Proposed Restricted Roads (20mph Limit) (Scotland) Bill
Friends of the Earth Scotland Response

15 September 2017

Friends of the Earth Scotland fully supports and welcomes the proposed Private Member's Bill on 20mph limits.

Question 1. Which of the following best expresses your view of the proposal to replace the current 30mph default speed limit on restricted roads with a 20mph limit?
- **Fully supportive**
- **Partially supportive**
- **Neutral (neither support nor oppose)**
- **Partially opposed**
- **Fully opposed**
- **Unsure**

Friends of the Earth Scotland fully supports the proposal to replace the current 30mph default speed limit on restricted roads with a 20mph limit.

20mph limits reduce road casualties, and lead to healthier towns and cities with thriving local communities. They are a straightforward and logical solution for addressing a range of local concerns including the need for safer and less polluted streets.

Currently, local authorities have to go through a cumbersome process to change speed limits from 30mph to 20mph. By making 20mph the default speed limit, this would save time and money, and make 30mph the exception rather than the rule.

We will make the case through our response that a default switch of speed limits in built-up areas from 30mph to 20mph will (1) increase safety in the quickest, fairest, and most cost-effective way (2) lead to per vehicle emissions reductions, (3) unlock the potential for walking and cycling, thereby improving air quality, reducing carbon dioxide from the transport sector, and reducing social inequalities by particularly assisting people who travel on foot or by bike, who are often those living in poverty, (4) reduce noise and (5) lead to more socially cohesive communities.

Question 2. Could the aims of this proposal be better delivered in another way (without a Bill in the Scottish Parliament)?

The aims of this proposal could not be better delivered in any other way. It has long been Scottish Government policy to promote 20mph limits, and this proposal would be the **quickest,** the most **cost effective**, and the **fairest** way to deliver on Scottish Government policy.

SG policy has supported 20mph limits in built up areas for at least 8 years:

Since 2009 the Scottish Government has had a vision "of a future where no-one is killed on Scotland's roads, and the injury rate is much reduced."[1] Slowing the speed limit is one of the best ways to eliminate road fatalities and reduce injuries (evidenced in question 3).

It is already Scottish Government policy to promote 20mph limits in built up areas, as evidenced by the following extracts from key documents:

- "The Scottish Government is committed to creating a healthier, greener and safer Scotland and believes that the introduction of 20 miles per hour (mph) restrictions can help to contribute to all these objectives."[2]

- "for residential streets, a maximum design speed of 20 mph should normally be an objective."[3]

- "[We will] encourage local authorities to introduce 20 mph zones or limits in residential areas or areas of towns or cities with a high volume of pedestrians and cyclists."[4]

However, currently, the onus is on local authorities to change 30mph roads to 20mph. A change in legislation would be the quickest and most effective way to ensure that everyone living in built up areas could benefit equally from safer streets.

Three key problems with the current model are:

(1) The current model is overly time-consuming, resulting in ongoing, avoidable fatalities and injuries

For local authorities to undertake extensive 20mph rollouts takes years. In Edinburgh, for example, the initial pilot was completed in 2013, and the roll out will only be complete next year – so the process will have taken over five years from start to completion. This is due to a number of factors, including how long it takes to progress Traffic Regulation Orders. This Bill will remove the need for Councils to introduce street-by-street TROs.

In the last three years alone in Scotland (2014-2016), in built-up areas specifically, 165 people have died, 2,634 have been seriously injured, and 20,071 have been slightly injured.[5] Transport Scotland Statistical reports make it crystal clear that speed influences the frequency and the severity of injuries.[6] These numbers would be lower if the speed limit were lower. Since the 1970s, the number of people dying on roads has reduced, but since 2009 (which corresponds with the Scottish Government introduction of its vision of a future where no-one is killed on Scotland's roads) this reduction has been much slower and appears to possibly be tapering off.[7] The status quo is evidently failing to deliver on the Government's vision, and systemic change is needed, and quickly.

