TransportPlanningSociety

State of the Nations: Transport planning for a sustainable future

October 2020

Foreword

Stephen Bennett
Chair
Transport Planning Society

It is my pleasure to present this report to you, as a record of the current state of transport and transport planning across the nations of Great Britain. It highlights what is going well and areas where we would like to see improvements, in order to achieve our desired outcomes for a sustainable future - a low carbon transport system and better places for people.

The initiative started before the current Covid-19 pandemic, which has massively impacted and disrupted travel demand and travel patterns across the nations. As such, we have tried to record the trends leading up to the pandemic, and acknowledge some of the changes we have seen since it started, although many of the longer term impacts remain to be seen.

This presents a challenge, but it is also an opportunity for the transport planning profession and key stakeholders in national and local government to consider what changes we could make that would help us create an efficient, integrated and healthy transport system, giving people easier access to essential services, jobs, shops, leisure facilities and their friends and families.

For the first time, we have brought together a comprehensive review of all aspects of the transport system that combine to produce the outcomes we see around us. We look at travel trends and patterns, the impacts of this travel behaviour, current government policies, local and regional transport and spatial planning, transport planning skills and capabilities, spending and investment, transport taxation and charges, and transport appraisal methods.

From this we are able to draw key conclusions and make some clear recommendations for government and for the transport planning sector. I urge you to browse the report and consider and support the recommendations. We already have a world-class transport planning profession. I believe that working together with stakeholders in government and other organisations, we can further improve transport to provide a better quality of life for people and communities across the nations.

I would like to thank everyone involved for their hard work on the report, my colleagues on the TPS Board and Steering Group, and the team at the University of Hertfordshire. I hope this will be the first in a series of these reports that can track and monitor the state of transport planning in our nations and play a part in improving transport for everyone.

TPS STEERING GROUP

Stephen Bennett, Chair
Justin Bishop, Board Director
Lynda Addison OBE, TPS Planning & Transport Lead
Keith Buchan, Skills Director
Andy Costain, Business Manager

UNIVERSITY OF HERTFORDSHIRE REPORT AUTHORS

Stephen Joseph, Visiting Professor
Alexandra Buckland-Stubbs, PhD Student and Visiting Lecturer
Sue Walsh, Principal Lecturer & Smart Mobility Unit Project Manager
Scott Copsey, Director Smart Mobility Unit

Introduction

This State of the Nations report was commissioned by the Transport Planning Society to look at the current state of transport planning in Britain and to draw conclusions and make recommendations on how it could be improved. The research was undertaken by the Smart Mobility Unit at the University of Hertfordshire.

The report has been prepared at a time of profound and rapid change in travel patterns and in transport policy and spending, with the impact of Covid-19 and the lockdown and restrictions in response to it. In some cases, therefore, it refers to the pre-Covid situation, while recognising that this has changed, and that the future will be different. However, most of the challenges facing transport planners remain the same, especially on decarbonising transport.

Good transport planning will be needed to tackle this and many other challenges. Transport planners work on a very wide range of projects, from major developments like rail upgrades to local projects like school streets. They also develop long term transport strategies and investment programmes. Despite their varied work, transport planners are united in helping people to get to places to live healthy and meaningful lives.

The report covers Great Britain – England, Wales and Scotland, as they have similar transport governance arrangements and travel characteristics. Northern Ireland is not included in the assessment as it has quite different circumstances in transport terms, for example more centralised transport functions and a vertically integrated rail system, and is therefore not directly comparable.

Executive summary

Current travel patterns need to change dramatically

Travel in Britain is dominated by motor vehicles. Most journeys and mileage are by car, and most goods transport in Britain is by vans and trucks.

Huge immediate changes in travel have come with the onset of Covid-19, with people working from home, a collapse in public transport use and a substantial increase in cycling and walking. However, even before Covid-19, travel was changing. Overall travel – journeys and mileage - has declined in the last 20 years, even with economic growth, and car journeys have fallen, while van traffic has increased by over 50% and rail use has grown. Technological developments are also changing travel patterns and options; vehicles are going electric, and the use of data, mobile phones and apps are changing the way people travel. New mobility options, such as shared and driverless cars and e-bikes, have the potential to change travel significantly.

The dominance of the car for personal travel has brought benefits but also huge downsides, both to the vehicle owner and to wider society. Health problems from air pollution and lower physical activity, a continued high number of deaths and injuries from road crashes, severance of communities, and economic impacts from congestion. Above all, transport is now the largest source of UK emissions of greenhouse gases (GHG) so is key to any strategy to tackle climate change and improve people's health and wellbeing.

Transport planning needs to be more inclusive: it needs to unhook people from car dependence, giving them healthier and more sustainable travel choices, including travelling less. It also has to help tackle climate change; previous patterns of surface travel, dominated by private cars and trucks fuelled by oil, must change dramatically.

