Cycling Scotland

National Transport Strategy – Early Engagement Survey

Question 1 – Have you used, or referred to, the 2006 National Transport Survey (NTS)?

Yes

The National Transport Strategy (NTS) is, and continues to be, of importance to our work. The NTS informs our approach to advocating for cycling and active travel provision as part of a sustainable and integrated transport system.

Question 2 – The current strategy sets out three key strategic outcomes of improved journey times and connections, reduced emissions, and improved quality, accessibility and affordability. Do you think each of these will still be relevant over the next 20 years?

The three key strategic outcomes outlined in the strategy will continue to be relevant over the coming decades. However, reduced emissions, and improved quality, accessibility and affordability will be of particular relevance. Currently, undue weight is placed on improved journey times, with more sustainable options negatively impacted. Connectively remains important and in some instances a focus on improving journey times is also important, with regards to trains for example, but where sought, and in turn where it has a determinantal impact on sustainable and active travel, and has safety and environmental impacts, improved journey times shouldn't be a priority.

Reduced emissions:
Although the Scottish Government has met their overall target to reduce carbon emissions by 42% by 2020 six years early, there is still some way to go. Emissions from transport are still an acknowledged concern. Transport accounts for 28% of total carbon emissions, with the current level only a marginal decline from the 1990 baseline. Roads (cars, vans and motorcycles) are the single biggest contributor to emissions at 73%, an increase from the 1990 baseline, and demand for road use by vehicles has increased by 22%[1].

Scotland continues to face a significant challenge in terms of vehicle carbon emissions and there is a clear need to address these both as a significant contributor to climate change and as a public health issue. A recent survey shows that there are now 38 pollution zones in Scotland, where air quality standards are regularly broken and levels of pollution from emissions are considered unsafe and illegal. Five of these zones were announced in 2016. Vehicle emissions are also associated with a range of health conditions including cancer, heart attacks, breathing difficulties, and strokes. The research reported that this air pollution is estimated to cause 2,500 early deaths each year and is second only to smoking in terms of its mortality impacts[2]. Scotland and the UK are currently in breach of EU air quality regulations.

The focus of the transport section in the recently published Draft Climate Change Plan appears to be on de-carbonising cars and other light vehicles through technology and fuel efficiency improvements which cannot be guaranteed or to deliver the pace of change required, which impacts significantly on the rate of emissions reduction. Recent research commissioned by Transport Scotland on greenhouse gas emissions reduction potential for Scotland shows that, although light vehicles (cars, vans and motorcycles) deliver the highest emissions reduction potential both in absolute terms and as a proportion of current emissions, increases in demand for such vehicles are likely to offset the

[1] Scottish Government (2017) Draft Climate Change Plan: The draft third report on policies and proposals 2017-2032 http://www.gov.scot/Resource/0051/00513102.pdf
[2] http://www.foe-scotland.org.uk/most-polluted-streets

emissions reduction impact of energy efficiency and technology improvements in these vehicles[3]. Currently, more than 99% of vehicles on the road in Scotland are either petrol or diesel. The rate of uptake of electric and hybrid vehicles did increase between 2014 and 2015, but these vehicles still account for less than 1% of vehicle share[4]. Increasing active travel and reducing car use helps cut vehicle emissions much more than a shift to other forms of individual motorised vehicle, such as electric cars, can achieve alone[5].

Cycling has a key role to play both in contributing to reduced carbon emissions and in reducing demand growth for light vehicles. Cycling is a viable and cost-effective way to reduce carbon emissions, as a zero-carbon option, to help move Scotland towards a carbon-neutral economy, and this should be emphasised in the National Transport Strategy. Encouraging more Scots to use a bike instead of a car for short trips can significantly reduce the huge contribution road transport makes to CO_2 emissions. 65.4% of car journeys are less than 5 km[6] [7], offering the greatest possibility to switch to cycling. Short motor vehicle journeys also make a disproportionate contribution to overall air pollution levels[8]. A switch from carbon-intensive, motorised transport to cycling (and walking) makes a positive contribution to lowering carbon and other greenhouse gas emissions and therefore positively contributes to conserving and enhancing biodiversity and the natural environment, and does not rely on technological innovation which may not deliver at all or at the pace expected and/or required. A shift to cycling also reduces congestion which will further reduce emissions.

