Cheaper Journeys, Faster

Building Scotland's Low Carbon Transport Network

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Our Scottish Future

Environment Commission Report

Foreword

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Once upon a time our cities had trams, buses, very few cars, and only in the largest cities, underground railways. The former were dispensed with as they got in the way of cars and the relatively few people who could afford to buy and run them. Investment by the car industry meant that by the 1960s car ownership had reached such huge proportions that we were even designing new towns round the perceived desires of the car owning class and, in many cases, the ambitions of the major supermarkets and big box stores. As a result we have, in Scotland, egregious examples of planning that dictated car ownership as taken for granted, roads built to encourage speeds of 30 mph in residential housing estates, out-of-town retail parks but no local shops, few community facilities, acres of bare grasslands punctuated by 'no ball games' signs, and poorly built tower blocks now recognised as being less than ideal places to grow up in.

Any discussion and any strategy that does not plan to accommodate the daily needs of our population will be bound to fail.

What we need is a plan that will take best practice, ally it with a commitment to long term financial planning, and extend our vision to cooperate with all the members of the UK. We can produce a four nations system where fares are controlled and equal, where concessions are open to all, where options are tailored to meet the needs of our rural communities, especially for those who do not have cars, and where all our buses are electrically powered by 2030. Working with the English mayoralities, competing to surpass the advances they are making, can create lessons for us all. Acting together, a national UK oyster card is not beyond our wildest dreams.

Buses and trains are the answer, cars and roads are the problem – we spend 33 times more on car transport than we do on buses - surely we do not have our priorities right. The poor, the old, the low paid, children and students still find the transport system does not always act for them. The comfortably off have it pretty good, while the poor still queue at the food banks. But we can build a new system.

The only and best way to get a fair and accessible transport system is for all of us to sit round tables in local and national government across the UK and produce a national transport plan that will work for all. Upgrading the bus fleet will create hundreds of jobs, putting Scotland into a leading position for electric bus manufacture, and at a stroke make a hugely significant contribution to achieving our Greenhouse Gas reduction targets.

Change is being done local levels all over the UK. Let us learn from, and act with each other. You can book train journeys all over the UK seamlessly. We should be able to do the same for bus travel as well. The more people we can get out of their cars and onto the bus - travelling together - the more we can lower the price of a ticket.

The report by Peter Wood and Mark Ross demands close attention by all who care to lift their heads above their political parapets and dream of the advantages of cooperation.

Executive Summary

Carbon emissions from transport have remained stagnant in Scotland over the last decade. If we're going to reach net zero by 2045 – the Scottish Government's target - this has to change immediately.

The bulk of emissions comes from cars – in total cars are responsible for 57% of emissions from transport in Scotland, excluding air and sea travel. So, given not everybody is going to buy an electric car over the next few years, if we're going to reduce transport emissions , we need to get people out of cars and onto less carbon emitting modes of transport.

We need to start seeing significant reductions every year, starting now. Rail is a medium to long-term aim, but the quickest way to achieve quick cuts to carbon emissions is to get more motorists to take journeys on clean electric buses. If we electrified our buses, and doubled the number of bus journeys taken by motorists, we'd slash total transport emissions by a third.

Choosing to get out of cars and to travel together on the bus – to cooperate - is also a way to reduce the cost of living. If we have more people buying bus tickets we can afford to make those tickets cheaper. If our government takes a leading role in coordinating the bus network we can ensure that the changes work for people, not just for profit.

This simply is not going to happen without radical change. Non-concessionary fares have increased by 9% over inflation in the last 5 years and passenger numbers are down. And we are not manufacturing nearly enough new electric buses to replace old diesel vehicles.

This report therefore proposes that the Scottish Government take immediate and radical steps to start a green bus revolution.

We recommend:

- Make bus travel affordable for everybody – with a maximum fare of £2 for an urban journey of 7.5 miles.
- Jump-start network improvements by doubling the amount of financial support for buses, by reducing new road building funding and by using UK Government investment to support bus decarbonisation.
- Create new Transport for Scotland authorities to deliver regional franchising, effectively nationalising the network, not the operators. These authorities would be responsible for looking beyond party politics, to decarbonise the bus fleet, improve services and increase ridership in line with the 2030 climate targets. The new authorities could draw on expertise established by the front-running English City Mayors, to develop a new model that works for Britain's villages and towns.
- Create a single travel card, that starts in Scotland but works across the UK.
- Support an industry-building, world-leading, UK-wide bus decarbonisation agreement.

The UK and Scottish governments should plan for the long term, using their unique strength to anchor a just transition. Creating a world leading bus manufacturing industry will create jobs in Scotland, but also allow us to support net zero transport by others. By driving down the cost of electric buses we can make it more affordable for the world to transition away from fossil fuels.

The UK remains the president of COP26 until next Autumn, giving our country a unique opportunity to accelerate global progress on climate change. Our Scottish Future believes that the evidence is clear – cooperation is the most effective way to move forwards. It is the fastest way to decarbonise our transport sector, and it builds the good jobs in growing industries that we need to secure support for net zero.

We call on the Scottish and UK Governments to accelerate the radical changes required by a new era of sustainable transport: fair fares, franchising, electric buses and a single travel card. This is a plan that offers immediate improvements to the cost of living crisis, brings each part of the country together around shared goals, and supports the move to net zero.

Building Scotland's Low Carbon Transport Network

The average household spends more on transport than they do on rent, mortgage repayments, heating, or food.[1] Whilst costs reduced during COVID, petrol and diesel prices rose as lockdown ended and the economy recovered. Russia's invasion of Ukraine then created the highest fuel prices ever seen, with the invasion itself funded by oil and gas sales.[2] Transport is also now the largest source of greenhouse gas emissions in Scotland and in the UK. This means that transport is simultaneously the bedrock of our social and economic life, a key threat to national security, and our greatest environmental challenge.

Action to reduce the cost of transport and our dependency on fossil fuels needs to accelerate rapidly, at a nationwide scale. The scale of the challenge, however, is an opportunity for optimism. This paper analyses how remaking our public transport networks – particularly an electric bus network - is a chance to come together in our communities, to build a good society and secure jobs, based on cooperation. It is an opportunity to make government more responsive to peoples' needs, to stop climate change, and to cut the cost of transport. Building the bus network is the fastest way to start accessing these benefits and savings.

If we fail to seize the moment our public transport may never recover, locking us into car travel and rising fuel prices. The COVID lockdown saw passenger numbers plummet across rail and bus, whilst the proportion of car journeys has risen massively and unsustainably.[3] If this continues it would make hitting our climate change targets almost impossible. But as this report explains, car use in Scotland was rising and bus use falling long before COVID hit.

Unless the decline of public transport is reversed then communities across the country will see their transport lifelines fall away. For thousands of Scots, public transport is their main way of getting around. For many it is a freedom and a choice that saves money, reduces congestion, avoids pollution, whilst supporting thriving high streets and economic growth. Yet almost a third of all households have no access to a car, whether because of age, income, choice or health. This makes public transport essential for many peoples' jobs, social life, parenting and caring responsibilities. As we discovered during lockdown, a life without transport, confined to our homes unless working in key roles, is not a vision to build the country around.

Cooperating to fund, build and travel by public transport can help everyone, socially and economically. Economically, running a small number of buses and trains is cheaper than requiring everyone to buy a car. It allows us to increase the range of locations served by high-quality, frequent, fast trains and buses. It reduces congestion for essential drivers. Socially, it makes transport open to all, irrespective of income. This frees people to travel for better jobs, to reduce the cost of homeworking, and to meet friends and family. It also uses government powers efficiently, taking advantage of the stability of the pound to reduce costs, supporting pioneering local manufacturing to create good jobs, with our democratic leaders empowered to agree solutions that work for all citizens. Winning these benefits will require us to speak up in support of cooperation.

Scotland's challenge going into an era of high fuel prices is not only to repair, but to build a new system, ready for the future. Scottish innovation, combined with UK-wide cooperation and risk-sharing, will allow us to play a leading role in sustainability research, engineering and exports. Repairing our transport network can be an opportunity to save money, build an economy that works for normal people, and to support our friends at home and abroad.

1 Office for National Statistics (2021) Family spending in the UK: April 2019 to March 2020 https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/bulletins/familyspendingintheuk/april2019tomarch2020 The last published statistics cover the period before COVID.

2 BEIS (2022) Weekly road fuel prices https://www.gov.uk/government/statistics/weekly-road-fuel-prices

3 Transport Scotland (2022) COVID-19 Analysis https://www.transport.gov.scot/coronavirus-covid-19/analysis/

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Transport is now the biggest challenge on Scotland’s road to Net Zero. It accounts for 36% of Scotland’s greenhouse gas emissions

The Environmental Case for Change

> Net Zero is a chance to fix long-standing problems in our country.