Transport decarbonisation plans are welcome, but they need to link to spatial planning and to transport spending priorities

The UK Government is developing a Transport Decarbonisation Plan and this is very welcome; the Welsh and Scottish Governments are already working on similar plans and strategies. **Transport policies need to provide a clear route map to net zero by 2050 and to meet the five-year carbon budgets set under the Climate Change Act. This will involve "avoid, shift, improve" strategies – reducing travel through better planning, shifting travel from low occupancy motor vehicles to shared, active and sustainable transport, and electrifying and improving the motor vehicles. These policies should also inform transport spending priorities.**

There are national transport strategies in Wales and Scotland, but there is no national transport strategy in England. **The UK Government should draw up a national transport strategy for England to provide a framework for and to consolidate its different strategies and guidance.**

City-region transport authorities are effective, but outside these areas, transport and spatial planning is fragmented: in general, local authorities do not have the powers they need to manage transport effectively

Devolution of transport powers and funding to local and city-region transport authorities is welcome and has been shown to work. **The Government should continue with this approach and extend it elsewhere, reducing the fragmentation and complexity of transport decision-making and increasing accountability. In all three countries, local transport authorities and sub-national transport bodies should have the powers, duties and funding to tackle transport challenges, especially reducing carbon emissions.**

Spatial planning and transport planning are separated at national and, in many areas, at local level. This separation does not support the creation of sustainable and attractive places to live, work and invest. The London system, where statutory transport, economic and spatial plans are developed in tandem by a democratically accountable mayor, should serve as a model. **New planning and devolution/local government plans in each country should promote integrated transport and spatial planning so as to reduce the need to**

travel and help tackle climate change and social exclusion. The Government's proposals for reform of the planning system provide an opportunity to achieve this.

Transport planning is an increasingly valued profession that can support the delivery of the government's objectives, but there are skills gaps

There are now high-quality professional qualifications, covering all levels of work, and an established professional development scheme and these need more recognition and support. **The Transport Planning Professional qualification, and associated professional qualifications, should be recognised in England and Wales, as the TPP is now in Scotland, as relevant or essential qualifications for everyone carrying out transport projects. Employers of transport planners should support and fund their training and professional development.**

Transport funding needs reform - it should be consistent with and support transport policy objectives

Governments have been providing significant funding for public transport, especially rail, and have continued to do so through the pandemic. They have also provided significant new funding for active travel. However, significant funding in all three countries is still going on major road projects, and this appears to run counter to Government transport objectives. **Transport projects which increase carbon emissions must be withdrawn and funding for low and zero carbon transport projects and networks increased. The Governments should reduce the cost of using public transport and allow local authorities to do so in their areas.**

Local authorities should have a long term funding regime for transport, so that they can plan ahead and spend effectively. Funding for packages of local measures to support zero carbon and sustainable transport should be increased. There should be more revenue funding to support transport services such as local bus and community transport services, which have important social and environmental benefits. Governments and local authorities should promote and fund "Total Transport" schemes to co-ordinate and bring together different transport services and funds from different public bodies.

Transport taxation should be reformed to support decarbonisation. Local authorities should have more powers to raise funding for transport and should make greater use of existing powers.

Future motoring taxes and charges should be reviewed to align with and support decarbonisation targets. The 10-year freeze on fuel duty has resulted in motoring costs reducing in real terms, while public transport fares have increased. A review of future ways to charge for vehicle ownership and road use is needed: revenue-raising options should include more radical ideas, such as an "eco-levy" on car use to pay for improved and cheaper public transport.

Local authorities should have a wider variety of powers to raise funding for transport, as local authorities in other countries do, and should be encouraged to make greater use of existing charging powers such as workplace parking levies, to fund transport and to manage traffic and congestion.

Transport modelling, forecasts and appraisal methods need reform

The current systems of transport appraisal, forecasts and modelling do not reflect current realities and priorities, notably decarbonising transport, support for disadvantaged people and communities and the promotion of active travel. **The Government should conduct a fundamental reform of these systems and the business cases that result from them to ensure they support and deliver transport policy objectives.**

In conclusion

The UK has a tradition of good transport planning. Transport for London is a much-admired transport authority: other city-region transport authorities and the devolved administrations have been able to develop and run effective local transport systems and have ambitions to do more. Governments should give transport planners, especially in local and sub-national authorities, the policies, tools, long term funding, data and freedoms to improve the transport system for all users to provide a better quality of life for people and communities across the nations.

