

5.12.16

Scottish Parliament Budget 2017-18

Pre-budget call for £20 per person annual cycling investment, and 10% of the transport budget for active travel as a whole

Political commitment leads to funding for cycling leads to provision of better infrastructure leads to increase in the amount and mode share of cycling ... Cycling Scotland International Comparator Study¹

Spokes has submitted pre-budget evidence to the Scottish Parliament's [Rural Economy and Connectivity Committee](#) [RECC] which in the 2016-2021 Parliament has responsibility for transport matters. That evidence is required to be short and concise. This fuller document incorporates that submission [part A below] and then gives much greater detail and supporting references [part B]. The sections in part B largely parallel and expand on the corresponding sections of part A, and are as follows.

1. Existing level of cycle funding
2. Recommended levels of cycle investment
3. Cycling targets in Scotland
4. Benefits of modal shift from car to cycling for local journeys
5. Road and cycling casualties
6. How cycling investment levels, and the transport budget, are currently decided
7. The Parliamentary Committee responsible for transport, and 17/18 budget recommendations

A. Pre-budget Spokes submission to Scottish Parliament RECC, 1.12.16

Whilst the Committee this year is specifically scrutinising Broadband and Forestry, it is vital also to keep track of active travel issues, which contribute to a wide range of Government objectives on climate, transport, congestion, air quality, public health, jobs and inequalities. **For such reasons, the government has a supremely ambitious aim for 10% of all trips to be by bike by 2020.** We no longer believe this possible by 2020, but policy and funding must be beefed up to meet it at the earliest possible date - hence this submission.

We have kept this document brief and without references, but a more detailed and fully referenced paper is available on request.

1. Existing level of cycle funding

- Annual Scottish Government active travel funding in 16/17 is £39m, just £7.25 per person, of which we estimate that some £4.50 goes to cycling.
- Additionally (i.e. excluding government contributions) local authorities invest roughly £1.50 per person in cycling so total annual public sector cycling investment is some £6 per person.
- In comparison, the government is this year spending £153 per person on motorways and trunk roads.

2. Recommended levels of cycle investment

- A wide range of professional, academic and voluntary bodies from the worlds of public health, transport and elsewhere, urge that £20 per person is invested annually in cycling (or that 10% of transport budgets should be allocated to active travel as a whole). £20 per person in Scotland represents £100m, or roughly 5% of the Scottish transport budget. Copenhagen and the Netherlands consistently invest at similar levels to achieve their high levels of everyday cycle use.

3. Cycling targets in Scotland

- The relatively low level of cycling investment seen in recent years means that the government's ambition of 10% of all trips by bike cannot now be reached by 2020. This is clear from SPICe Bulletin 16/33 and other documents.
- Any cycle-use target, if it is to be achievable, must be set in association with an expected level of investment. Evidence from the English Cycle Demonstration towns suggests that a tough but realistic target *based on £20 per person cycling investment starting in 2017* would be to achieve 10% of all trips by bike in 2027, or a more rounded target of 15% of all trips by bike in 2030.

4. Benefits of modal shift from car to cycling for local journeys

- The benefits of cycling for everyday local travel are well known in terms of congestion, air quality, climate emissions, public health and more. We are happy to provide references.
- Specifically, increased cycle use contributes to the Government's *National Performance Framework* indicators, including...
 - Increase the proportion of journeys to work by public or active travel
 - Reduce Scotland's carbon footprint
 - Reduce traffic congestion

5. Road and cycling casualties

- The health benefits of cycling in terms of extended healthy life outweigh road injury dangers by about 20-1. Nonetheless, road casualties, and fear of road danger, remain hugely concerning.
- During the last 10 years (2006-2015) cyclist injuries in Scotland rose slightly, whilst all other road user categories fell by 30%-40% [Car occupants 10,705->6,712; Motorcyclists 1068->734; Pedestrians 2853->1694; Cyclists 781->794]. The KSI (killed and seriously injured) figures are even worse, with cycling KSIs up 20% from 141 to 169. The need to tackle cycle casualty rates is therefore very obvious.
- The most effective way to reduce cycle casualty rates (and the fear of cycling) is by investment in safe infrastructure. Analysis of a wide range of US cities found that, very roughly, a 100% increase in the size of a cycle network resulted in a 200% rise in cycle use and a 70% cut in the rate of KSIs.