Transport is now the biggest challenge on Scotland's road to Net Zero. It accounts for 36% of Scotland's greenhouse gas emissions (GHG) under the definition set out in the Climate Change Scotland Act.[4] From that, road and rail transport makes up 68% of transport emissions - a quarter of the Scottish total. Control over this 'ground' transport is largely devolved.[5]

The Scottish Government has committed to reaching 'Net Zero' by 2045. This would mean almost entirely stopping the production of greenhouse gases in Scotland, with any remaining emissions balanced by removing the same amount from the atmosphere, such as by growing trees and restoring peat. An alternative name for this process is 'decarbonisation'.[6]

Net Zero will require all sectors of the economy to be decarbonised, and doing so will require bold steps and new plans. This creates opportunities. Net Zero is a chance to fix long-standing problems in our country and to build a better UK.

Up to now the UK, and especially Scotland, has achieved the fastest reductions of any industrialised country in the world. But we have done so by focusing on renewable energy, particularly electricity from wind farms, as Our Scottish Future's previous report detailed.[7] The next stage will require changes across the board; in parallel rather than one-by-one. We are ready to make a number of big changes immediately, but for the more difficult actions we must start preparing ourselves, so that they are ready to be scaled up.[8] If we move fast on low-carbon transport we will not only create a better Scotland, but we will gift the world a model for improving their own transport whilst creating new, sustainable jobs.

The road to Net Zero contains legally binding milestones on the way, with each UK nation in control of its own targets.[9] The next deadline in Scotland is the 2030 commitment to have reduced emissions by 75%, relative to 1990. This is significantly faster than the rest of the UK. Given that 2030 is only eight years away, we would hope to already see a track record of successful transport decarbonisation.

Unfortunately, transport emissions have remained stagnant across the UK over the last ten years. The greatest reduction has been the 10% achieved by Northern Ireland, with Scotland in the middle of the pack. Whilst Scotland successfully made early reductions these have been eroded away by increases over 2013-17. In this context, the Scottish Government's choice to spend billions on roadbuilding (see this report's financial section) can be seen a missed opportunity to take a lead on zero-carbon transport.

4 Scottish Transport Statistics, 2020, Chapter 13. i.e. excluding international shipping, domestic shipping or ferries, and aviation. Road and rail are often called 'surface' or 'ground' transport

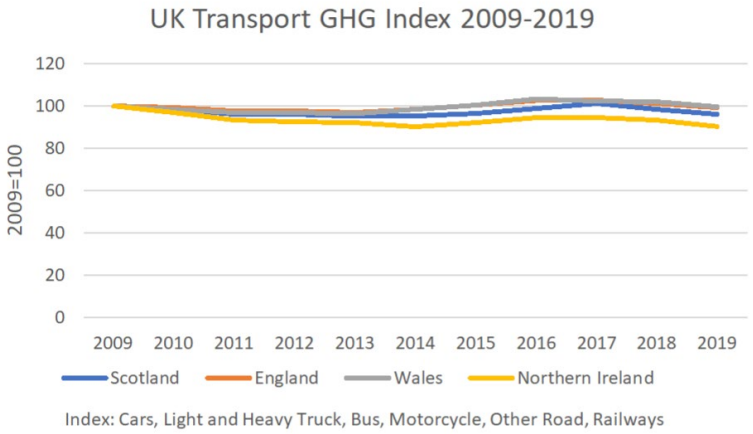
5 Cross-border transport, particularly rail, requires shared responsibilities whilst the UK government sets fuel tax. Decisions on public transport and on road building are devolved

6 Because carbon dioxide (CO2) is the main greenhouse gas, the phrase 'decarbonisation' is often used as a shorthand for the reduction or elimination of greenhouse gas emissions.

7 Wood, for Our Scottish Future (2021) A Net Negative Nation – hitting Scotland's climate targets, https://ourscottishfuture.org/report-backs-a-new-uk-office-of-climate-responsibility-to-end-flatlining-carbon-cuts/

8 Committee on Climate Change (2021) Progress reducing emissions in Scotland – 2021 Report to Parliament, https://www.theccc.org.uk/publication/progress-reducing-emissions-in-scotland-2021-report-to-parliament/

9 Scottish Climate Change Plan and Climate Change (Emissions Reduction Targets) (Scotland) Act 2019



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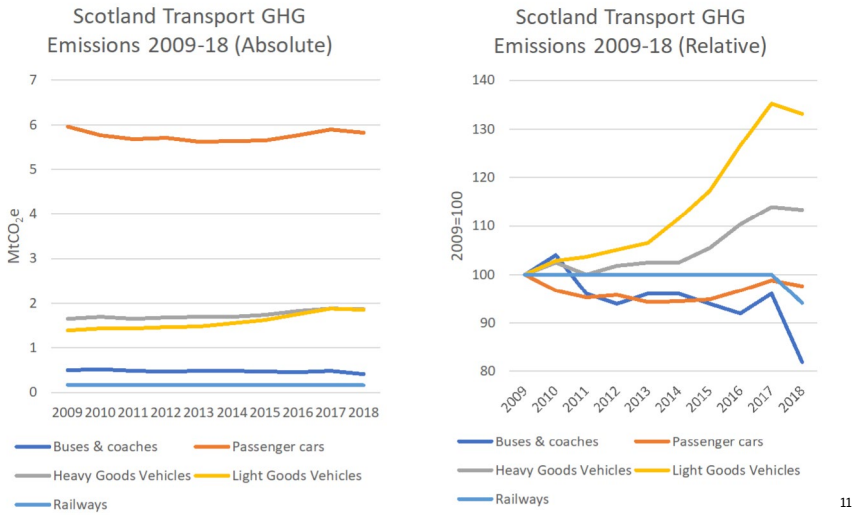
Focusing on Scotland's transport, the majority of emissions are produced by cars. Emissions from heavy trucks are almost a quarter, with light trucks another quarter. Buses, coaches, rail, motorbikes and other road vehicles produce very little. Whilst we would expect COVID to bring lasting changes, particularly a rise in homeworking, this will not achieve full decarbonisation by itself. As such, this report uses the long-term historic trends to indicate the scale of the challenge, and does not speculate on how transport will rebound in the short term. Our suggestions would support transport's recovery from COVID, but rather than propping up the old, failed market, we propose to use recovery funds to build a better system. This needs to be adapted to our future needs, including urgent action to bring down the cost of living.



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Analysed in percentage changes, bus emissions have reduced most of all modes - almost 20%. Some of this is a reduction in distances travelled, but much is due to technological improvements. Government research estimates[12] that the carbon reduction achieved by replacing a diesel bus with an electric bus is around 98%.

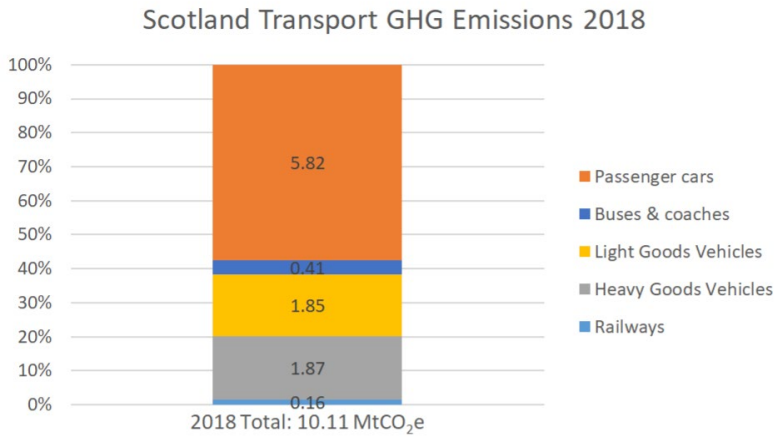
Looking at other modes, rail emissions have reduced due to the electrification of track and the increased proportion of renewable energy in the national grid. These reductions have been balanced by an increase in emissions from light and heavy goods vehicles, largely caused by an increase in distance travelled. Emissions from cars have slightly fallen over the last ten years, largely due to technological improvements, but much of this gain has been eroded by an increase in total car distances.[13]

10 UK NAEI - National Atmospheric Emissions Inventory, (2021) Devolved Administration GHG Inventory 1990-2019, released 23/06/2021, ED62689/2018/CD9826/HS. https://naei.beis.gov.uk/reports/

11 Scottish Transport Statistics 2020, No39 (2021) Chapter 13, Table 13.2. This data disaggregates Buses and Coaches from Heavy Goods Vehicles but lags the NAEI data by a year. The 2019 bus figures have not yet been released. NAEI 2019 data for other categories show similar trends.

12 EY for the Scottish Government, 2020, Low Carbon Investment - Scottish Bus Electrification commercial and economic content.

13 Committee on Climate Change (2020) Reducing emissions in Scotland Progress Report to Parliament, p51-52



Decarbonising to meet the 2030 target will involve reducing emissions rapidly, but not all modes are equally ready to do so. Cars produce over 57% of ground transport emissions, so the urgent reduction of these emissions is a priority. Whilst light and heavy goods vehicles are a significant proportion of emissions their decarbonisation is difficult: vehicles able to travel long distances each day are still at the pilot stage, whilst the country lacks a widespread industrial charging infrastructure. Decarbonisation of rail is in progress, but expanding railways, subways and trams to serve new locations is a long-term project. Planning and construction need to start now, but most benefits will not arrive until after 2030. With this starting point, bus and coach travel is already decarbonising most rapidly and can most rapidly expand to match the flexibility of car journeys.