The Rural Economy and Connectivity Committee in the Scottish Parliament, following their evidence gathering sessions on the Draft Climate Change Plan, reported that active travel has an important role to play in reducing carbon emissions, especially where it replaces car use[9]. We would like to see this emphasised in the National Transport Strategy and echo the call of the Committee for the Scottish Government to outline how it intends to meet its active travel modal shift commitments, and in particular with regards to 10% of everyday journeys to be cycle journeys by 2020.

Improved quality, accessibility and affordability:
Improving the quality, accessibility and affordability of transport is of fundamental importance for ensuring Scotland has a sustainable and efficient transport system for the next 20 years.

In terms of cycling, easy access to bikes, which are affordable, and safe infrastructure to support cycling is vitally important. Going forward, greater emphasis should be placed on investment to

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[3] Element Energy on behalf of Transport Scotland (2017) Greenhouse Gas Emissions Reduction Potential in the Scottish Transport Sector from Recent Advances in Transport Fuels and Fuel Technologies http://www.transport.gov.scot/system/files/documents/reports/j202258.pdf, pages 35 & 36

[4] Transport Scotland (2017) Scottish Transport Statistics 2016 edition http://www.transport.gov.scot/sites/default/files/documents/rrd_reports/uploaded_reports/SCT01171871341/SCT01171871341.pdf

[5] Murie, J (2017) Active travel in Glasgow: what we've learned so far. A Glasgow Centre for Population Health (GCPH) report http://www.gcph.co.uk/assets/0000/6007/Active_travel_synthesis_final.pdf, page 11

[6] Transport Scotland (2016) Travel and Transport in Scotland 2015, page 61 http://www.transport.gov.scot/sites/default/files/documents/rrd_reports/uploaded_reports/j450918/j450918.pdf

[7] Car journey includes both driver car and passenger car journeys

[8] Murie, J (2017) Active travel in Glasgow: what we've learned so far. A Glasgow Centre for Population Health (GCPH) report http://www.gcph.co.uk/assets/0000/6007/Active_travel_synthesis_final.pdf, page 10

[9] Scottish Parliament (2017) Rural Economy and Connectivity Committee report on the Draft Climate Change Plan – the draft Third Report on Proposals and Policies 2017-2032 https://sp-bpr-en-prod-cdnep.azureedge.net/published/REC/2017/3/10/Report-on-the-Draft-Climate-Change-Plan--the-draft-Third-Report-on-Policies-and-Proposals-2017-2032/5th%20Report,%202017.pdf

ensure there is safe, usable and accessible cycling infrastructure, such as segregated cycle lanes and cycle parking, to enable anyone, anywhere to cycle.

Question 3 – If there was one thing that needs to change substantially now in transport, what would that be?

The one thing which needs to change substantially now in transport is to change the current focus away from cars (and other light motorised vehicles) as the default option, and instead re-focus on cycling and active travel as a real and positive alternative, particularly for short journeys (of which 61.1% of journeys in Scotland are under are under 5km[10]. For example, in Minnesota in the US, planning now presumes in favour of the bicycle, with the economic, tourism, and health benefits to the population emphasised[11]. The findings of the research show that the benefits of investing in cycling infrastructure outweigh the costs.

An increased focus on cycling (and active travel) is a critical driver of the National Performance Framework and for delivering on several indicators outlined in the Framework, including to reduce traffic congestion, reduce Scotland's carbon footprint, increase the proportion of journeys to work made by public or active transport, and improve access to local greenspace[12]. In our response to the recent consultation on the National Performance Framework, we emphasised the importance of continuing to monitor these indicators and argued that active travel makes a significant and positive contribution to improving lives in Scotland, a key aim of the Framework.