6. Role of the Parliamentary Committees responsible for transport

- We believe that cycling investment, and the share of the transport budget allocated to cycling, are not currently assessed in a sufficiently objective evidence-based fashion by the government in drawing up the budget.
- The Parliamentary Committees responsible for transport have year after year strongly advocated increased active travel investment – for example recommending that “*substantial additional funding should be considered*” in the draft 15/16 budget. Yet only in 14/15 did this happen, and even then rising from just 0.9% of transport spending to still only 1.9%.

7. Recommendations for the Committee in considering the 17/18 draft budget

- **Active travel investment should rise** each year of this Parliament, reaching 10% of transport spending by the end of the Parliament, with at least half of this invested in cycling - primarily in high quality cycling infrastructure.
- **The entire transport budget should be reassessed** and its various elements re-prioritised in relation to their impacts, positive and negative, on all relevant government objectives - including not just transport and congestion, but also public health, toxic and climate emissions, jobs and equalities.

B. Detailed background to the Spokes RECC pre-budget submission

1. Existing level of cycle funding

The level of Scottish Government cycling investment is opaque...

1.1 Active Travel investment [i.e. primarily walking and cycling]

- Recent budgets have included 3 budget lines^a which together make up the bulk of government active travel investment – CWSS (Cycling, Walking and Safer Streets), SAT (Sustainable and Active Travel) and FTF (Future Transport Fund).
- Each of these 3 budget lines contributes to walking and cycling and each also contributes to one or more other purposes such as 'safer streets', public transport, low-carbon vehicles, behaviour change away from single-occupant car use, and so on. There is very little transparency as to how much of each source is to be allocated to each purpose. This lack of transparency has often been highlighted, not least by the Parliamentary Committees responsible for transport in their budget scrutiny reports.
- As a result, the 16/17 budget document included [p130] an explanatory sentence stating that “funding for *active travel* ... will total approximately £39m in 2016-17.” This £39m comprises the whole of CWSS plus unspecified portions of SAT^b and FTF.
- The figure of £39m for active travel is certainly very approximate. For example some CWSS money goes to “safer streets” traffic management, rather than clear cyclist or pedestrian benefit; whilst on the other hand a small portion of the trunk roads budget^c (i.e. not part of the £39m) goes to cycle facilities. Overall, it seems reasonable to take the £39m as a rough estimate of total government active travel investment in 16/17. £39m represents £7.25 per head of population, based on 5.375m population.
- This compares with £153 per person on motorways and trunk roads (based on the £820m figure in the 16/17 budget document).
- Historically, dedicated Scottish cycling and walking investment only really began in 2003/04². For years it then sat somewhat below 1% of the £2bn+ Scottish transport budget. In 2014/15 it was roughly doubled, to 1.9%, where it remains in 2016/17.

1.2 Cycling-only investment

- An estimate solely of cycling investment is vital, for two reasons. First, because the numeric 'vision' of the government and of the SNP manifesto [section 3 below] relates to levels of cycle use only, not active travel as a whole. Second, because comparative investment data, such as from other countries or from the former English Cycle Demonstration Towns, usually relates to cycling only.
- Disentangling cycling investment from 'active travel' is difficult and indeed not always possible, so an element of guesstimation is unavoidable. To take an obvious example, a shared facility such as a toucan crossing or shared path has a single cost but benefits both types of user.
- Local authority cycle funding surveys by Spokes in previous years suggested that some 55% of CWSS money went to cycle-only or joint cycle-walk projects, so it would be reasonable to count around 50% of CWSS as cycling investment. The proportions of the SAT and FTF active travel cash attributable to cycling are even less certain, but may be higher.
- Overall, given the above, and with an AT total of approximately £7.25 per head, it seems reasonable to conclude that government cycling investment in Scotland is probably between £3.50 and £5.50 per head. For the purposes of this paper we will assume it is £4.50 per head (just over 60% of the AT total).

a Funding could be simplified and made somewhat less opaque by combining SAT and FTF, though there are good reasons for keeping CWSS as a separate budget line.

b Amongst the elements of SAT which are *not* counted in the £39m is the £5m which goes to 'Smarter Choices' – i.e. encouraging people to move from single-occupancy car to walk, cycle, car-share, public transport, etc.

c The portion of the trunk road budget used for cycling facilities is unknown and is likely to vary significantly from year to year. However, there is some evidence that a useful estimated average would be £2m per year.