Electrifying the bus fleet and achieving a 4x increase in the distance travelled by passengers would reduce total transport emissions by a third. It means reducing carbon emissions from petrol and diesel cars by just over half. This reduction has two components.

Firstly, electrifying the bus fleet would eliminate 98% of the approximately 0.41MtCO2e that this previously produced each year via predominantly diesel buses. This would be 4% of the total Net Zero transport goal.

Secondly, doubling the number of (electric) bus passenger journeys through an equivalent reduction in car passenger-distance from petrol and diesel cars, whilst maintaining the average bus journey length, would reduce carbon emissions by 0.76-0.79MtCO2 approximately.[14] [15] It reduces car emissions by around 13%, or total transport emissions by around 7.5%, and could then be repeated. In short term, simply shifting car kilometres to diesel bus or coach kilometers can reduce emissions by 40-85%. Fast, bold action to achieve these carbon savings through bus travel is essential, as it buys the time we need to prepare for the more difficult reductions across the rest of transport.

Meeting Net Zero will be a challenge, but it is one that we can be optimistic about. Previously the UK's priority was to cut carbon emissions from energy generation. We collected funds from across Britain's national grid and focused it on increasing renewable electricity generation, particularly in the North East of England and Scotland.[16] From 2006-2019, Scottish emissions from energy production reduced by a world leading 75%. Coming out of COVID, we can come together for a new challenge: to decarbonise transport and build the industries of a Net Zero future.

14 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Table 2.2b. This is produced through 378m local bus passenger journeys in 2018-19, with an average journey of 12km.

15 Scottish Transport Statistics 2020, No39 (2021) Chapter 13, Table 13.5

16 Wood, for Our Scottish Future (2021) A Net Negative Nation – hitting Scotland's climate targets, https://ourscottishfuture.org/report-backs-a-new-uk-office-of-climate-responsibility-to-end-flatlining-carbon-cuts/

Shifting to Zero-Carbon Behaviour

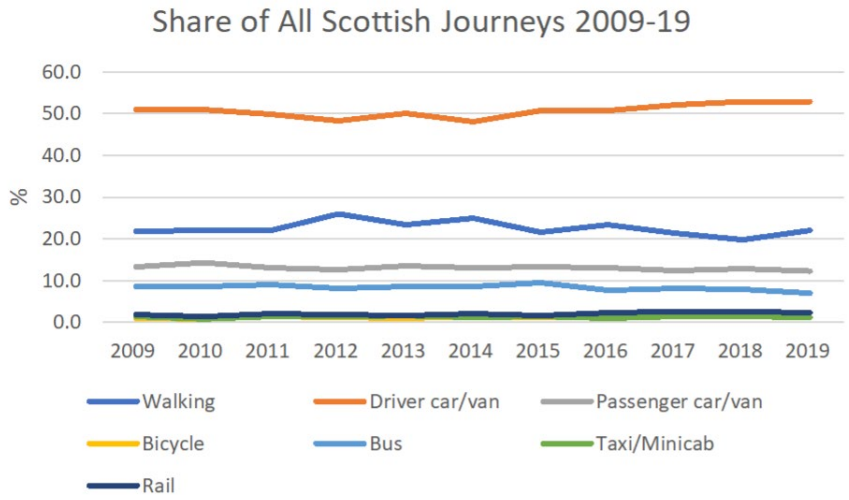
> The bus remains the largest mode of public transport.

Key to analysing transport emissions is the concept of 'derived demand'. It explains how few journeys take place simply because someone likes to travel, and even less so because they insist upon a particular mode of transport. Every Sunday afternoon sightseeing drive or lunchtime cycle is far outnumbered by trips from A to B. The important part is what they achieve; getting from home to work, between shops, friends and family. Rather than the mode of travel, the main things to consider are the speed, ease and cost of the journey.

At the same time, the availability of transport will influence what is available to be travelled to. If local high streets and places of employment become harder to reach, such as if bus routes are cut back, then they struggle to attract staff or visitors, and so fail to create jobs. Polluted streets discourage visitors. Peoples' ability to meet or care for their friends and family is dependent upon having the means to reach them.

Transport trends rarely change quickly, but the last ten years have seen differences creeping in. The share of all journeys carried out by car has increased, from an already dominant position.[17] The share of journeys carried out on foot has remained almost unchanged – and it will take time to build towns and cities in the ways required to significantly increase walking journeys. Rail use has increased by over half, but from a low baseline. Cycling has doubled, but from an even lower starting point, increasing by only 0.4% overall. In this respect, we do need to keep increasing use of the train, of walking, cycling and wheeling,[18] but it will take many years of effort for these to become mainstream modes.

The current mix of market forces and government support has failed buses, although the situation is not yet terminal. Bus use has declined by almost a quarter, but 25% of people still travel by bus once a week, and 8% most days.[19] The average current length of a bus journey is only 12km, or 7.5 miles.[20] Assuming no congestion and a 15 miles per hour average speed, this would give a 30-minute journey. The bus remains the largest mode of public transport, multiple times larger than either cycling or rail. Buses are best able to immediately replace a range of carbon-emitting car journeys.



17 Transport and Travel in Scotland Survey, 2019, Table Sum 1

18 Wheelchairs and other forms of aided mobility, including shopmobility and e-scooters

19 Scottish Transport Statistics 2020, No39 (2021) Chapter 2 infographic / p58

20 Scottish Transport Statistics 2020, No39 (2021) Chapter 2 infographic / p58

Beyond popular choice, buses also create the country's travel foundations. This means their decline is a failure of government. They remain the safety net through which people who cannot drive, walk or cycle - whether that is through health, choice or income - are able to get around. Buses are not an act of charity, but a building block that allow thousands of people to live independent lives. They create the ability to travel to better jobs, to reach those shops where goods are cheapest, or simply to go beyond their home when socialising.

Returning to the decarbonisation of transport, addressing derived demand means focusing on three main approaches:

1. Decarbonising vehicles
2. Moving journeys to decarbonised modes
3. Achieving the same by travelling less

For example, a journey currently carried out by petrol-powered car could be carried out by electric car, moved to an electric bus, or not taken. Reducing the number of journeys can mean relatively direct replacements, such as replacing face-to-face meetings with video-calls, or cinema trips with home-streaming services.[21] Indirect replacements could include greater use of online shopping, so replacing multiple shoppers' car journeys with one delivery van. Alternatively, revitalising local high streets means that people can travel shorter distances to work, shop and socialise.

The danger is to over-focus on changing individuals' existing motivations and demands, rather than offering a better set of choices. For example, protecting private car journeys but asking everyone to buy their own electric car could be very expensive. Asking people to travel less and work or socialise at home can carry indirect costs, such as increasing the cost of renting, buying or heating a home. After COVID, many would say that meeting in person can be more efficient or enjoyable.

Even if the derived demand is unchanged, achieving large increases in uncommon activities is also difficult. Familiar activities are far more easily tweaked. In this light, cycling could struggle to grow rapidly enough to replace a large number of car journeys by 2030. It is harder still to replace the longer journeys that cannot be easily cycled, and which produce the majority of distance travelled.[22] Yet electric cars are only owned by 1.6% of adults with a driving licence and the average age of a car is currently 6.7 years.[23] This means that petrol and diesel car journeys will persist for some years yet.[24] In contrast, combining government coordination and public support would allow electric buses to be manufactured and rolled out quickly, to replace car journeys on a like-for-like basis.

The potential to change transport behaviour is strongly linked to existing familiarity with the change. A powerful indicator of how easily the use of a mode of transport could be increased is whether it is already used once a month. For example, someone getting a train or bus at least once a month should have a basic familiarity with how to find a stop or station, purchase a ticket, and have demonstrated a willingness to travel that way. Travelling less than monthly indicates a high level of unfamiliarity, unwillingness, or lack of access, and so would be more difficult to change.