Continued expansion of road infrastructure encourages more car use and increases rates of car ownership. This has been seen in the recent M74 improvement works where the increased volume of traffic on the road was from new journeys[13]. Further, evidence suggests that vehicles on the road prevent a 'natural' volume of cycling (and walking) activity from occurring in urban areas, where 'natural' means the volume of cycling (and walking) which would take place if people were able to choose the mode of transport they use based on their preferences, where vehicle traffic did not cause them insecurity and pose other barriers[14]. The latest statistics in Scotland show this to be the case. Car use continues to dominate, accounting for 84% of licenced vehicles on Scotland's roads in 2015[15], with numbers expected to rise further in the coming years. Cars also accounted for 64% of all journeys and 74% of total distance travelled (for personal travel)[16]. Rates of cycling, on the other hand, are stagnating. The latest Annual Cycling Monitoring report shows that cycling was reported as the main mode of transport in 1.2% of journeys in 2015. This is down from 1.4% in 2014 and the same as in 2013[17]. We support the CAPS vision of 10% of everyday journeys to be cycle journeys by 2020. This vision should be maintained and re-emphasised, with investment in cycling and active travel prioritised. Evidence from many European countries in the International Comparator study

[10] Cycling Scotland (2017) Annual Cycling Monitoring Report 2017 http://www.cyclingscotland.org/wp-content/uploads/2015/03/3191-Annual-Monitoring-Report-2017-v1.1-SP.pdf
[11] http://www.startribune.com/cycling-in-minnesota-creates-thousands-of-jobs-and-cuts-health-care-spending-state-report-concludes/417240963/
[12] Scottish Government (2016) The National Performance Framework http://www.gov.scot/Resource/0049/00497339.pdf
[13] http://www.gcph.co.uk/assets/0000/6101/Jill_Muirie_Active_Travel.pdf
[14] Saelensminde, K (2004) Cost-benefit analysis of walking and cycling track networks taking into account insecurity, health effects and external costs of motorised traffic, *Transportation Research* Part A 38:593-606
[15] Transport Scotland (2017) Scottish Transport Statistics 2016 edition http://www.transport.gov.scot/sites/default/files/documents/rrd_reports/uploaded_reports/SCT01171871341/SCT01171871341.pdf, page 33
[16] Ibid, page 181
[17] Cycling Scotland (2017) Annual Cycling Monitoring Report 2017 http://www.cyclingscotland.org/wp-content/uploads/2015/03/3191-Annual-Monitoring-Report-2017-v1.1-SP.pdf

highlights that reductions in car use are necessary to increase cycling, and that this can be achieved through greater prioritisation of cycling, rather than car (road) infrastructure[18].

In addition to the environmental benefits outlined above, cycling offers a range of a co-benefits. Cycling helps promote an active lifestyle, which can lead to a reduction in risk factors for 'inactivity' diseases and result in lower health care costs. Increased physical activity also fosters a greater sense of physical and mental wellbeing. Further, there are strong economic benefits for places and spaces which encourage, promote and facilitate cycling, including increased retail activity, higher house prices, and greater productivity. Cycling is good for business. It creates greater footfall which is associated with an increase in trade[19]. There are also a clear range of benefits to children and young people from participating in cycling and active travel. As well as the obvious health benefits, the social interaction skills of children improve. Further, children who travel actively to school are better and more confident learners, and are likely to be more active later in life [20]. Embedding cycling and active travel as part of everyday life is crucially important and can increase physical activity levels amongst children and young people, helping to improve their mental health and wellbeing. It reduces car congestion in local communities, improves air quality and makes the journey to school a pleasant part of the day-to-day routine.

Cycling can also help to address inequalities. The present transport system currently places an unequal burden on those in the most deprived communities, and there is a risk that growth in car ownership further isolates those without access to a car, or forces car use on low income households who can find themselves without any viable means of travelling around their local area and to their place of work for example. In many areas of Scotland, particularly in cities like Glasgow and Dundee, around 50% of households do not own a car, and in Scotland as a whole, around a third of households do not own a car. This is patterned by deprivation, with the most deprived least likely to own a car[21]. Therefore, re-focusing on providing integrated and responsive active travel services and infrastructure instead of continuing to focus roads is essential and will contribute significantly to reducing inequality in the transport system in Scotland.