- Additionally local authorities and RTPs invest their own funds in cycling and raise additional funds from outside bodies such as Europe. The former annual Spokes funding survey consistently showed that these sources totalled around £8m per year, or around £1.50 per head^d.
- Thus total *cycling* investment in Scotland (as opposed to active travel investment) per head of population is in the order of £4.50 (government) + £1.50 (local government), i.e. £6. Although £6 is clearly only a ballpark estimate, we point out that there is *no government estimate*. Furthermore, we show below that £6, or indeed any figure between say £4-£8, is way too low to achieve the government's cycle use vision in any reasonable timescale, if at all.

2. Recommended levels of cycle investment

- The Scottish Government has allocated just under 2% of its transport budget to AT for the last 3 years (1.1 above), only part of which is cycling investment (1.2). Local authorities are a very mixed picture, with some investing zero of their own capital in cycling in some years, whilst Edinburgh City Council³ has increased its percentage from 5% of its transport budget (capital and revenue) to 9%, rising annually by 1%, with 10% expected in 17/18 – a guaranteed % thought to be unique in the UK and widely praised, from the Scottish Parliament to the London Assembly.
- There have been widespread and long-standing calls for **10% of all transport budgets to be invested in active travel, with the expectation that at least half of that would be cycling investment**. 5% of the £2bn Scottish Transport budget represents **£100m, or £20 per person in Scotland**.
- As long ago as 2009 the [Association of Directors of Public Health](#) recommended the 10% AT figure in their report *Action on Active Travel*⁴. The report was subsequently endorsed by *over 100* transport, medical and other professional, expert and interested bodies⁵, ranging from the Institute of Highway Engineers to the British Heart Foundation.
- A comprehensive 2013 inquiry report, *Get Britain Cycling*⁶, by the UK [All-Party Parliamentary Cycling Group](#), recommended a government cycling budget of “*at least £10 per person per year, rising to £20.*” In Scottish terms, £20 per person per year represents 5% of the transport budget [note that this is for *cycling alone*, not AT, and so corresponds to the ADPH recommendation above].
- Within Scotland there were calls for the 10% in *Active Travel, Active Scotland*⁷, from 5 national bodies in 2012 and [again in 2016](#) from the more broadly-based [WalkCycleVote coalition](#) of over 30 organisations.
- For developing countries the [United Nations Environment Programme](#) recommends⁸ investing 20% of transport budgets in active travel – the 10% UK recommendations above are very modest in comparison!

3. Cycling targets and visions in Scotland

3.1 The vision

- The government could not be clearer or more consistent than in its continuing reaffirmation of its 'vision' (often also referred to by Ministers as a 'target') that 10% of all trips are by bike in 2020. In 2013 the then Deputy First Minister **Nicola Sturgeon MSP** stated⁹ with great firmness “*we are committed to the 10 per cent target ... targets are not easy to meet or there would be no point in setting them, but we have commitment and determination.*”
- The SNP manifesto¹⁰ for the May 2016 Holyrood election stated, “*We are **determined** to meet our vision of 10 per cent of everyday journeys being made by bike by 2020.*”
- As recently as 26.10.16 Transport Minister Humza Yousaf confirmed to Parliament's Rural Economy and Connectivity Committee¹¹ [11.45] “*our vision ... for 10 per cent of journeys to be by bicycle by 2020.*”

^d Obviously, to avoid double counting, this excludes government cash spent by councils, such as from CWSS and Sustrans.