A successful example of behaviour change in Scotland has been train use. In the twelve years following 2002 the number of surveyed adults using a train the previous month doubled to 30 per cent. From 2014 the figure stopped rising but has not significantly reduced.[25]

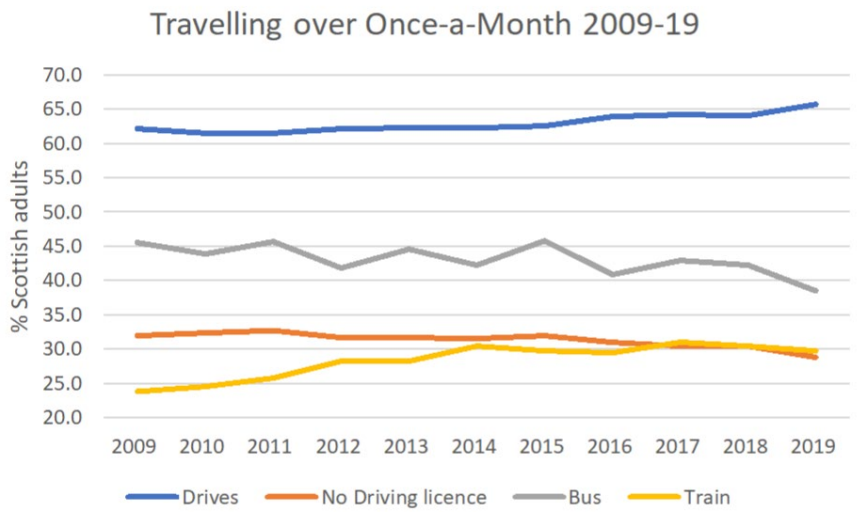
21 Such as Netflix or iPlayer

22 Transport Scotland (2022) Reducing car use for a healthier, fairer and greener Scotland. A route map to achieve a 20 per cent reduction in car kilometres by 2030. https://www.transport.gov.scot/news/reducing-car-use-for-a-healthier-fairer-and-greener-scotland/ A more detailed review of Active Travel's potential will be published in a subsequent report.

23 Scottish Transport Statistics 2020, No39 (2021) Chapter 1, Table 1.6

24 Transport and Travel in Scotland Survey, 2019, Figure 23. The 2019 survey data is used because the 2020 survey data was conducted during COVID. The 2021 release of Scottish Transport Statistics cover up to 2019.

25 Transport and Travel in Scotland Survey, 2019, Figure 28/Table 28.



Looking at once-a-month travel over the last ten years, use of a car has increased faster than access to driving licences. Monthly data for walking and cycling is unavailable, but in 2019 almost a third of Scots stated that they did not walk anywhere as a means of transport in the preceding seven days. 95% of people did not cycle as a form of transport or as a form of leisure during the previous week.[26] The decade of road building has been a missed opportunity for behaviour change.

The opportunity for low-carbon behaviour change is that familiarity with the bus is still high: almost 40% of adults still catch the bus once a month.[27] Even in remote rural areas and small remote towns a fifth of adults use the bus monthly. In large urban areas this rises to over half of adults using it monthly.[28] This is a firm foundation for the bus-based decarbonisation of transport.

26 Transport and Travel in Scotland Survey, 2019, Table 25 and 25a.

27 Transport and Travel in Scotland Survey, 2019, Figure 25/Table 2. Records begin in 2002.

28 Transport and Travel in Scotland Survey, 2019, Figure 27/Table 28.

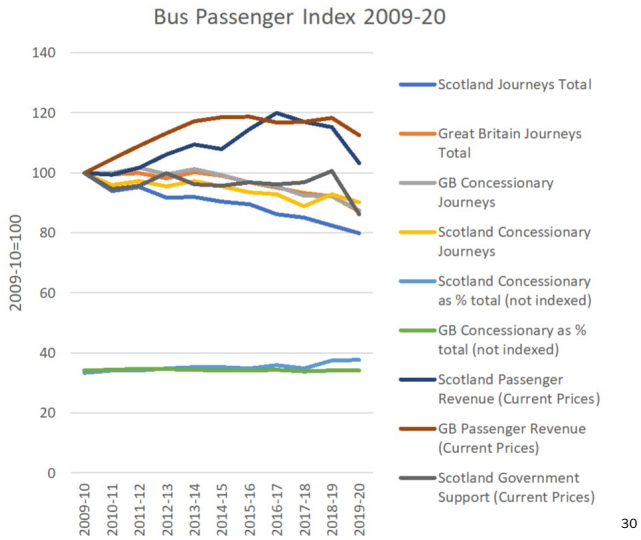
Bus Finances

> Tares in Scotland have increased by 9% over inflation in the last five years.

To understand how the bus network might be rebuilt, we first need to understand where and how it has fallen away. This creates a dashboard showing the key features of passenger fares, government funding and democratic oversight. The dashboard will guide our later proposals for what might be changed.

The next chart brings together a range of key market and government support indicators. It shows the proportion of concessionary journeys rising faster in Scotland than the British average. However, underneath this, the number of bus journeys overall is falling faster. Income from passengers initially rises slowly but as Scottish government support falls so does income, even as fares rise.

Fares in Scotland have increased by 9% over inflation in the last five years, whilst in Great Britain as a whole they have increased by only 4%. However, passenger revenue in Scotland has not increased because there has been a 10% decrease in passengers.[29] This does not only reduce the amount of revenue available to support the network. Falling passenger numbers also push operators to extend the life of existing vehicles, rather than to invest in newer vehicles. This slows down the natural replacement of diesel buses with zero-emission electric vehicles, it means that buses are older, with a lower quality of passenger experience, and increasingly unable to attract fare-paying passengers.



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In total, the Scottish bus network generates 55% of its revenue through fares and receives 45% through government support. In 2019/20 this amounted to £380m passenger revenue and £314m government support.[31] A large part of the funding results from the increasing use of the national concessionary schemes. In 2019, approximately 29% of adults over 16 years old had some type of concessionary pass.[32] This was before the launch of the new Young Persons' (Under 22s) Free Bus Travel entitlement that extended free travel to all children. Over the decade, concessionary fares expanded from 32% to 38% of journeys.

29 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Table 2.8, 2.2a and 2.5.

30 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Tables 2.2 and 2.8. "Government support includes Bus Service Operators Grant, Concessionary Bus Travel and Local Authority gross costs incurred in support of bus services." No UK or GB figures for government support were available. Current prices are viewed as a consumer would see them, i.e. not adjusted for inflation.

31 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Table 2.8. Such figures exclude additional non-revenue support, such as the Scottish Green Bus Fund and the Bus Investment Fund

32 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Table 2.12.

A curious outcome of the current devolution framework is that each nation's concessionary scheme only operates within its own borders. If Scottish pass holders want to visit other parts of the UK they will have to pay the cost in full. The reverse is true for visitors to Scotland, whether daytrippers or workers from Northern Ireland and the North of England, or holidaymakers and visiting family from the Midlands, the South and Wales. Environmentally, this encourages driving and congestion. Socially, it creates barriers that discourage those most in need of support from having a social life that crosses our internal borders.

To put the amount of revenue from fares and government funding into long-term context, evaluation has calculated that over 2011-2021, £4bn was spent by the national government on new roads, or £400m per year. The new Infrastructure Investment Plan has committed £6.96bn to high-carbon transport, whilst Transport Scotland's 16 ongoing or planned road projects are to cost at least £7bn.[33] The national Active Travel (walking, cycling and wheeling) budget will be increased to 10% of the national transport budget by 2024-25, or £320m.[34] Looking at local authorities, in 2018-19 net revenue expenditure on transport was £379 million. Road maintenance accounted for 51% of the expenditure (£195m) and contributions to passenger transport (excluding concessionary fares) at slightly over 25% (£109 million).[35]

In the short-term, the draft Scottish budget for 2022-23 is focused on sticking plasters and inflated figures, not on fixing the foundations of travel in Scotland. The Bus Partnership funding announced in February was the re-announcement of an £800 thousand allocation from a pot of £25.8 million. This is a drop in the ocean when compared to the pre-COVID bus network's annual turnover of almost £700 million. The fund is also controlled centrally by Holyrood, with local authorities submitting bids rather than developing schemes themselves. Commitments to reduce congestion through bus priority infrastructure are spread over multiple years, and add up to a fraction of the amount previously spent on new roads. Almost half of the Network Support Grant - £40m - is temporary funding to support COVID recovery,[36] but bus travel was declining for a decade before COVID. It is also designed to be reduced as passenger numbers recover from COVID – but passenger numbers need to increase many times over if we are to meet the carbon emissions reductions of Net Zero.

In total, the government has created a failing system where it spends a significant amount of money each year on supporting buses, but without fixing the causes of their decline or creating a thriving industry. It regularly spends a larger amount road building, incentivising car travel. Yet increasing bus (and active travel) journeys would also be expected to lower congestion and reduce road wear and tear, so making further savings on journey time and road maintenance. Whilst the new funding for active travel is supported, it may surprise many to read that buses only receive a similar sum. The failure to agree a cooperative solution between the UK nations for concessionary fares restricts the horizons of those who are least able to access alternatives. Yet the missed opportunities on-road are only half the story.

33 Transform Scotland (2021) Roads Debate Briefing https://transform.scot/wp/wp-content/uploads/2021/11/2021-11-17-Roads-debate-Briefing-from-Transform-Scotland.pdf

34 Transport Scotland, (2021) Keeping the wheels in motion beyond COP26 https://www.transport.gov.scot/news/keeping-the-wheels-in-motion-beyond-cop26/

35 Scottish Transport Statistics 2020, No39 (2021) Chapter 10, Table 10.1

36 Transport Scotland (2022) More flexible support to maintain bus services https://www.transport.gov.scot/news/more-flexible-support-to-maintain-bus-services/

Zero Emission Bus Futures

> The government's own research shows how much more could be done.