By re-focusing on cycling, and active travel, and overcoming barriers to implementing policies that prioritise it as a transport mode, all the benefits outlined above can be achieved.

Question 4 – What do you think are the main transport challenges and opportunities over the next 20 years?

Challenges

Over the next 20 years, one of the main transport challenges will be achieving significant modal shift towards the shared CAPS vision of 10% of everyday journeys by 2020 to be cycle journeys. As outlined above, cycling as a main mode currently accounts for 1.2% and this figure is slowly increasing according to the data currently available[22].

[18] Cycling Scotland (2015) International Comparator Study Final Report http://www.cyclingscotland.org/wp-content/uploads/2016/01/2015-12-27-Cycling-Scotland-Comparator-Study-WEB.pdf

[19] Designed to Move: Active Cities report - http://e13c7a4144957cea5013-f2f5ab26d5e83af3ea377013dd602911.r77.cf5.rackcdn.com/resources/pdf/en/active-cities-full-report.pdf

[20] Scottish Government (2016) Tackling the School Run Research Study Final Report, research undertaken by Systra, Sustrans and Wellside Research http://www.gov.scot/Resource/0051/00513039.pdf

[21] Murie, J (2017) Active travel in Glasgow: what we've learned so far. A Glasgow Centre for Population Health (GCPH) report http://www.gcph.co.uk/assets/0000/6007/Active_travel_synthesis_final.pdf, page 38

[22] Cycling Scotland (2017) Annual Cycling Monitoring Report 2017 http://www.cyclingscotland.org/wp-content/uploads/2015/03/3191-Annual-Monitoring-Report-2017-v1.1-SP.pdf

Concerns for personal safety and the speed and volume of traffic on the roads have been identified as some of the key barriers to cycling. Too many cars on the road and the traffic travelling too fast was reported in 14.1% and 11.5% of cases respectively as a reason for not cycling. In Scotland in 2015, 164 adults and 11 children were seriously injured when cycling. More than 80% of accidents (88%) occurred in built up areas and 84.4% involved a car or taxi. The overall killed and seriously injured (KSI) rate is 0.49 per million vehicle kilometres travelled[23]. The latest Scottish transport statistics show that there was a 2% increase in the number of vehicle registrations in 2015 compared to 2014[24]. This is the highest number of new registrations in a single year since 2007 and is projected to increase further. We are concerned that an increase in traffic levels may lead to more vehicle-cycle accidents. Even if a proportion of these vehicles are electric vehicles, they still represent vehicular traffic, and raise additional safety concerns of their own. Electric vehicles produce little or no noise, and this makes it more challenging for vulnerable road users, like people cycling, to hear these vehicles in traffic which arguably increases risk and could have an impact on accidents. Improving personal and road safety for those who cycle will facilitate more cycling and will encourage more people to choose cycling for everyday journeys.

The introduction of cycle-friendly infrastructure, in particular segregated cycle lanes, can help reduce accident rates and improve safety for all road users. Research shows that marked, segregated cycle lanes can reduce vehicle-bike accidents by as much as 30%[25]. Therefore, the primary focus for investment going forward should be on enabling cycling through changing the physical environment to make it easier for anyone, anywhere to cycle. There needs to be a significant change in the level of investment in high-quality infrastructure across Scotland to achieve anything that could be described as a 'network' that enables utility cycling. However, achieving this is likely to be problematic as local authorities increasingly face cuts to both financial and human resources. The funding commitment to 2021 is welcome but few Local Authority officers have a guarantee of the multi-year funding required to develop, properly consult and engage, review and then build a high-quality cycling project on local roads. This is extremely challenging for maintaining the required levels of investment in infrastructure. We would like to see funding guaranteed beyond 2021.