3.2 Can the 2020 vision be achieved?

- The evidence is clear that without really rapid, drastic and (at present) politically impossible measures (such as, perhaps, a hefty charge to drive in all urban centres) there is no chance of even approaching 10% of all trips by bike by 2020. Whilst substantially higher cycling investment is desperately needed, planning of facilities, design and construction all take time – they will not be widespread by 2020 - and we are already entering 2017. Nor will encouragement alone be sufficient to get large increases in the numbers of people cycling for everyday trips – the evidence is clear that for large increases in everyday cycle use people need to feel that it is safe to cycle.
- Despite the political promises and 'determination' in 3.1 above, those bodies that have studied the *evidence* have recognised for some time that 10% will not be reached by 2020. Back in 2012 Spokes calculated¹² that £20 investment per person per year from 2013 might, on very optimistic assumptions, just achieve the 2020 vision. Even that calculation was over-generous^e, but in any case there was no such investment. Now SPICe Bulletin 16/33¹³ (May 2016) has said, “*it seems clear that the vision of 10% of everyday trips in Scotland being made by bike by 2020 will not be met.*” Cycling Scotland's Second CAPS Progress Report¹⁴ (June 2016) states that 10% by 2020 would require “*a modal shift to cycling at a speed not seen in evidence in any other country.*”
- **The ambition of 10% of trips by bike, or some such target, remains vital, albeit that is still well below some other European countries, and cannot be achieved by 2020. A bold target should be retained (for many reasons, as in sections 4 and 5 below), but with evidence-based and funded policies to achieve it by as early a date as is feasible.**

3.3 An evidence-based cycle-use target, assuming £20 pp pa investment

- According to the Scottish Household survey¹⁵ cycling made up 1.4% of all trips in 2014; a low figure in European terms but the highest in Scotland for many years. Whilst the 2015 figure fell to 1.2% that change is within the margin of error, so let us optimistically assume the current figure is 1.4%.
- Data from the English Cycle Demonstration Towns^{16,17} suggested that *investment of £10 per person per year can increase cycle use by 27% over 3 years, when starting from a fairly low base* – so let us optimistically assume that £10 pppa cycle investment could bring about a 10% annual rise in cycle use. If we also assume that doubling the investment would double the achievement, then investing £20 per person per year (as widely recommended, 2 above) could, optimistically, raise cycle use by 20% a year.
- Based on the above, investing £20 per person per year could raise cycle use from 1.4% of all trips to around 10% of all trips in 10-11 years (using the formula for compound increases) or to 15% in 13 years.
- **Thus assuming £20 cycling investment per person per year, starting in 2017, a realistic though very ambitious evidence-based target would be 10% of all trips by bike by the year 2027, or the round figure of 15% of all trips by bike by year 2030.**
- European cities and countries with high levels of cycle use invest at this level - for example Copenhagen City and the whole of the Netherlands (averaged across all transport authorities) invest around £20 per person per year¹⁸. This suggests that the above calculations are in the right order of magnitude.
- **In addition to a national evidence-based target, local targets should make up this national target.** Local targets have to differ, since local authorities vary substantially in their existing levels of cycle use, their potential for increasing cycle use (for example, what proportion of trips are within easily cycleable distance – or could be made so through improved spatial planning), their population density (since £1 invested in cycle infrastructure is likely to impact on many more people in a city than in the countryside) and their commitment to rapid modal shift towards cycling. This can be seen in Europe where some towns, such as Seville¹⁹ in Spain, have raised cycle use rates at well over average rates of progress.
- Finally, extrapolating again from the English Cycle Demonstration Towns, present levels of cycling investment (around £6 per person per year) might raise cycle use by 6% a year, in which case it would take 35 years to reach 10% of all trips being by bike, and therefore 2050 would be a more realistic hope than the government's present 'vision' of 2020!!

e We cannot find the reference used in that previous calculation, and it now appears over-optimistic even back then