Spending on transport is not only about buying better journeys. The significant sums create a range of jobs across the country, from infrastructure construction and vehicle manufacturing, to mechanics, dispatchers, network planners and drivers. They industry also anchors a range of jobs in the wider sustainability field. For example, it anchors a range of engineers, scientists and apprentice technicians developing a new generation of electric and hydrogen fuel cells, with applications beyond transport.

Scotland has the potential to be a leader in electric buses. Doing so would save money in our own country, whilst producing opportunities to sell or give that knowledge to the world. Yet despite having commissioned research on what it would take to make the switch from diesel to electric, the government has held back from committing to a long-term plan.

Switching diesel buses to electric reduces their emissions by 98%. The higher the passenger numbers, the more cost effective it is for operators to replace old buses with new, increase service quality, and bring down the number of car journeys. However, to speed up decarbonisation, government has a unique ability to reduce the risk of making these large investments and to coordinate the increased passenger numbers that make the system affordable.

There are around 4,200 buses servicing Scotland's bus routes. At the time of the most recently released statistics, they had an average age of 7 years with only 23 are electric or hydrogen powered. This figure is likely to have increased, but analysis commissioned by the Scottish Government in 2020 revealed that "Scottish bus orders amount to c400 buses per annum. Based on this assumption, it would take 10 years to replace Scotland's current fleet with [electric] buses. However, given both the current economic climate, and the potential barriers to purchasing an [electric] bus, it is likely that it will take considerably longer before Scotland's bus fleet is fully electric."[37] Given the Scottish Government's accelerated 2030 decarbonisation targets – only eight years away - more significant support is required.

Looking to the shorter term, whilst last Holyrood election's SNP manifesto committed to 'remove a majority of fossil fuel buses from public transport in Scotland by 2023',[38] research by the Scottish Parliament's information centre (SPICe) suggested that to replace 2,046 diesel buses by December 2023 would require the replacement of "roughly 76 buses a month for the next 27 months", and an additional £640m.[39][40] Our review of funding revealed that the Zero Emission Bus Challenge Fund (ScotZEB) has awarded only £62m, towards "supporting innovative business models". This will replace 276 diesel buses with electric models, of which slightly less than half will be built in Falkirk.[41] Previous funding includes £40m announced in 2021 to replace 215 old buses with new zero carbon alternatives, another 57 supported through a previous round. This results in 172 buses being built in Falkirk, by Alexander Denis limited, the UK's largest bus and coach manufacturer, and their electric

37 Figure correct for 2020. EY, 2020, Low Carbon Investment - Scottish Bus Electrification commercial and economic content, for the Scottish Government. Available from https://www.cpt-uk.org/media/2dlevyfk/ey_report_low_carbon_investment_-_scottish_bus_electrification_commercial_and_economic_content_report.pdf

38 Written Parliamentary Question, (16 September 2021) Question ref. S6W-02993, https://www.parliament.scot/chamber-and-committees/written-questions-and-answers/question?ref=S6W-02993

39 Edinburgh Evening News (7 September 2021) Ambitious SNP-Greens target to scrap half of Scotland's diesel buses by 2023 met with industry scepticism, https://www.edinburghnews.scotsman.com/news/transport/ambitious-snp-greens-target-to-scrap-half-of-scotlands-diesel-buses-by-2023-met-with-industry-scepticism-3374621

40 The Herald (17 October 2021) £640m funding black hole emerges in SNP's zero carbon buses vision https://www.heraldscotland.com/politics/19652069.640m-funding-black-hole-emerges-snps-zero-carbon-buses-vision/

41 Transport Scotland (2022) Over £62 million for zero emission buses https://www.transport.gov.scot/news/over-62-million-for-zero-emission-buses/

bus partners, BYD.[42] The project has been supported by the Scottish Trades Union Congress and the Just Transition Commission, due to the support it provides to establishing and expanding new skilled jobs in Scottish research, manufacturing and export. However, the government's commitment only tops up the £80m being spent by bus companies and the finance sector. Transport Scotland's headline commitment is only to spend £120 million over five years.[43]

The government's own research shows how much more could be done. Their reporting estimates that over the 15-year lifespan of a new bus, without the bus fuel tax rebate and before the increase in fuel prices,[44] electric buses cost an additional £5,000 to run per year when compared to diesel. If 20 buses are bought this drops to £2,000. Even larger bulk purchases would be expected to further reduce the difference, as could fundamentally shift the country to a primarily electric bus network, allowing a changeover of charging infrastructure and maintenance services. Greater savings could be achieved through capital support for operators to purchase new buses or for operators to lease buses from manufacturers or the government. Full changeover could turn electric vehicles into a net saving over the life of the vehicle. If oil prices remain high and renewable electricity prices continue falling, a full changeover to electric buses would save money even sooner.

Savings could rise further if the cost or risk of bus electric batteries was reduced. Currently the cost of a new battery is approximately 35% of the overall price of a new bus.[45] Although costs have reduced by 30% over the last 10 years, there is still a high degree of unknown risk attached to the lifespan of current batteries. This risk is amplified by the precarious and declining finances of the bus industry, and on the longer distance routes that form a large proportion of Scotland's network. If warranties could be underpinned or the vehicles owned by an external source, this would support operators and manufacturers to de-risk the roll out a new fleet. This could include the government purchasing a fleet of vehicles and then renting them back to operators, allowing operators to focus on efficient day-to-day running, with the government able to use its size, stability and long-term focus to support technological innovation. In so doing they would be supported to manufacture sufficient numbers of electric buses to become a worldwide market leader in this essential, growing industry. The stability of the bulk order would also allow manufacturers to accelerate the alterations that will be required to improve public confidence in public transport, post-COVID, such as better ventilation.

Securing Scotland's leading position in sustainable manufacturing would also create benefits for the wider economy. According to predictions from the Scottish Trades Union Congress,[46] investing £100m buying new electric buses from Scottish manufacturers would create 528 jobs over a two year period, and result in 300 new buses for transport fleets. Building a new battery factory would create 3,187 jobs in just over two years. The wider positive effects of becoming a leader in zero emission vehicle manufacturing could create an additional 5,000 jobs by 2050.[47] It would also allow Scotland to help the world, reducing the global cost of meeting net zero by reducing the cost of electric buses.

Scotland already hosts the UK's largest bus and coach manufacturer. With stable funding, committed through a long-term decarbonisation plan, the industry's future could be secured through a transition to electric vehicle manufacturing. From this manufacturing base, funding could be pooled from across the UK to produce a new generation of buses for the whole country – Scotland, England, Northern Ireland and Wales.

Pooling funds from across the UK to invest in sustainable transport should not be seen as far-fetched. It is the mechanism that successfully decarbonised energy production in less than a generation. The question to ask is why the bus industry has been shrinking, and who would need to pay for a successful decarbonised bus network.

42 Transport Scotland (2021) Over £40 million for zero emission buses https://www.transport.gov.scot/news/over-40-million-for-zero-emission-buses/

43 Transport Scotland (2022) Mission Zero for transport https://www.transport.gov.scot/our-approach/environment/mission-zero-for-transport/

44 Bus Service Operators' Grant, BSOG

45 EY, 2020, Low Carbon Investment - Scottish Bus Electrification commercial and economic content, for the Scottish Government, p17

46 STUC (2021) Green Jobs in Scotland, p52 https://stuc.org.uk/media-centre/news/1587/major-new-green-jobs-report-estimates-up-to-367-000-jobs-in-scotland

47 Department for Transport (2021) Decarbonising Transport, p131 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf

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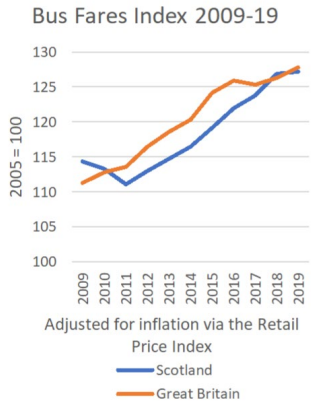
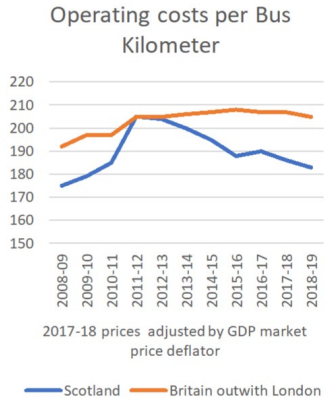
The last decade has seen Scotland’s initial advantages in bus travel eroded away, increasing the difficulty of moving to electric buses.