We consider that greater emphasis must be placed on behaviour change and it should be acknowledged that this will not happen overnight. It is imperative that work commences immediately to influence behaviour and that a trajectory of targets is set out to demonstrate progress. Only by adopting this approach will it be possible to influence people's travel choices effectively and encourage a sustained modal shift towards cycling (and other modes of active travel).

Opportunities

Passenger journeys on the railway in Scotland have increased by 34% over the last decade[26]. Further, in 2014, emissions from rail accounted for 1.3% of all transport admissions, 44% above the 1990 baseline figure[27], and is largely a result of increasing demand for rail services. This presents a key

[23] ibid

[24] Transport Scotland (2017) Scottish Transport Statistics 2016 Edition http://www.transport.gov.scot/sites/default/files/documents/rrd_reports/uploaded_reports/SCT01171871341/SCT01171871341.pdf, page 12

[25] Designed to Move: Active Cities report http://e13c7a4144957cea5013-f2f5ab26d5e83af3ea377013dd602911.r77.cf5.rackcdn.com/resources/pdf/en/active-cities-full-report.pdf

[26] Transport Scotland (2017) Scottish Transport Statistics 2016 Edition http://www.transport.gov.scot/sites/default/files/documents/rrd_reports/uploaded_reports/SCT01171871341/SCT01171871341.pdf, page 108

[27] Scottish Government (2017) Draft Climate Change Plan: the draft third report on policies and proposals 2017-2032 http://www.gov.scot/Resource/0051/00513102.pdf

opportunity for increased emphasis on the need for better integration between cycling and public transport, and to promote the role cycling can play in making all parts of a journey – from start point to destination – as sustainable as possible. Joining up cycling journeys with truly integrated rail services means that longer distance journeys are able to be made in a much more sustainable way, and opens up the opportunity to create better conditions for cycling at and around stations to allow for this integration. The benefit is not only felt in terms of cycle-rail tourism, but also to support longer commuting and utility journeys that could be made by a bicycle-train combination. Key to ensuring conditions to support this are the establishment of key cycling routes, cycle parking/storage, provision of bikes, such as cycle-hire schemes at stations, public transport timetabling, ticketing and booking processes, and clear information on how people can integrate bike and train for their journey.

Public bike-share schemes can make a positive contribution to enhancing modal integration and encourage people to cycle more as part of their everyday journeys. Results from a recent survey by CarPlus/BikePlus show that 40% of bike-share users across the UK used a bike-share scheme in conjunction with the train[28], highlighting the significant potential that bike-share schemes offer to increase modal integration. Further, bike-share schemes provide opportunities for individuals to cycle who would otherwise not have access to bikes. Significantly, the aforementioned survey highlights that 15% of individuals surveyed stated that they would not previously have made the journey they made on the bike-share scheme bike, suggesting that public bike-share schemes have the potential to provide new opportunities. Evidence from Nextbike in Glasgow suggests that the scheme contributed to an increase in cycling in the city, with commuters comprising the largest proportion of users, and also contributed to an increase in the number of women cycling[29]. Extension and expansion of the Bike & Go public bike-share scheme and other bike share schemes at railway stations and other locations across Scotland could help to facilitate and provide opportunities for increased modal integration, and could help to encourage increased participation in cycling across a broad demographic.

In addition, electronic or e-bikes provide an opportunity to broaden the appeal of cycling and to increase participation among groups that do not usually participate in cycling. E-bikes are of interest as they provide a credible alternative for local or short journeys, where a car may currently be the only option. They can also help to increase levels of physical activity, and make cycling an inclusive activity for everyone, in particular increasing mobility and independence among the elderly for example. Further, they allow for longer distances to be cycled, and enable users to more easily overcome obstacles like hills and headwinds[30]. A survey carried out by CarPlus/BikePlus, which examined user experience at 11 e-bike share schemes across the UK, found a wide range of positive user outcomes including attracting new riders, improving health and wellbeing, facilitating new types of cycling and reducing car use. Specifically, the survey found that 45% of e-bike share scheme users were women, which is significantly higher than the proportion of women who cycle in the general population; and the average e-bike trip length was 5 miles, compared to 3 miles on a traditional pedal cycle. Further, around half of all e-bike trips were previously made by private car, as a driver or passenger or in a taxi[31]. Given the apparent commitment to electric vehicles in the