3.4 Car-use reduction

- For the sake of completeness we add that the carrot of increasing cycling investment has to be accompanied by measures to encourage modal shift away from cars. For example, Copenhagen gradually reduced car parking spaces in parallel with improved cycle facilities, whilst some towns in the Netherlands use road closures to make it impossible to rat-run through wide areas of the town centre and residential areas, whilst making them extensively permeable to cycling.
- Edinburgh Council has long-standing and tough targets to reduce car use both for commuting and for all trips, and (unique in Scotland) the figures are moving in the right direction as shown by the Census²⁰ and by our own traffic counts²¹ - so this is possible in the UK.
- Possible measures include charging providers of large parking areas [including workplaces, superstores, leisure centres etc] for the number of spaces over a certain low minimum; road restrictions; heavily incentivised car club and trip share initiatives; reduced on-street parking provision and/or higher parking charges; air quality zones; congestion charging and many more options.

4. Benefits of modal shift from car to cycling for local journeys

- It is widely known and accepted that investment in cycling has a great variety of benefits, not just for transport and congestion, but also **climate emissions, air quality, population health, inequalities** and more. Furthermore, car use contributes negatively to those problems, including through carbon and toxic emissions and sedentary travel. Rather than repeating the evidence here, we refer to...
 - the detailed and extensively referenced letter²² sent recently to Derek Mackay MSP, the Cabinet Secretary for Finance and the Constitution, by a group of health and transport bodies
 - evidence described and referenced on the *WalkCycleVote* website²³
 - our letter²⁴ to the First Minister about her announcement of a Capital Investment Boost after the Brexit vote [see page 2 of our letter].
- Specifically, increased cycle use contributes to several of the Government's *National Performance Framework* indicators. Our submission²⁵ on the 15/16 budget discussed in detail these indicators...
 - Increase the proportion of journeys to work by public or active travel
 - Reduce Scotland's carbon footprint
 - Reduce traffic congestion

5. Cycling casualties

- The health benefits of cycling²⁶ in terms of extended healthy life outweigh road injury dangers by a figure often estimated as 20-1. People who cycle regularly in mid-adulthood typically enjoy a level of fitness equivalent to someone 10 years younger and their life expectancy is two years above average. Regular cycle commuters on average take more than one day per year less off sick than colleagues who do not cycle to work, saving UK businesses around £83m annually.
- Nonetheless, road casualties, and fear of road danger, remain hugely concerning, not least because they suppress cycle use and therefore pre-empt the above public health opportunities.
- The table below, extracted from *Reported Road Casualties Scotland 2015*²⁷ [table 23], covers the 10 years 2006 to 2015. It shows that, over that period, cyclist injuries in Scotland rose slightly, whilst all other road user category injuries fell by 30%-40%. The cycling KSI (killed and seriously injured) figures are even worse, up 20% from 141 people to 169.

	All severity injuries			KSI (killed & seriously injured)		
	2006	2015	% change	2006	2015	% change
Cyclists	781	794	2%	141	169	20%
Pedestrians	2853	1694	-41%	749	465	-38%
Motorcyclists	1068	734	-31%	410	284	-31%
Car occupants	10705	6712	-37%	1433	714	-50%

- Clearly these figures do not include exposure – cycle use has risen by about 30% whilst other categories have been more static - but the need to tackle cycle casualty rates is nonetheless very obvious. Cycling has now overtaking motorcycling in terms of total injuries, and cyclist KSIs have risen from 10% of car occupant KSIs to 24%. Cyclists are contributing a growing percentage of Scotland's total casualties and are therefore impacting more strongly on the ability to meet absolute casualty reduction targets.
- Extensive and cross-national research is clear that the most effective way to reduce cycle casualty rates is by infrastructure investment – and that this also reduces the fear of traffic and raises cycle use rates. The effect is strongest with protected cyclist routes, though not limited to that. Some of the most thorough research has been done by Pucher and Buehler, ranging from their 2008 *Making Cycling Irresistible*²⁸ to a December 2016 article²⁹ in the *American Journal of Public Health*. The latter paper analysed data from a range of US cities and suggests that, very roughly, a 100% increase in the size of a cycle network resulted in a 200% rise in cycle use and a 70% cut in the rate of KSIs. The table below is an extract.