[1] Scottish Government, "Go Safe on Scotland's Roads, It's Everyone's Responsibility" (2009) p.58

[2] Transport Scotland, "Good Practice Guide on 20 mph Speed Restrictions" (2013), reiterated in "Good Practice Guide on 20 mph Speed Restrictions" (2016)

[3] Scottish Government, "Designing Streets: A Policy Statement for Scotland" (2010)

[4] Transport Scotland, "Road Safety Framework Mid-term Review" (2016)

[5] Taken from Transport Scotland, "Key Reported Road Casualties Scotland 2016" (published June 2017), Table 3

[6] Transport Scotland, "Key Reported Road Casualties Scotland 2016" (published June 2017), paragraph 5.1

[7] Ibid., Figure 1

(2) The current model makes it overly expensive for local authorities to deliver SG policy.
Under the current model, councils can switch the speed limits using Traffic Regulation Orders. These can be costly (£1500 - £3000 per order).

However, what forms the lion's share of the cost is signage, as illustrated in the table below which shows the breakdown of Edinburgh Council's £2.2 million 20mph roll out. 'Design and Construction' which comprised signage and road markings amounted to 86% of the overall cost, at 1.9m.[8] 20mph signs had to be put on 80% of Edinburgh's roads – an inefficient model.

Switching the default urban speed limit to 20 could require a lot less signage: if the presumption were that streets were 20, signage would be required for the minority which remained 30 (much like how on today's urban roads, there is signage for 40mph streets in urban areas but not for 30). This would significantly reduce the number of signs needed and expense. In Edinburgh's case, for example, it would have been roughly four times cheaper had the council only have needed to sign the 20% of streets which were still 30mph than the 80% that were 20mph.

Table 1

		2015/2016					2016/2017				2017/2018		
	Cost	Cap	CWSS	Comm Links	SG	SCSP	Cap	CWSS	Comm Links	SG	Cap	CWSS	Comm Links
Design + Construction	1900		150	150			300	250	550		100	150	250
Awareness Raising	190		30			65		60				35	
Monitoring	130	35			35		30			30			
Total	2220	35	180	150	35	65	330	310	550	30	100	185	250

Cap	Transport Capital Budget
CWSS	Cycling, Walking and Safer Streets (Scottish Gov)
Comm Links	Community Links (SUSTRANS)
SG	Scottish Government
SCSP	Smarter Choices, Smarter Places (Scottish Gov)

(Note: All figures are representing thousands £)

Table 1Full breakdown of costs of Edinburgh's 20mph roll out - T&E Committee Report, 17/03/15

(3) The current model has resulted in patchwork delivery of Scottish Government policy on 20mph limits, which is unfair and can lead to lower compliance levels. Legislative change would deliver a fairer distribution or, and more effective, 20mph limits.

Mark Ruskell's research obtained through FoI requests illustrates how the delivery of the Scottish Government's support for 20 has been delivered in a piecemeal, incomplete way. For example, in Edinburgh now the majority of residential streets are 20mph whereas in Dundee there are only 44 permanent 20mph streets and in Falkirk, there are none.

[8] Edinburgh Council's Transport and Environment Committee Report – 17 March 2015, page 8.

This is obviously unfair because people living/spending time in built up areas are in a postcode lottery and are not all able to benefit from the potential of safer streets that the SG has visioned. But it is also particular unfair because often the more affluent areas are often the first to get 20mph limits (for example, in Edinburgh, we objected to the fact that roads like Melville Drive and Morningside Road benefitted from 20mph, whereas roads slightly more residential in character but in more deprived parts of the city, such as Granton Road, West Granton Road, Muirhouse Parkway and Crewe Road North did not)[9]. This is doubly regrettable because evidence shows that people living in the most deprived areas are at higher risk of being a casualty in a road traffic incident. This is particularly the case for pedestrians, for whom the risk of injury is over twice as high in the most deprived compared with least deprived areas.[10] **Therefore, the current patchwork model for 20mph limit roll outs has the unintended, but undeniable consequence of potentially worsening social injustice.**

There is also evidence that where 20mph speed limits are implemented on a handful of streets rather than in a widespread way, they are not properly obeyed, and they result in certain streets becoming rat runs.[11] A broader spread of 20mph will lead to higher compliance levels as they become the rule rather than the exception.