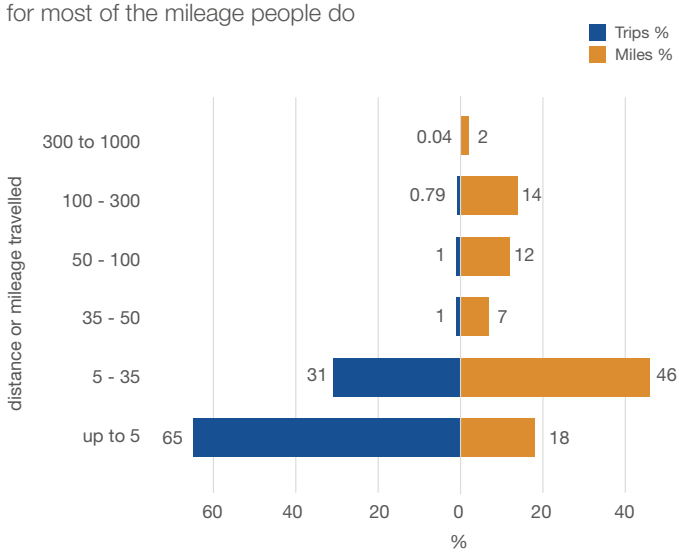
Section 1
How we travel: patterns and trends

For most of the last 50 years, the story of travel in Britain has been about the rise in car ownership and car use, and the dominance of the roads for freight transport. In 2019, most personal travel was by car, as driver or passenger, accounting for 61% of trips and 77% of distance travelled in England[1]. In fact, walking, often overlooked in discussions on transport, is the next most important mode of travel, accounting for a large proportion (26%) of trips and a big proportion of local travel (58% of trips under two miles are made on foot[2]). 71% of the population walk at least once a week for 20 minutes or more. In 2019, on average people spent 35 minutes a day travelling by car (as driver or passenger), 11 minutes walking and 13 minutes on public transport.

Much transport discussion focuses on commuting and education trips. In England in 2019, 61% of commuting trips were made by car, 12% by walking, 12% by rail and 8% by local bus. Education travel, including adults taking children to school, was 41% on foot, 45% by car, and 10% by public transport (bike was just 2%)[3]. However, commuting and education accounted for only 15% and 13% of trips respectively in 2019 - the most common reason for travelling was leisure (26%) followed by shopping (19%). "Leisure" covers a range of trips – visiting friends and relatives, entertainment, sport, holidays and day trips; 70% of these trips were by car.

Miles versus trips (England, 2017)

Note: a small proportion of trips account for most of the mileage people do



Local Government & Decarbonising Transport, Marsden & Anable, Leeds ITS

However, a different picture emerges when looking at travel distance. A small proportion of trips account for a large proportion of personal mileage[4]. Older analysis shows that in 2002-6, 25% of mileage came from the trips between 10 and 25 miles[5]. Rail travel accounts for just 2% of trips and 10% of mileage overall but has a much higher share of travel over longer distances, accounting for 16% of all trips over 50 miles and 25% of journeys between 250 and 350 miles[6].

These figures are England-wide averages and they mask differences in travel behaviour by gender, ethnicity, income and age, and in different areas. In 2019, men made 8% fewer trips than women in England, but

1 National Travel Survey, Department for Transport, 2019, https://www.gov.uk/government/statistics/national-travel-survey-2019
2 Ibid, table 0308
3 Ibid, table 0409
4 Analysis of the National Travel Survey by Anable and Adeel in "Local Government & Decarbonising Transport" by Anable and Marsden (ITS Leeds, 2020) https://www.local.gov.uk/sites/default/files/documents/Professor%20Jillian%20Anable%20and%20Professor%20Greg%20Marsden.pdf
5 Carbon Pathways Analysis. Informing Development of a Carbon Reduction Strategy for the Transport Sector (Department for Transport, 2008), quoted in High Speed Rail Leaders Group, August 2020 https://www.rail-leaders.com/wp-content/uploads/HSRG-Decarbonising-Transport-Report.pdf
6 National Travel Survey, Department for Transport 2019, https://www.gov.uk/government/statistics/national-travel-survey-2019, table 0317

travelled 17% further. As the National Travel Survey summary says, "This partly reflects differences in the type of trips made. Women make more trips for shopping and escort education, which tend to be relatively short, whereas men make more commuting trips, which tend to be longer"[7]. More men than women have driving licences. However, this has been changing; women's licence holding has increased by 15% from 56% in 2002 to 71% in 2019, while the proportion of men over 17 years with driving licenses has remained at 80% since 2002.

Car ownership and travel also varies by ethnic group. In 2019, White people made an average 994 journeys per person per year, while Asian people made 845 per person, and Black, African, Caribbean or Black British people made 783 journeys per person. 39% of Black people were in households without a car, against just 17% of White people and 22% of Asians[8].

As might be expected, travel patterns also vary depending on the type of area. Whereas those living in bigger cities travel just over 5,000 miles a year, of which 3,373 is by car, those in rural villages travel 9,700 miles a year, of which just under 8,500 is by car[9].