City	Years	Growth in cycle network	Growth in bike trips	Change in KSIs per 100,000 trips
Portland	2000-2015	53%	391%	-72%
Washington	2000-2015	101%	384%	-50%
New York	2000-2015	381%	207%	-72%
Minneapolis	2000-2015	113%	203%	-79%
Chicago	2005-2015	135%	167%	-60%
Seattle	2005-2015	236%	123%	-53%
Los Angeles	2005-2015	130%	114%	-43%

6. How cycling investment levels, and the transport budget, are currently decided

- The Scottish Government, despite many requests, has never provided an evidence-based and costed programme for how the 2020 vision of 10% of trips by bike would be met.
- The Government regularly criticises the suggestion that a % of the transport budget should be allocated to cycling investment, on the grounds that this is arbitrary rather than determined through any objective means or through analysis of transport needs and priorities. This is an implicit criticism of Edinburgh City Council, who have adopted a % policy, and of the very many esteemed organisations such as the Association of Directors of Public Health who have recommended it.
- We could understand the argument of a cycle percentage being illogical if it was plucked out of the air. However it is the Government's current cycling investment level (at 1.9% of the transport budget) which is not evidence-based - and as a result is too low to reach the 2020 cycle-use ambition, as we have shown. In contrast, we have shown evidence that to achieve 10% cycling levels in a realistic time period requires of the order of £20 per person per year cycling investment. This represents £100m a year in Scotland, or 5% of the transport budget for cycling alone. If other aspects of active travel, primarily walking, are allocated similar funding, we reach the widely recommended 10% of the budget (section 2 above).

- As well as no evidence base for current cycling investment levels, neither is there clarity about the prioritisation method^f used in deciding the wider make-up of the transport budget. Indeed it appears that the budget is decided by tweaking the previous year's budget rather than through any prioritisation process. Cycling projects, in addition to their transport benefits, score well on health, climate, toxic emissions and jobs per £1 invested - yet there seems to be no analysis of the comparative benefits of this and other elements of transport spending. Similarly, road maintenance is something of a Cinderella – particularly for squeezed local authority budgets, but even within the trunk roads budget³⁰.
- **We suggest that, in constructing its transport budget, the government should assess how its transport aims (including 10% of trips to be by bike) relate to health, environment, economic and other objectives - and decide the overall make-up of the transport budget in that context.** We believe that such an assessment might well justify 10% of the budget going to active travel (with at least 5% for cycling investment). It might also bring higher priority for local transport³¹ of all types and for road maintenance³² - whilst slowing the costly continuing year-on-year expansion of trunk road capacity.

7. Role of the Parliamentary Committees responsible for transport

7.1 Committee scrutiny of Scottish Budgets with regard to active travel and transport more widely

- For many years the Parliamentary Committees responsible for transport have firmly recommended increased investment^{33,34} in cycling, and more widely in active travel – for example recommending that “*substantial additional funding should be considered*” in the draft 15/16 budget. Yet only in one year (14/15) did this happen, and even then rising from just 0.9% of transport spending to still only 1.9%.
- A major explanation for this has been that the Committee never had the courage to state *from where within transport this rise should come*. As a result the Finance Secretary and Finance Committee were unwilling to consider the recommendation, and have on more than one occasion made clear that this was the reason. This unfortunate outcome reinforces our point (6 above) that the way in which the transport budget as a whole is constructed should be made more objective and transparent.
- In the new Parliament, the Committee structure has been revised, such that there is no longer an Infrastructure or Transport Committee, with transport of all types now falling under the *Rural Economy and Connectivity Committee*. Clearly this Committee has an extremely wide remit, given the importance to Scotland of the rural economy, and its problems; so we are concerned that transport, particularly within towns and cities, will not be able to receive the attention it needs and saw in previous parliaments.

7.2 Recommendations for the Committee in considering the 17/18 draft budget

- **Active travel investment should rise** each year of this Parliament, reaching 10% of transport spending by the end of the Parliament, with at least half of this invested in cycling - primarily in high quality cycling infrastructure.
- **The entire transport budget should be reassessed** and its various elements re-prioritised in relation to their impacts, positive and negative, on all relevant government objectives - including not just transport and congestion, but also public health, toxic and climate emissions, jobs and equalities.

