very low rates of cycling among older people in the UK will change. Although cycling offers many health benefits, without a dramatic improvement in cycling environments (improved infrastructure, and improved driver behaviour) these benefits will not be realised.

4. Data collection – including monitoring and review

Available data on cycling has improved but still remains relatively poor; if the 2011 Census is the last this removes a limited but still useful source of data (although the Labour Force Survey contains a similar indicator, the sample size means that it is little use at a sub-regional level). Measuring all types of (utility) cycling, including the mode share of cycling in relation to all trips (the Census just gives main mode of travel to work) is particularly problematic. If we are to monitor results at a local authority level the available data needs to be improved, for example by increasing the sample size of the National Travel Survey. The Active People Survey is useful for measuring levels of various types of regular cycling, but is of limited use to explore changes (for example, where people move from leisure cycling on a Saturday to cycling every day to work or vice versa, this will not appear on the survey).

The abolition of the National Indicators is of particular concern given that NI198 (mode of travel to school) had led to the creation of a School Census dataset, including information on cycling to school. It seems such a dataset will no longer be available, although authorities may still require schools to collect the data. The lack of a national dataset blocks monitoring, benchmarking, comparisons between authorities, and makes it harder to identify and share good practice.

While cycling is seen as a 'local' responsibility, comparable data on cycling levels at a local authority level are poor with the exception of data derived from the Census, which only relates to main mode of travel to work. Measuring and comparing

progress in terms of cycling levels requires better data, either through enhancing existing data collection and/or creating new datasets. Indeed, if as I recommend, there is a substantial increase in funding for cycling, it is imperative to monitor progress at a local authority level. To some extent this is possible in London now at a borough level via the London Travel Demand Survey although its sample size limits usability for cycling statistics (e.g. individual years at a borough level).

Data on road safety could benefit from improved presentation. In particular, we need more measures of risk per km or per hour, rather than absolute numbers – this better measures the level of risk in relation to exposure. It enables comparisons within the UK and between the UK and other countries or cities; allowing us to set ambitious targets for cycle safety per km or per hour cycled in relation to those in best practice contexts. Currently, a kilometre cycled in the UK is significantly more risky than a kilometre cycled in The Netherlands or Denmark; although the UK does well for motor vehicle safety it does poorly for cyclist safety. Level of risk posed to others per km or per hour travelled is also important; it can identify whether, for example, certain road users pose a disproportionate danger to others, but although it is possible to derive this data it is not routinely published in this form.

Data on the funding of cycling is also inadequate. The Treasury regularly publishes a breakdown of public expenditure on transport by function. This needs to include a category of spending on cycling alongside the existing figures for major roads, local roads, railways and local public transport. Once we raise spending on cycling to a level where we can expect substantial increases in cycling, measuring and evaluating spending becomes a high priority. Where for example two areas spend similar amounts on cycling, but one raises its modal share from 3% to 6% and the other only from 3% to 4%, we can then examine the two cases to see whether one is spending more wisely than the other. A positive side-effect of asking authorities to categorise spending as 'for cycling' might be to improve the quality of infrastructure, through encouraging them to think about what cyclists need in a variety of road contexts. Currently, for example, traffic calming is often not implemented in the most helpful way for cyclists (e.g. not including cycle bypasses beside pinch points).

Some indicators are simply not collected and again the UK lags behind best practice. In The Netherlands, the ‘cycle balance’ indicator offers a sophisticated mix of subjective and objective measurements of cycling environments; this would need some adaptation for a UK context but has proved to be a useful tool for encouraging healthy competition between authorities, identifying local and national strengths and weaknesses. In Copenhagen, authorities collect information on experiences of cycling including subjective safety and perceptions of threats; something else absent from the UK but potentially an excellent complement to existing safety statistics. Such indicators should be developed or adapted for use in a UK context. They could build on existing route network data but will also need to involve the collection of new data (e.g. through on-bike surveying, as used in the Dutch Cycle Balance tool). The ability to collect data online including asking participants to indicate on maps where they cycle, where they have experienced good or bad infrastructure, etc. further provides an opportunity for a step change in data collection.

In sum, data needs substantial improvement outside London and some improvement within London. This will be crucial to secure value for money for increased funding.

5. Principles of cycle-friendly planning and design

Much could be said here, but I wish to identify a central problem with UK cycle planning. This is the tendency to segment cyclists, based on the pessimistic (by comparison to best practice contexts) assumption that new cycling infrastructure can only meet the needs of a minority of types of cyclist. LTN 1/12 states (p. 11):

'4.2 The core design principles are:
• Convenience;
• Accessibility;
• Safety;
• Comfort; and
• Attractiveness.
4.3 These design principles represent the properties desired for a successful scheme.'