3. What do you think would be the main advantages, if any, of the proposal?

(1) 20mph limits make streets safer

In 2015 in Scotland, there were 10,881 total road casualties, of which three fifths occurred in built-up areas, which is the area of interest for this consultation.[12]

When it came to pedestrians, the vast majority of those killed, seriously injured and slightly injured were all on built-up roads.[13]

With regards to cyclists the majority seriously injured and slightly injured were on built-up roads (there were 8 killed on the roads: 3 on built up roads and 5 on non-built up roads).[14]

There is a wealth of evidence which shows that reducing speeds reduces the severity and frequency of casualties and risk of fatality, some of which is documented here:

- A 2000 report commissioned by TfL found that on the types of urban road likely to be considered for a 20mph limit, casualties could be expected to fall by between 4% and 6% for each 1mph reduction in average speed. The

[9] See our response to Edinburgh's 20mph zone consultation (2014) https://foe.scot/resource/node-1907/

[10] P Edwards et al, "Deprivation and road safety in London: a report to the London Road Safety Unit, London" (2007), http://www.tfl.gov.uk/cdn/static/cms/documents/deprivation-and-road-safety.pdf

[11] Brighton & Hove City Council Scrutiny Panel, "Speed Reduction Review: An Investigation into 20mph speed limits/zones" May 2010, http://www.20splentyforus.org.uk/UsefulReports/BrightonAndHove/20%20mph%20Final%20Volume%202%20part%201.pdf, Department for Transport, "Traffic Calming" (2007), http://books.google.co.uk/books/about/Traffic_calming.html?id=RxVuumMTcSAC, Paragraph 3.2.5

[12] Transport Scotland, "Key Reported Road Casualties Scotland 2016" (published June 2017)

[13] 23 fatalities on built-up roads and 9 on non-built-up roads; 378 serious injuries on built-up roads and 19 on non-built-up roads, and 1600 total accidents on built-up roads and 63 total accidents on non-built-up roads. Transport Scotland, "Key Reported Road Casualties Scotland 2016" (published June 2017)

[14] 118 serious injuries on built-up roads and 29 on non built-up roads, 682 injured on built-up roads, and 107 injured on non built-up roads

greatest reductions were achievable on "busy main roads in towns with high levels of pedestrian activity."[15]

- A 2007 study quantified the effect of the introduction of 20 mph traffic speed zones on road collisions, injuries and fatalities in London. It found introduction of 20mph zones was associated with a 41.9% reduction in road casualties. The percentage reduction was greatest in younger children and greater for the category of killed or seriously injured casualties than for minor injuries. In areas adjacent to 20 mph areas, casualties also fell slightly by an average of 8.0%. It concluded that 20 mph zones are effective measures for reducing road injuries and deaths.[16]

- A review of the first 230 20mph zones found that annual casualty frequency fell by 60%, child casualties fell by 70%, and crashes involving cyclists fell by 29%.[17]

(2) 20mph limits lead to less congestion and vehicle per vehicle emissions reductions

It is a misperception that driving at 30 can be less polluting than driving at 20 because of current vehicle gearing. This myth has been based on average speed models, but average speed models do not emulate how traffic moves in the real world. Imperial College London was commissioned by the City of London to explore the relationship between speed limits and emissions. They found that vehicles flow more smoothly in 20mph areas than in 30mph areas. Not only did this lead to less congestion, but also, as a result of reduced acceleration and braking, vehicles in 20mph areas on the whole used less fuel than vehicles in 30mph areas, meaning cost savings for the driver and reduced air pollution emissions. They found that petrol cars polluted more NOx and CO_2, and less PM_{10}, at 20mph compared with 30mph. Diesel cars on the other hand, polluted less NOx, less CO_2, *and* less PM_{10}. Their findings with regards to emissions are set out below:

Imperial College London, "An evaluation of the estimated impacts on vehicle emissions of a 20mph speed restriction in central London" (2013), p 6

Vehicle type	Drive cycle speed limit	NO_X (g/km)	PM_{10} (g/km)	CO_2 (g/km)
PETROL 1.4 – 2.0 litre, EURO IV	20	0.0726	0.00218	271.95
PETROL 1.4 – 2.0 litre, EURO IV	30	0.0673	0.00237	266.35
Impact of 20mph drive cycle		+7.9%	-8.3%	+2.1%
DIESEL 1.4 – 2.0 litre, EURO IV	20	0.7437	0.01758	201.58
DIESEL 1.4 – 2.0 litre, EURO IV	30	0.8104	0.01917	203.48
Impact of 20mph drive cycle		-8.2%	-8.3%	-0.9%

In summary, 20mph limits lead to per vehicle emissions savings from 20mph zones due to smoother traffic leading to lower fuel consumption.