^f Spokes has recently written to the Transport Minister asking how this prioritisation is done.

1 <http://www.cyclingscotland.org/wp-content/uploads/2016/01/2015-12-27-Cycling-Scotland-Comparator-Study-WEB.pdf>
2 <http://www.spokes.org.uk/2015/02/scottish-government-cycling-cash-2001-2015/>
3 <http://www.spokes.org.uk/2015/06/spokes-bulletin-122-edinburgh-tops-uk-with-10-cash-promise/>
4 http://www.adph.org.uk/wp-content/uploads/2013/08/Take_action_on_active_travel_20104.pdf
5 http://www.adph.org.uk/wp-content/uploads/2013/08/Take_Action_on_Active_Travel_sigs_June_20101.pdf
6 <https://allpartycycling.files.wordpress.com/2013/04/get-britain-cycling1.pdf>
7 <http://www.cyclingscotland.org/wp-content/uploads/2012/06/Active-Travel-Active-Scotland-full-report.pdf>
8 <http://www.spokes.org.uk/wp-content/uploads/2010/04/1610-UNEP-20-of-budgets-globalOutlookOnWalkingAndCycling.pdf>
9 <http://www.spokes.org.uk/2013/02/1-by-2020-vision-or-target/>
10 <http://www.spokes.org.uk/2016/03/holyrood-election-5-may-2016/#Manifestos>
11 <http://www.parliament.scot/parliamentarybusiness/report.aspx?r=10590&i=97431&c=1942089>
12 <http://www.spokes.org.uk/wp-content/uploads/2012/09/1209-ICI-Cttee-Spokes-submission.pdf>
13 <http://www.parliament.scot/parliamentarybusiness/99386.aspx>
14 <http://www.cyclingscotland.org/wp-content/uploads/2013/10/Second-CAPS-Progress-Report-2016-V2.0.pdf>
15 <http://www.transport.gov.scot/report/j450918-09.htm#TSum1>
16 http://webarchive.nationalarchives.gov.uk/20110407094607/http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2010/05/making_a_cycling_town_qualitative_report1.pdf
17 <http://webarchive.nationalarchives.gov.uk/20110407094607/http://www.dft.gov.uk/cyclingengland/cycling-cities-towns/results/>
18 <http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2015/regdev/2315.pdf>
19 <https://www.wired.com/2015/06/copenhagenize-worlds-most-bike-friendly-cities/>
20 <http://www.spokes.org.uk/documents/technical-and-research/census-data/>
21 <http://www.spokes.org.uk/2016/11/traffic-count-highest-ever-november-bike/>
22 <http://www.spokes.org.uk/wp-content/uploads/2015/04/1609-Emilia-LETTER-FINAL-active-travel-investment.pdf>
23 <http://walkcyclevote.scot/why/>
24 <http://www.spokes.org.uk/wp-content/uploads/2015/04/1608-Letter-to-N-Sturgeon.pdf>
25 <http://www.spokes.org.uk/wp-content/uploads/2012/09/1410-Spokes-SP-ICI-14-15-Budget-submission.pdf>
26 <http://www.cyclinguk.org/campaigning/views-and-briefings/health-and-cycling>
27 <http://www.transport.gov.scot/report/j452722-36.htm>
28 <http://www.spokes.org.uk/wp-content/uploads/2010/04/0711-Pucher-Irresistible.pdf>
29 <http://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2016.303507>
30 <http://www.pressreader.com/uk/the-herald/20161117/281758448875131>
31 <http://transformscotland.org.uk/wp/wp-content/uploads/2016/01/What-We-Want-For-Scottish-Transport.pdf>
32 <http://transformscotland.org.uk/what-we-do/campaigns/fix-it-first/>
33 Former TICC cttee
<http://www.parliament.scot/parliamentarybusiness/CurrentCommittees/85439.aspx>
34 <http://www.scottish.parliament.uk/parliamentarybusiness/CurrentCommittees/45089.aspx#anni>