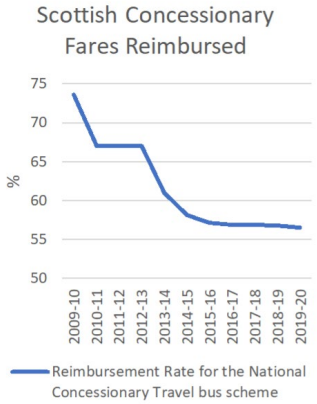
Bus Cuts

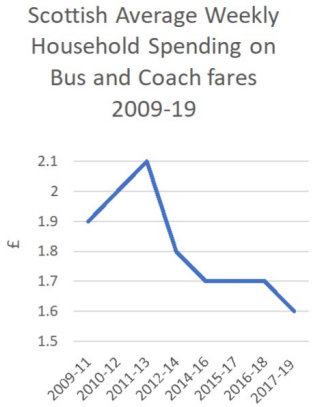
> Given the state of the present day bus network, it is understandable why car travel has become so dominant.

The last decade has seen Scotland's initial advantages in bus travel eroded away, increasing the difficulty of moving to electric buses. Bus fares in Scotland have been rising steadily for the past decade. Whereas price inflation was initially lower than the British average, it has subsequently risen and closed the gap. Operating costs per kilometre have fallen over the same period, but this has not resulted in a price reduction for passengers. In parallel, the amount paid to operators to cover each free journey has been repeatedly and consistently reduced, so that it now covers just over half the price of the equivalent fare.[48] Overall, the average amount spent per household on bus and coach fares in Scotland has declined consistently since 2011.









49 50 51 52

Because the rate of concessionary fare reimbursement is linked to the standard adult single fare, reducing the rate of reimbursement creates an incentive to raise that fare. This would be expected to drive paying passengers away. In turn, as the bus network becomes more focused upon concessionary fares, the greater the need to focus on securing income through reimbursement, rather than by catering to paying passengers. In isolation, blanket measures to increase the number of people eligible for free travel, such as all under-22s and the unretired 60-65s, is at risk of pricing out working age adults on lower incomes.

48 The National Concessionary Travel bus scheme covers Scottish residents with certain disabilities or aged over 60 years old. The Young People's Concessionary Travel Scheme started in 8 January 2007, aimed at 16 to 18 year olds (inclusive) and full time volunteers (aged under 26), and from 2022 became the Young Persons' (Under 22s) Free Bus Travel scheme. The reimbursement rate for the two youth schemes are not noted in the Scottish Transport Statistics.

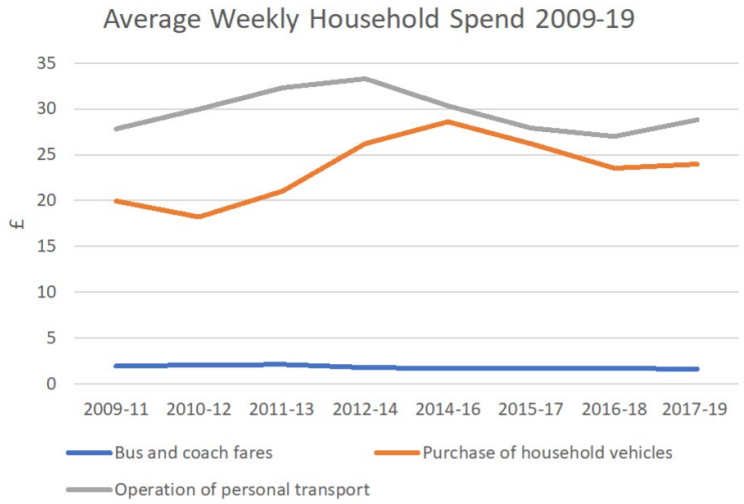
49 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Table 2.5

50 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Table 2.6

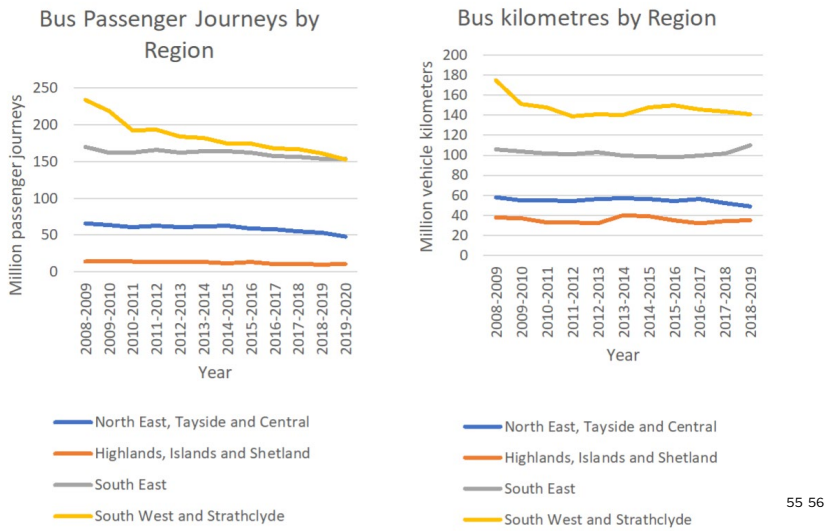
51 Scottish Transport Statistics 2020, No39 (2021) Chapter 11, Table 11.29

52 Scottish Transport Statistics 2020, No39 (2021) Chapter 10, Table 10.8

Given the state of the present day bus network, it is understandable why car travel has become so dominant. Individualised journeys, conveniently timed, are a tempting combination. However, this lack of cooperation has its downsides. Whilst the share of car journeys (including as passengers) is nine times larger than the number of bus journeys, the average household spends 33 times as much money on purchasing and using those vehicles as is spent on bus travel.[53] With fuel prices rising, the cost of driving will have increased. This means that moving a relatively small amount of households' spending from car to bus could transform the quality of the network.



Looking geographically, the popularity and decline of bus services shows significant regional trends. Bus travel has reduced most significantly in the South West and Strathclyde, with journeys reducing by 35% and distance travelled by 24%, over 2008/9 to 2019/20. The South East has seen declines of just under 10%. Together, bus travel in these regions makes up 84% of bus journeys.[54] Despite starting at much lower levels, passenger journeys in the North East, Tayside and Central regions have reduced by 27%, and by 21% in the Highlands and Islands.



55 56

The simplest description of these regional differences is that bus use is concentrated in the central belt, but not only in Glasgow and Edinburgh. Bus use is also high in the areas that are harder to walk and cycle, far from rural and containing a large number of low-income households without cars. This would include large parts of Fife, Falkirk, Lanarkshire and Dunbartonshire, along with towns across the country. Car use is highest in the most rural parts of the country, but this is also where those without access to a car have the most pressing needs and lack of alternatives.

The challenge for increasing the number of fare paying passengers, particularly the 'once-a-month' riders, is to reduce the price, the complexity and the time spent travelling. Different regions of the country have different needs and will need to develop bespoke solutions, drawing upon local knowledge. The main barrier they will need to dismantle is the inconvenience and expense of occasionally catching the bus.

53 Transport and Travel in Scotland Survey, 2019, Table Sum 1

54 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Table 2.2b. The Regional Transport Partnership areas of SPT, SWestrans (Dumfries and Galloway) and SEStran.

55 Scottish Transport Statistics 2020, No39 (2021) Chapter2, Table 2.2b

56 Scottish Transport Statistics 2020, No39 (2021) Chapter 2, Table 2.3a

Disjointed Travel and Eye-Watering Fares

> Whilst the cost of bus travel is a problem, it is a particular problem where the network is disjointed.

The government's chosen system for bus travel in Scotland is complicated, with planning and payment highly unpredictable. This disincentivises people from using the bus, particularly one-off journeys by fare paying passengers. Reducing the number of travelling passengers then leads to a spiral of service reductions and cut-backs. But a second effect is that once someone effectively 'never' uses the bus they become less aware of where the remaining buses run, increasingly out of the habit of catching one, and harder to inform about any improvements. A significant cause of difficult journeys and high fares is the lack of integration between different operators, and across different local councils.

Scotland does not have a publicly accessible dataset that collects together all the information on fares and timetables, as the network is split across a range of public and private operators. In England there are a range of public and private operators, but information on fares and timetables is published as Open Data, allowing analysis.[57] Wales is moving towards making open data available via the publicly-funded PTI Cymru.

In Northern Ireland all buses are run by the publicly-owned Translink, with data published by the government's OpenDataNI. This makes it difficult to calculate the cost of a typical Scottish journey, as experienced by the travelling public.

Councils and bus operators run a variety of schemes that give different prices, depending upon the time and route travelled. The most common examples are that the cost of travel reduces if it takes place entirely within one local authority area, or only uses one operator's buses. Yet only the shortest journeys take place entirely within one local authority. This can make for a highly unpredictable transport experience, as the following examples show.[58]

Cadder and Lenzie are in East Dunbartonshire, on the northern fringe of Glasgow. The bus takes around 20 minutes to travel 7.5 miles into the University Campus for Glasgow Caledonian or the Glasgow School of Art. An adult single from Cadder, the last stop within the 'GlasgowTripper' smart card zone costs £2.50. A few minutes east, from Lenzie and Kirkintilloch, the price is £4.40.