(3) Safer streets make it possible for more people to walk and cycle. This leads to healthier lifestyles, and where new cycle/walking trips displace car journeys,

[15] Taylor, M. C., Lynam, D. A. and Baruya, A. (2000) "The effects of drivers' speed on the frequency of road accidents"
[16] Grundy et. al "Effect of 20 mph traffic speed zones on road injuries in London, 1986-2006" BMJ 2009;339:b4469
[17] Webster and Mackie (1996), cited in DfT, "Traffic Calming" (2007), Paragraph 3.2.2

this will result in improved air quality and reduced carbon emissions from the transport sector

Aside from the fact that vehicle per vehicle, cars driving at 20mph do not pollute more than those driving at 30mph, the bigger environmental gain from 20mph zones is that by increasing safety, they remove a key barrier to traveling on foot or by bike.

Across Scotland, the rate of cycling has been stalled at under 2% of all trips despite a Government vision that 10% of all trips should be made by walking and cycling by 2020.[18]
One of the biggest barriers to walking and cycling is fear of speeding traffic.[19] This is clearly evidenced by Transport Scotland statistics, set out below. "Too many cars on the road", "Traffic travels too fast", "Inconsiderate drivers", are cited as key reasons why people do not cycle to work.

Table 26: [Cycling] Reasons why do not cycle to work, 2009-2015 [1]

	2009	2010	2011	2012	2013	2014	2015	Average fo 2012-201
Reasons why do not cycle to work								*cell percentages*
Too far to cycle	35.6	38.9	34.9	34.3	37.4	33.3	..	.
Weather too cold / wet / windy	17.6	18.2	19.3	21.0	19.8	16.2	..	.
Do not have a bike	13.8	13.9	12.2	16.4	14.3	11.9	..	.
Too many cars on the road	15.7	12.8	11.9	14.8	14.7	18.2	..	.
Traffic travels too fast	13.2	11.5	10.1	12.4	11.6	12.4	..	.
Prefer to drive	10.2	11.4	9.1	10.6	10.0	9.1	..	.
Inconsiderate drivers	10.0	8.5	8.0	9.9	8.9	9.1	..	.
Concerns for personal safety on dark / lonely roads	9.9	9.1	9.6	9.1	9.0	6.7	..	.
No way to carry luggage / shopping	9.4	10.3	7.9	8.3	7.9	5.9	..	.
Nowhere at work to shower / change	7.7	7.8	7.6	7.5	7.3	5.5	..	.
Don't have time to cycle	7.9	7.9	7.0	9.2	8.3	9.2	..	.
Too hilly	5.8	5.9	7.2	7.6	6.2	4.4	..	.
Not fit enough	5.7	6.6	6.0	5.8	4.9	5.6	..	.
Can't be bothered	6.4	6.3	6.4	6.8	5.9	5.3	..	.
Road surfaces are dangerous	3.9	5.1	6.1	4.9	5.6	4.2	..	.
Not enough safe places to lock bike	2.5	2.7	2.7	2.2	4.1	1.7	..	.
Can't ride a bike	2.4	1.7	1.8	2.1	2.4	2.1	..	.
Health reasons	2.3	1.9	1.4	2.3	1.9	2.5	..	.
Difficult taking bike onto other forms of transport [2]	..	..	..	1.7	2.0	1.6	..	.
Inconsiderate pedestrians in towns\cities	1.0	0.6	0.6	0.5	0.7	0.7	..	.
Worried about pollution from traffic	1.6	1.6	1.1	1.5	1.3	1.5	..	.
Nowhere to keep a bicycle at home	0.6	0.9	0.6	0.3	0.8	0.5	..	.
Too many bikes stolen	0.9	0.5	0.5	0.4	0.7	1.3	..	.
Sample size (=100%)	*2,770*	*2,350*	*2,580*	*1,610*	*1,540*	*1,590*	..	..