[28] CarPlus/BikePlus (2017) Public Bike Share Users Survey Results 2016 http://www.carplus.org.uk/wp-content/uploads/2017/01/Public-Bike-Share-User-Survey-2017-A4-WEB.pdf (Accessed 31/01/2017)
[29] Murie, J (2017) Active travel in Glasgow: what we've learned so far. A Glasgow Centre for Population Health (GCPH) report http://www.gcph.co.uk/assets/0000/6007/Active_travel_synthesis_final.pdf, page 34
[30] European Cyclists' Federation (2016) Electromobility for All: Financial incentives for e-cycling https://ecf.com/sites/ecf.com/files/FINAL%20for%20web%20170216%20ECF%20Report_E%20FOR%20ALL-%20FINANCIAL%20INCENTIVES%20FOR%20E-CYCLING.pdf, page 5
[31] CarPlus/BikePlus (2016) Shared Electric Bike Programme Briefing

Scottish Government's Draft Climate Change Plan, where infrastructure exists for electric vehicles, this needs to be able to be readily accessible by electric bikes to fully realise this opportunity.

As outlined earlier, cycling offers a wide range of benefits including environmental, economic, and health benefits, and there is an opportunity to promote these more widely. In particular, there is a sound economic case to be made for increasing rates of cycling. A recent report analysing the benefits of cycling in a number of countries found that annual economic impact of people cycling is almost nine times as much as the one-off public investment to construct cycling infrastructure. In the UK, in particular, cycling projects and infrastructure were shown to increase both employment and visitor numbers, each by 300%[32]. Cycling infrastructure is also cheaper and requires less space than infrastructure for cars. If less infrastructure is needed, this leads to reduced building costs and resource savings but also to environmental benefits in terms of less use of green space and less soil damage due to infrastructure. There is also less traffic, and so there will be less soil and water pollution as a result, as well as reduced congestion[33].

Question 5 – How would like us to engage with you during the development of the future strategy that will lead to a formal public consultation?

We are keen to engage with Transport Scotland at all stages of the consultation process and welcome the opportunity to influence the development of the new National Transport Strategy for Scotland.

Cycling Scotland operates a Cycling Potential Tool, supported by Transport Scotland, which can model emissions savings for a defined/specified area from realising the cycling potential. Going forward, we offer to use this Tool to help contribute to further evidence gathering and in any discussions on how the cycling potential tool can be incorporated more into decision making and strategic thinking around transport policies. We believe the Tool is of particular relevance to the National Transport Strategy and Strategic Transport Projects reviews and ensuring that investment in cycling is prioritised where it will have the greatest impact. The Cycling Potential Tool (CPT) uses a range of national datasets to provide an evidence-base for investing in cycling in Scotland. The tool uses Geographical Information Systems (GIS) to produce local 'heatmaps' based on the datasets to demonstrate the areas with the most potential for cycling. This Potential focuses on cycling as a regular form of everyday travel, and potential links to existing networks for improved usage. Within this tool, there are four which can be applied to any urban or rural local area across the country. The modules provide outputs on the study area's environment, schools and planning and development opportunities.

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http://www.carplus.org.uk/wp-content/uploads/2016/03/Shared-Electric-Bike-Programme-Report-Year-1-2016.pdf

[32] Designed to Move: Active Cities report - http://e13c7a4144957cea5013-f2f5ab26d5e83af3ea377013dd602911.r77.cf5.rackcdn.com/resources/pdf/en/active-cities-full-report.pdf

[33] European Cyclists' Federation (2016) The EU Cycling Economy https://ecf.com/sites/ecf.com/files/FINAL%20THE%20EU%20CYCLING%20ECONOMY_low%20res.pdf

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