The cost of a day's travel can quickly multiply if someone needs to visit a range of locations, especially if they do not have access to a smartphone. Uddingston in Lanarkshire is extremely well connected by car, sitting next to the junction of the M74 and M73 that funnel traffic into and around Glasgow from the east. A ticket allowing return travel for the 7.5 miles to Glasgow's People's Palace with FirstBus costs £5.80 if bought by smartphone, but rises by almost 10% - to £6.30 – if the passenger buys from the driver. The journey itself lasts just over half an hour. However, once in Glasgow, if they want to get a bus run by a different operator they would need to pay again. So if our traveller from Uddingston wants to go between he People's Palace and the Science Museum, they would need to pay another £4.05 for an adult return on a McGill bus. This discourages travel by exactly the passenger that many would expect the bus to be there for: people wanting to go shopping and carry packages back from the high street, with children, or who simply find it difficult to walk between destinations. The arbitrariness of the divide is particularly clear here: Making the same journey but starting one stop closer, at Broomhouse within the

57 Department for Transport (2022) Bus Open Data Service https://www.bus-data.dft.gov.uk/

58 Calculated using the Traveline Scotland (2022) Journey Planner www.travelinescotland.com

GlasgowTripper zone, would allow unlimited travel on all Glasgow buses and cap the total fare at £5.40.

Journeys that cross between different local council areas but without going into a city can be even more expensive and time consuming – even in the relatively densely populated areas of the Central Belt. To get across North Lanarkshire, travelling the 11 miles from Kilsyth to Coatbridge, takes half an hour by car. By bus it takes an hour, a 20 minute wait in Kirkintilloch, two changes, and new tickets with three different bus operators. The cost is around £15 return. To travel from Stirling to the docks at Grangemouth, in other words to reach Scotland's main industrial cluster from the next closest city, takes 20 minutes by car. By bus it takes an hour and a half, including a 20 minute wait to change buses, and costs almost £15.

In more rural areas, costs, time and inaccessibility can escalate quickly. Tifty, a village 45 minutes car drive from Aberdeen city centre,[59] has no bus service. It requires travellers to walk 25 minutes to Fyvie Castle, for a return ticket costing £19.80. In the Highlands, there are 19 different bus companies operating across a vastly fragmented and difficult to understand network. In the most remote areas public transport is provided by 'dial-a-bus', which take travellers directly to their destination (rather than between bus stops), so long as the booking is made before 6pm the night before. However, the explanation of how to book is found on a sub-page of the Highland Council website, on a downloadable PDF flyer, with no details of the cost.[60]

There are pockets of excellence, but these are somewhat unpredictable. The 'ABC' ticket covers all operators in Dundee and East Fife, offering unlimited day travel for £9. Council-owned Lothian buses are the primary bus operator for Edinburgh and the surrounding area, for which a day ticket is £4.50. The Glasgow tripper zone extends through much of Renfrewshire and Dunbartonshire. The Highland's dial-a-bus services are not restricted to those with particular transport needs, and are open to any member of the public.

Overall, whilst the cost of bus travel is a problem, it is a particular problem where the network is disjointed. Because peoples' lives are larger than their local council area, even relatively short journeys that cross these administrative borders can cost huge amounts. Because our bus networks have decayed they now require people to make slow journeys, with waits, detours and additional payments, to travel relatively short distances. Dismantling these barriers would transform peoples' ability to catch the bus, but requires a governmental solution based on cooperation at the regional scale. This system is increasingly being built in England.

59 Train and bus station

60 The Highland Council (2022) Dial-a-bus https://www.highland.gov.uk/info/1526/public_and_community_transport/111/public_transport/5

Nationalising the Network

> By making buses better to use, franchising can increase the total fare income whilst still reducing individual prices.

The devolved mayoral system in England gives elected figures the powers to organise and regulate bus networks across the areas that people actually work and live. Rather than being limited to individual local authorities, they are empowered to coordinate across wider areas, and to align with plans to support economic growth. They do so with a democratic mandate to focus on improving their regions by bringing local people and expertise together. This has led to significant progress in improving public transport.

Perhaps most importantly, mayoral improvements are not driven by bringing the bus operators themselves into public ownership. There are a number of council-owned operators across England, Wales and Scotland, many of which are the pride of their passengers.[61] However, public ownership does not stop them having to compete with private operators. In Scotland, the largest publicly owned company - Lothian buses - only operates across a relatively small part of the country.

In much of the world, London's transport network is held up as a gold standard, yet its bus operators are not publicly owned. Instead, the network is 'nationalised' through franchising. Transport for London sets requirements in terms of timetabling, fares and bus quality - including air pollution standards or the use of electric vehicles. Private bus companies then bid to operate the set routes. For passengers this allows travel on 19 bus operators to be combined under one 'oyster card', which can be loaded online or with cash at all underground stations, but also at many corner shops. The contactless card speeds up travel time on buses and reduces the cost of maintaining stand-alone bus ticket offices. It also supports local high streets by integrating public transport use with encouraging passengers and tourists into local shops. The outcome is a flat fare of £1.55 for a single ticket allowing unlimited changes, or £4.65 for a day's unlimited bus travel, through an area stretching further than the distance between Dumbarton and Motherwell, or from Falkirk to Levenmouth.

The oyster card also has important social benefits. Because the oyster card can be topped up with cash it makes sure that those without access to contactless payments or smartphones can still access the lowest fares. The system also supports safety, as it allows cardholders who have run out of credit to make one last journey. Passengers who are caught short, particularly late at night, are not left vulnerable at the roadside or required to borrow money from strangers. They effectively borrow the fare from the Mayor, then top up before travelling again.

The Mayor of Greater Manchester, Andy Burnham, has announced that the bus network will be taken under public control by 2024. Buses crossing Manchester's 10 local authorities will still be run by private companies, but the Greater Manchester Combined Authority (GMCA), via 'Transport for Greater Manchester' will have control over fares, timetables and routes, taking in buses, trains and trams.[62] By winning a High Court case that confirms their franchising plans are legally valid, Manchester has reduced the risk and demonstrated the feasibility of other devolved bodies doing the same.[63] The plan is expected to cost £134m, to cover a population around

61 Whilst many call this 'nationalisation', as most publicly-owned bus operators are owned by local councils the technical term is 'municipalisation'.

62 GMCA (2019) Doing Buses Differently - Consultation on Proposed Franchising Scheme https://greatermanchester-ca.gov.uk/what-we-do/transport/doing-buses-differently-consultation-on-proposed-franchising-scheme/

63 Local Government Chronicle (2022) Legal win paves way for bus franchising across devolved areas https://www.lgcplus.com/politics/devolution-and-economic-growth/legal-win-paves-way-for-bus-franchising-across-devolved-areas-10-03-2022/

half the size of Scotland's.[64] Manchester's network will have maximum fares of £2. Further announcements of the intent to develop or consider franchising have been made by Labour Mayors in Liverpool,[65] Newcastle and Sunderland,[66] Sheffield,[67] Leeds[68], and even the relatively rural mayoralty for Cambridgeshire and Peterbrough.[69] Multiple rural areas in England are believed to be negotiating to introduce bus franchising schemes as part of their county deals.[70] Conservative Mayors have committed to Bus Partnership schemes on a similar model to the Scottish Government. The groundwork prepared by Labour devolved mayoralties in England frees the Scottish Government to take bold, nationwide action that demonstrates the potential of franchising at a larger scale.

For rural areas, the Channel Island of Jersey already runs a bus franchise, with a £2 maximum fare (by contactless payment), discounts for using travel cards, unlimited transfers within an hour's travel, and passenger growth of almost 40% in the first five years (2013-2017).[71]

By bringing network planning under a regional roof, franchising creates greater opportunities to smooth away the sharp edges that come from crossing local council borders or changing between buses. It can insist upon and support the meeting of particular pollution standards. Authorities can then support travel planning by individuals, experiment with new routes, and shift from some people receiving blanket free travel to everyone receiving personalised support. For passengers it creates one simple to recognise brand, a single point of contact for queries, and a more efficient way to travel. It replicates much of what people like about Lothian buses, but with greater potential to expand into areas that are not currently covered by a publicly-owned operator.

The benefit of franchising is that it bring stability and clarity to an otherwise chaotic system. It means common ownership of the network, not of the bus companies. It does not mean creating a bottomless subsidy, but instead uses the coordinating power of the state to create efficiency.[72] Now that mayoralties across England have set to work upon developing their own franchising plans there is increasingly a pool of expertise to be drawn upon, complemented by the knowledge established in Northern Ireland's Translink, and in Wales' evaluation of franchising's potential. Strathclyde Partnership for Transport, already equivalent to a 'Transport for Greater Glasgow', has a long history of sharing expertise with the largest English cities as their equal. This means the foundations are all in place for Holyrood to coordinate bold action across Scotland.

By making buses better to use, franchising can increase the total fare income whilst still reducing individual prices.