1. The survey routing was updated in 2012 to ensure that only those with at least one bike in their household were asked this question. To ensure comparability, responses from previous years have only been included in this table where the respondent's household had a bike.
2. Asked from 2012 only
This question was moved to biennial in 2015 so the last data refer to 2014

Transport Scotland, "Transport and Travel in Scotland" (2015)

Cities in the Netherlands, Denmark, and Germany have lowered their speed limits to 30 kph (18 mph) and taken measures to limit through traffic in many instances. In the Netherlands, cycle rates are 27%, they are 18% in Denmark and 10% in Germany.[20]

[18] Transport Scotland, "Transport and Travel in Scotland 2015" (published 27 September 2016)
[19] See, for example, Professor Colin Pooley, "Promoting walking and cycling
New perspectives on sustainable travel" (2013)
http://www.policypress.co.uk/display.asp?K=9781447310082&sf1=keyword&st1=Pooley&m=1&dc=2#sthash.dxaRhHj5.dpuf
[20] J Pucher, "Making cycling irresistible: lessons from the Netherlands, Denmark, and Germany," (2008), Transport Reviews 28 (4), 495–528, http://policy.rutgers.edu/faculty/pucher/irresistible.pdf

We do not think that we can simply say that slowing the traffic will in and of itself lead to high levels of walking and cycling, but it certainly removes a key barrier, along with increased walking and cycling infrastructure.

It is crucial that the Scottish Government does all it can to increase the rates of people walking and cycling in Scotland, including making 20mph the default speed limit in urban areas. The benefits are as follows:

(a) Improved air quality

Toxic air pollution is responsible for over 2,500 premature deaths each year[21] and at levels that we see regularly on Scottish streets, long term exposure to pollution plays a major role in cancer, strokes, heart attacks, asthma, dementia, diabetes, babies being born prematurely and/or with reduced birthweights, and children's lungs not developing to their full potential. There are currently 38 Pollution Zones in Scotland where safety standards are being broken.[22]

Local traffic is responsible for 80% of roadside concentrations of nitrogen oxides. While a switch to 20mph in urban areas will not be a silver bullet to Scotland's air pollution crisis, it will be one of many transport steps required to rebalance our roadscapes towards enabling people to feel confident, comfortable and safe to make sustainable transport choices. The Scottish Government's "Cleaner Air for Scotland" Strategy reaffirms the need for 10% of trips to be made by bike as one of several measures required to achieve compliance with European air quality limits by 2020.

(b) Reduced carbon emissions from the transport sector

Enabling more motorists to switch from driving to walking and cycling by making streets safer will also lead to carbon reductions from the transport sector. The transport sector is now Scotland's biggest source of climate emissions.[23] Of this, cars are the largest source, accounting for 44%.

A key way to end reliance on fossil fuels in the transport sector, is to support motorists to travel instead by bike or on foot for short distances. This also tackles congestion, which currently affects 12.4% of all trips[24] and which is likely to worsen if cars continue to dominate the modal share of transport, due to projected rises in population. Enabling people to walk and cycle by making the streets safer also supports the 30% of Scottish families who do not have access to a car.

Electric Vehicles will no doubt play an important role in Scotland's transport future and Friends of the Earth Scotland fully supports the Scottish Government's decision to phase out sales of diesel and petrol cars and vans by 2032. However, they will be but one part of a sustainable transport future. The Scottish Government needs a suite of transport policies which support fair transport, including with a way to implement its own policy on 20mph effectively.

(c) Healthier people:

[21] Based on a conservative estimate from the Royal College of Physicians that across the UK, air pollution from NO2 and PM2.5 causes over 40,000 early deaths annually. See Royal College of Physicians, "Every breath we take: the lifelong impact of air pollution" (February 2016)
[22] An indicative list of air quality management areas can be found at http://www.scottishairquality.co.uk/laqm/aqma.
[23] Scottish Government, Scottish Greenhouse Gas Emissions 2015, Table B1
[24] Transport Scotland, "Scottish Transport Statistics No 35: 2016 Edition"

Physical inactivity costs the NHS in Scotland £94 million annually.[25] Switching your commute from driving or using public transport to walking or cycling is one of the easiest and cheapest ways to be fitter.