I support these principles, which are also enshrined in other countries' manuals for cycle planning. However, the problem in the UK is that in practice we trade off the principles against each other, rather than ensuring that they are all achieved. This is justified through what we might call a Hierarchy of Cyclists, as identified in LTN 2/08 and repeated in LTN 1/12 (pp. 11-12):

'• fast commuter;
• utility cyclist;
• inexperienced and/or leisure cyclist;
• children; and
• users of specialised equipment (e.g. cycle trailers, tricycles, handcycles).
4.5 Their needs, and hence the type of provision required, can vary considerably. For example, **children or inexperienced cyclists might welcome the comfort of offcarriageway provision, while confident commuter cyclists might prefer to use the carriageway to keep journey times to a minimum**.' (my emphasis)

The emphasised extract (DfT 2012a:12) assumes (a) that it is only children and inexperienced cyclists who 'welcome […] comfort' and (b) that off carriageway provision will necessarily be slower than cycling on the road. However, I would disagree with the former based on my research. Many of our interviewees in *Cycling Cultures* were experienced cyclists. Some do indeed currently chose to cycle with motor traffic on busy roads, because alternatives are circuitous, unlit, muddy and/or slow (and because itineraries necessitate speed: many would start their commute by dropping children off at school, leaving limited time to get to work on time).

However, many of this group, which could currently be labelled 'fast commuters', also said explicitly that they preferred lower-traffic or traffic-free routes; it was clear that if they were offered a high quality, direct off carriageway alternative, most

would prefer this. At present, however, they lack this choice and choose the only option that will get them into the office on time. (Arguing that commuting cyclists prefer busy roads is rather like saying that commuting rail passengers prefer to stand or that commuting drivers prefer traffic jams.)

There is no need, in fact, to trade off convenience, accessibility; safety; comfort; and attractiveness. In The Netherlands, a key advantage of cycle tracks is that they can be **faster** than cycling with traffic as well as taking more direct routes: dedicated paths can bypass lights or be given priority, and because tracks do not experience wear from motor traffic, surfaces can be kept very smooth, allowing greater speeds.

The hierarchy of cyclists is also problematic because it requires too much knowledge, discouraging take-up. My research has found that UK cycling conditions require cyclists to exhibit an unusually high level of knowledge and skill, and this is a barrier to the spread of cycling (Aldred and Jungnickel 2012). The hierarchy of cyclists seems to envisage users who know the routes suitable for their category – yet this category may change not just through the life cycle, but from day to day.

Around 14 million UK adults live in a household containing dependent children. If (as we would all like to see) the UK becomes a high-cycling country, many of these adults and children will cycle regularly. The adults cycling alone would often be assumed to be 'fast commuters' or 'utility cyclists'; when cycling with their child or children, they might join the 'children' or 'users of specialist equipment' (i.e. bicycles adapted to carry children) category; when cycling with others new to cycling they would join the 'inexperienced' category. The problem is that people are expected to know about at least two (often fragmented and incomplete) networks – the network that they would use on their own, and the network that they would use when cycling with their children. Indeed, many current cycling parents *do* have to do this – but it is far from ideal and a barrier to mass cycling. (By contrast, *driving* does not require the driver knowing, for example, a 'route without children' and a 'route with children').

As we invest more into cycling, it will be important to instead have default *universal design* standards; the ideal should always be a network of routes that any cyclist will want to use. (The test could be whether a panel including *all* types of cyclist are all happy with a route or piece of infrastructure). Of course, there will be cases where this is not the desirable or possible; for example, in a remote rural area one might want to provide a leisure route that will not be suitable for commuting. However, one should start with the assumption that routes should be usable by all, and then justify deviations from that principle, rather than beginning from the assumption that (LTN 1/02, 2012: 11) that 'the most convenient route might not always be the safest option', which in itself justifies the creation of inferior infrastructure. It is generally better to provide one excellent facility, which satisfies all the principles and is suitable for most users, than to provide several less adequate facilities that each only satisfy one or two principles.

There are encouraging signs in London of a recent shift towards more inclusive design; on 1st December Deputy Mayor for Transport Isabel Dedring was quoted as

saying: “If we want to deliver the aspiration we have of making cycling a mainstream mode of travel then we have got to invest accordingly […] We have seen a very significant increase in cycling and a change in the types of people who are cycling. Therefore we need to see a transformation in terms of the facilities that are being provided.”[i] This approach needs to be supported both in London and elsewhere; as Ms. Dedring argued, providing for mainstream cycling requires a step change in the quality of provision. 70% of women say that the roads are too dangerous for them to cycle on (DfT 2012: 18). If we want mass cycling, we need to design in response to the concerns expressed by women and men (including many who currently cycle: see TfL 2010; Aldred and Jungnickel 2012), rather than assuming that people who dislike cycling around motor traffic do not mind arriving at destinations late or muddy, or having to regularly dismount.

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