64 Office of National Statistics (2021) Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland
65 BBC News (2022) Liverpool bus network franchise plan moves forward
66 Chronicle (2020) Five years after Tyne and Wear bus plans rejected Government says it could hand control to councils
67 Yorkshire Live (2022) Yorkshire buses 'in crisis' as major changes on the cards for region's transport network
68 Insider Media (2021) Mayor moves forward with bus franchising plans
69 Cambridgeshire Live (2021) Bus franchising 'top priority' of newly elected mayor
70 Local Government Chronicle (2022) Legal win paves way for bus franchising across devolved areas
71 States of Jersey (2017) Jersey Bus Franchise: The Commissioner Perspective, and https://www.libertybus.je/fares
72 Urban Transport Group / PTEG (n.d.) Bus Franchising

Bus to the Future

> We can make affordable transport available to all, with Net Zero as an opportunity to improve the country through cooperation.

The task as we approach 2030 is to rapidly increase the number of fare-paying passengers travelling by bus. This means creating a transport system that makes journeys cheaper, faster and more reliable. Done correctly, the bus network can cost less than car travel, pay for its own decarbonisation, and grow a globally-leading manufacturing industry. Improvements can start now, reducing our dependency on Russian fossil fuels and bringing down the cost of living.

We can make affordable transport available to all, with Net Zero as an opportunity to improve the country through cooperation. This means cooperation within Scotland and across the UK, pooling the best from each nation to create something better than any one could achieve alone.

Decarbonising transport through the bus network means catalysing behaviour change immediately, building upon the high numbers already familiar with the network by incentivising them to travel by bus more often. We should be aiming to create a network that can replace the car for as many people as possible, before 2030. In the short term, even a small increase could multiply the amount of funding circulating through the system. Different regions would need different approaches that ensured their local needs are met, but a truly seamless system would allow for UK-wide travel.

We call on the UK and Scottish governments to work together and implement the following:

1. Fair Fares. We need to reduce the cost of bus travel so that it is affordable for everyone. This means moving away from a system in which an increasing number of people receive free travel, irrespective of their income, with those on the lowest incomes increasingly paying the difference. This is unjust. We suggest setting the target that by the end of the Scottish parliament, at 2022 prices, a 12km or 7.5 mile journey should cost a maximum of £2.

Securing this reduction in price without tying into a long-term subsidy means rapidly increasing passenger numbers. In the long term, we want to see well-priced buses running close-to-full, rather than subsidised buses running close-to-empty. To double the pre-COVID level of funding from fares would require each household – not even each person – to spend £3.20 per week. This would be less than one return journey at the £2 rate.

To kick start a bus-based recovery from COVID, we suggest doubling the amount of government support to the bus industry. This means investing 10% of the national transport budget, sourced through the cancellation of road building, topped up by savings from the reduced cost of road maintenance that would result from reduced car usage. It will help people of all ages, throughout their lives, to receive a fair level of support and to establish sustainable travel behaviours.

The UK government should release additional funds to support bus decarbonisation. This recognises that whilst transport is devolved, fuel is currently a matter of national security. Additional funds would be allocated according to the Barnett formula, demonstrating the ability of the Union to act on reserved matters in a way that improves everyday lives.

The funding released by government would pay for prices to fall, routes to expand and service frequency to rise - immediately. In turn, the government should identify and commit to maintaining a specified minimum level of service until the 2030 carbon reduction target. If announced this year, the timescale is long enough that drivers can plan to change their travel needs in order to capture the financial savings of not replacing cars at the end of their working life.

2. Transport for Scotland Authorities. A new and powerful set of transport authorities would be set up to deliver regional franchising. These would enhance the seven existing regional transport partnerships by giving them the powers equivalent to Transport for London, and control of the funding announced above. They would be responsible for achieving fully-functional

franchising by 2030. This would be equivalent to turning the Strathclyde Partnership for Transport, who currently run Glasgow's subway, into a fully integrated Transport for Strathclyde, directly responsible for the bus, subway and any future metro in the region. Each one would be responsible for deciding how to apply their additional funding through a franchising system, with the aim to decarbonise their bus fleet and increase ridership in line with the 2030 climate targets.

The regions would be expected to cooperate and share their successes, including through establishing a 'centres of excellence' training and research network. This could include the Lothian partnership collaborating with other levels of UK government to share expertise on combining franchising models with publicly-owned bus companies. It would also allow the more rural authorities to develop innovative models of on-demand common transport provision, less like a traditional bus timetable and more like a nationalised Uber pool taxi.

The recent High Court case on Greater Manchester's franchising plans prove that passenger fluctuations caused by COVID need not prevent the establishment of franchising. The first step towards establishing franchises could be combined with overseeing the regional distribution of COVID-recovery and national bus decarbonisation funding, allowing the transport authorities' staff to be assembled and gain expertise whilst the franchising deals are developed and signed off.

Making a clear move on francising would benefit Scotland and the wider UK. Drawing on the expertise established in the front-running English Mayoralties, Northern Ireland and Wales means that Scotland does not have to carry the full risk and cost of developing a new franchising model from scratch. Yet a Scottish national commitment to franchising, properly funded, would be the biggest new commitment in the UK. In turn, Scotland would be able to play a leading role in developing and sharing franchising models that work for more rural areas, and which allow passengers to travel between regions.

3. A single travel card, that starts in Scotland but works across the UK. To simplify travel planning, the national government in Holyrood should organise the creation of a single travel card system, so that one card allows travel across Scotland. This means that the regional transport partnerships would practically organise the bus network in and between their own areas, but that passengers would not need to worry about where each one starts. This would be comparable to how the national rail website supports travel planning and booking for all train companies, so that multiple changes or operators can be covered by a single ticket.

The system is an opportunity to address safety and accessibility concerns as well as provide cost-effective travel. It would mean ensuring that cards can be loaded with money at a range of locations, so that those without smartphones and contactless payment, for whom bus travel is particularly important, can access this social and economic lifeline. It would mean a way to ensure that travellers caught short, left without fare-money for whatever reason, are able to make a one-off journey to safety.

To support sustainable travel, tourism and social ties across the UK, the system should aim to work with the smartcard systems of other regions in England, Northern Ireland and Wales. The UK government in Westminster should fund the payments for concessionary passes used outside their home nation. It should also develop discounts that encourage people to holiday in the UK without use of a car, helping holidaymakers to travel sustainably, whilst also reducing needless congestion in popular rural destinations.

4. An industry-building, world-leading, UK-wide bus decarbonisation agreement. The UK and Scottish governments should plan for the long term, using their unique strength to anchor a just transition. We would commit to decarbonising the entire UK bus fleet, pooling funds from across each local and devolved government, alongside economic development, aid and research-innovation funding.

The bus decarbonisation agreement should showcase the best of joined-up government across the union. Convening a COP-UK, it should assemble a bulk purchase agreement that drives down costs, in the same way our NHS uses its size to negotiate the best deals with medical suppliers. With a stability that supports long term planning, rather than overheating manufacturers with a massive one-off purchase, it should be a multi-year commitment that our manufacturing industry can restructure itself around. This will help it to attract private investment and spin-off pioneering high-tech export industries. The commitment should be made quickly, so that we start moving towards our climate goals, and then demonstrate how UK-wide agreements allow for a faster acceleration than any one nation could achieve by itself.

The security of a government agreement and bulk purchase structured to meet the 2030 climate targets will be linked to innovation funding, creating the security required to develop and underwrite a new generation of manufacturing in Scotland. Funding will be designed to reduce the cost of electric buses, particularly batteries, so that they become better value than diesel and suitable for international export. Upskilling, retraining and redevelopment will be built into the programme, so that workers in declining industries are helped into new employment, on sites with appropriate transport links. As part of a strategy for long term economic growth and investment, this would ensure that Net Zero is an opportunity to make our country better, by investing in those areas most in need of a helping hand.

Creating a world leading bus manufacturing industry will allow us to support net zero transport by others. By driving down the cost of electric buses we can make it more affordable for the world to transition away from fossil fuels. It also increases our ability to support economic and social development amongst those most in need. We call on the UK government to commit to funding UK bus manufacturers to immediately maximise their production of zero-emission buses. As a one-off investment in national security, they should guarantee that any buses manufactured during 2022 that are not purchased by the UK's bus operators will be donated to countries seeking to reduce their dependency on Russian oil and gas. Where donating this technology would be inappropriate, operators will be reimbursed so that existing, working vehicles can be donated to support the rebuilding of bus networks in countries, such as Ukraine, that are recovering from conflict.

Conclusion

The UK remains the president of COP26 until next Autumn, giving our country a unique opportunity to accelerate global progress on climate change. Our Scottish Future believes that the evidence is clear – cooperation is the most effective way to move forwards. It is the fastest way to decarbonise our transport sector, and it builds the good jobs in growing industries that we need to secure support for net zero.

We call on the Scottish and UK Governments to accelerate the radical changes required by a new era of sustainable transport: fair fares, franchising, electric buses and a single travel card. This is a plan that offers immediate improvements to the cost of living crisis, brings each part of the country together around shared goals, and supports the move to net zero.

We hope you will join us on the journey.

About the Authors

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Our Scottish Future believes that good government in Scotland and across the United Kingdom has to be based on the values of cooperation, empathy, solidarity and reciprocity.

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