4. What do you think would be the main disadvantages, if any, of the proposal?

We do not see any disadvantages to switching the default speed limit in urban areas to 20 and fully support the proposals.

We recognise that a widespread change in the speed limit will demand a change in behaviour of motorists across the country, but think that Scotland is ready for these changes. Some journeys may take a little longer, but we think this slight disadvantage is vastly outweighed by the benefits.

5. What measures do you think would be needed to maximise compliance with the new national 20mph speed limit on restricted roads? (Examples might include advertising, signage or police enforcement.)

There are concerns that 20mph limits are not always observed, and evidence is mixed. There have been reports that the 20mph limits in Edinburgh have not been observed by a majority of residents,[26] but these reports came out before the roll out was complete.

A 2013 study by Imperial College London found that in London, speed limits *did* generally work. It found, "Mean cruise speeds were 14.9mph on 20mph segments and 19.2mph on 30mph segments."[27]

Furthermore, as noted above, evidence shows that the widespread 20mph areas are, the higher the levels of compliance are.[28]

We therefore take the view that the longer the speed limits exist, and the more widespread they are, the higher compliance levels will be. In this vein, lessons can be drawn from the indoor smoking ban. Despite attempts to water down the smoking restrictions, the law eventually banned smoking in all enclosed public places and almost all indoor work places, with very few exceptions. It was the widespread and holistic nature of the legislation that led to such a huge cultural step-change and as a result the ban has been hugely successful. Following its introduction, and the later ban in England, there are 1.9 million fewer smokers in the UK today than there were in 2007.[29]

We should reflect on Edinburgh's low compliance levels and consider whether it might be worth decriminalising the 20mph speed limit and turning it into a civil offence. This would enable local authorities to dedicate specific teams to enforcing

[25] Sustrans, "Physical activity and health - facts and figures
[26] I News "Eight in ten drivers break 20mph limits" 3 July 2017: https://inews.co.uk/essentials/lifestyle/cars/car-news/eight-ten-drivers-break-20mph-limits/
[27] Imperial College London, "An evaluation of the estimated impacts on vehicle emissions of a 20mph speed restriction in central London" (2013), p 4
[28] Brighton & Hove City Council Scrutiny Panel, "Speed Reduction Review: An Investigation into 20mph speed limits/zones" May 2010, http://www.20splentyforus.org.uk/UsefulReports/BrightonAndHove/20%20mph%20Final%20Volume%202%20part%201.pdf, Department for Transport, "Traffic Calming" (2007), http://books.google.co.uk/books/about/Traffic_calming.html?id=RxVuumMTcSAC, Paragraph 3.2.5
[29] Cancer Research published in ScienceDaily, "British smokers down by 1. 9 million since smoking ban" (1 July 2017)

the limit through fines (in the same way as parking offences are decriminalised) which might lead to higher levels of enforcement, and compliance.

6. Taking account of both costs and potential savings, what financial impact would you expect the proposed Bill to have on:

Overall and as outlined above in Q2, this Bill will be the most cost-effective way to deliver on existing SG policy. The current council-by-council approach is cost-ineffective as it relies on TROs, signage for 20mph signs rather than 30mph signs, and individual separate communications campaigns.

(a) the Scottish Government

20s Plenty estimate that a national 20mph limit for Scotland is 8 times cheaper than authority by authority action, principally due to the reduction in the need for signage.[30]

Whilst there will inevitably be a cost involved in rolling out 20mph limits, the Scottish Government needs to deliver on its policy and it is significantly cheaper for SG to deliver 20mph limits in this way rather than through providing match funding to Councils in individual cases.

(b) Local authorities

It will be significantly cheaper for local authorities to implement 20mph limits via this Bill than by designating limits themselves, particularly as it this will require a less signage, remove the need for TROs and for individual communications campaigns.

(c) Motorists

There will be some reduction in cost for motorists benefiting from 20mph limits. As outlined above, research has shown that cars typically run more smoothly in 20mph areas than in 30mph areas, resulting in fewer emissions and associated fuel cost savings.

(d) Other road users and members of the public

We are unsure as to whether there will be cost savings to other road users and members of the public. However, we do not foresee there to be an increase in cost to these users.

Indirectly of course, there will be cost savings to members of the public in the sense that this scheme will be a much more efficient use of public money to implement SG policy on 20mph than relying on councils to introduce the limits.

(e) Other public services (e.g. NHS, Fire and Rescue Services etc)

This Bill would see a significant reduction in cost to other public services.

- In 2015, the overall cost of all road casualties was £1,130m;[31]
- The cost of physical inactivity is £94m per year; as pointed out above, 20mph will help unlock potential for active travel;

[30] 20s Plenty, "National 20mph Limit for Scotland is 8 Times Cheaper than Authority by Authority"
[31] Transport Scotland, "Scottish Transport Statistics No 35" (2016 Edition) Chapter 6: Reported Injury Road Accidents

- The annual cost of air pollution to the Scottish economy in terms of days lost at work and costs to the NHS is £1.1bn/yr[32], as pointed out, 20mph limits will help deliver modal shift and therefore will help to improve air quality;

7. Do you believe there will be any other benefits to reducing the speed limit from 30mph to 20mph?

The primary benefits have been listed above as (1) Improved safety (2) Improved air quality (3) Reduced carbon emissions from safety, and (4) increased physical and mental health

There are also a number of secondary benefits, which include:

(1) Equalities
As mentioned above in q 2, evidence shows people living in the most deprived areas remain at higher risk of being in a road traffic incident. This is especially the case for pedestrians, for whom the risk of being hit by a vehicle is over twice as high in the most deprived compared with least deprived areas.

Grundy et al, from the London School of Hygiene and Tropical Medicine have found:

"As there is good evidence that reducing the speed and volume of traffic reduce casualty rates it is a reasonable inference that implementing traffic calming, and doing so particularly in areas where there are high rates of deprivation, might reduce not only overall casualty rates, but also area level inequalities in casualties."[33]

However, as mentioned above, where Councils have implemented 20mph limits, it has typically been the more affluent areas that benefit from more 20mph streets.

20mph limits must be rolled out in a way which at the very least covers affluent and deprived areas equally in order to reduce area level inequalities – and the best way to do this is via a switch in the default limit rather than through local authority based consultations which may have the unintended but inevitable consequence of favouring the affluent, thereby exacerbating inequalities.

(2) Reduced noise
Slow traffic results in quieter and more pleasant streets.

(3) Improved community cohesion and wellbeing
A seminal study from 1981 found that residents living on roads with low traffic levels and slow driving traffic knew their neighbours better and had stronger social networks than people living on streets with busy and fast traffic.[34]

8. What overall impact is the proposed Bill likely to have on equality, taking account of the following protected characteristics (under the Equality Act 2010): age, disability, gender re-assignment, marriage and civil

[32] Extrapolated from a Defra assessment that air pollution costs the UK economy as a whole £16bn per year, based on 29,000 UK- wide deaths from air pollution: Defra, "Impact pathway guidance for valuing changes in air quality" (May 2013)
[33] Grundy et al, "The Effect of 20 mph zones on Inequalities in Road Casualties in London: A report to the London Road Safety Unit", (2008)
[34] Appleyard, 1981, also Hart and Parkhurst, 2011

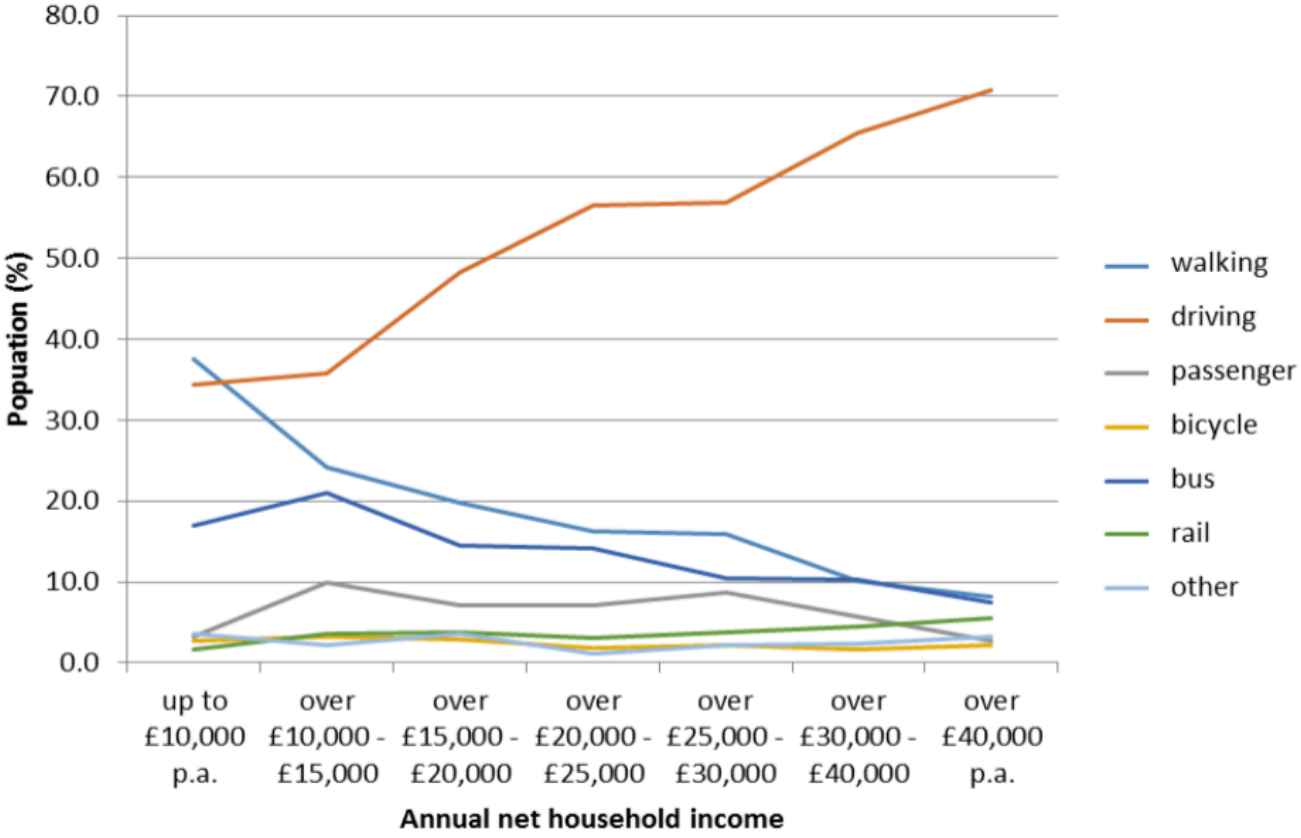
partnership, pregnancy and maternity, race, religion and belief, sex, sexual orientation?

Article 1(1) of the Equalities Act states, in relation to "public sector duty regarding socio-economic inequalities":

> (1) An authority to which this section applies must, when making decisions of a strategic nature about how to exercise its functions, have due regard to the desirability of exercising them *in a way that is designed to reduce the inequalities of outcome which result from socio-economic disadvantage.*

As outlined above in Q7, a change in the default from 30mph to 20mph will be a much fairer way to implement SG policy on 20mph because it will ensure that the less affluent built-up areas in Scotland, which have more to gain from 20mph, are adequately and properly covered.

Another factor is that 30% of households in Scotland do not have access to a car. Typically, less affluent people in Scotland travel to work by car the least and walk to work the most, as shown by the following graph. They therefore have the most to gain from a switch in the speed limit.



Travel to work (excluding those who work at/from home) shown by annual net income of household, 2015 (Source: Scottish Household Survey)

9. Could any negative impact of the Bill on equality be minimised or avoided?

We do not consider there to be any negative impact of the Bill on equality.

10. Do you consider that the proposed bill can be delivered sustainably, i.e. without having likely future disproportionate economic, social and/or environmental impacts?

We believe that the proposal in this Bill is a good example of economic, social, and environmental sustainability.

Economic: for the reasons described above in Q2 and 6, the Bill is the most cost-effective and efficient way to deliver on existing SG policy on 20mph.

Social: For the reasons described in Q7 & 8, this Bill will improve social cohesion and reduce social inequality.

Environmental: For the reasons set out in Q3 and 7, the Bill will improve air quality, reduce carbon emissions from the transport sector, reduce noise pollution, and enable motorists to reduce their dependency on the car.

11. Do you have any other comments or suggestions on the proposal to establish a 20mph default speed limit on restricted roads?

No.