There are sharp differences in travel and car ownership by income. In 2019, 55% of English households in the bottom 20% of household income owned at least one car, compared to 86% of households in the top 20% of household income (overall, 76% of households owned at least one car). Households with no cars make around 30% fewer trips and travel about 60% less in mileage than households with a car, and the lowest income households make nearly 20% fewer trips and travel 40% less in mileage than the average household[10]. In rural areas this disparity is increased, with reduced public transport.

The results for England are largely mirrored in Scotland. Between 1999 and 2017 motor vehicle kilometres increased by 20%, total distance cycled increased by 22%, bus passenger numbers fell by 15% and rail passenger numbers rose by 58%. Most journeys were short – 16% under 1 km, 53% under 5 km. Of the journeys under 1km, 34% were by car, 62% on foot. 71% of households had at least one car, slightly lower than in England. Even before Covid, there was an increase in the percentage of people working from home. In Scotland this rose from 7% in 1999 to 16% in 2018.

Some travel statistics in Wales are included in the National Survey for Wales[11]. This shows that there has been a modest increase in the percentage of people walking and cycling at least occasionally. Car ownership and use is higher than in England and Scotland – 87% of households have access to a car, while 75% of journeys to work are by car, 13% on foot and around 10% on public transport.

7 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/906276/national-travel-survey-2019.pdf
8 National Travel Survey op cit, table 0707 https://www.gov.uk/government/statistics/national-travel-survey-2019
9 National Travel survey 2019, op.cit, https://www.gov.uk/government/statistics/national-travel-survey-2019, table nts 9904
10 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784685/future_of_mobility_access.pdf
11 https://statswales.gov.wales/Catalogue/National-Survey-for-Wales

Changes in travel demand

Travel in Britain has undergone some significant changes. For many years, the numbers of journeys people were taking remained constant overall, at around 1,070 or so per year, but the average length of journey and car mileage increased as increased car ownership made it easier and cheaper to make longer journeys.

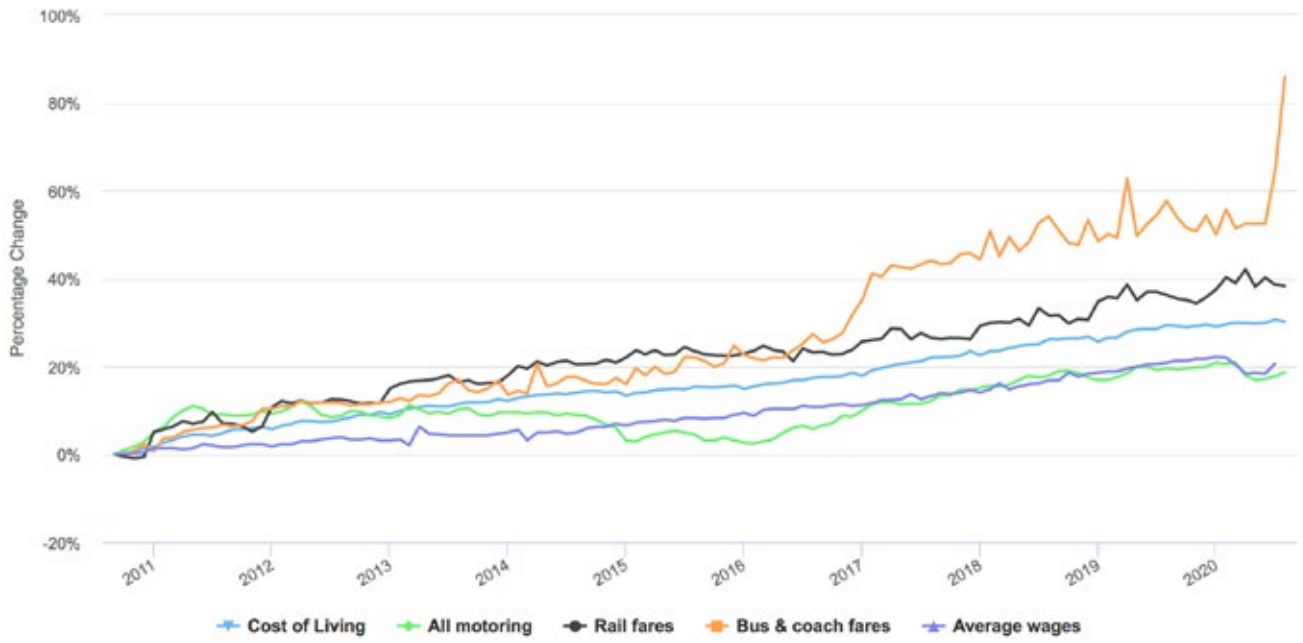
For many years, transport planners assumed that this would continue, and that as people became richer they would travel more[12]. However, since 2002, there has been a decline in travel overall (to around 953 trips per year in England), mostly due to the reduction in the number of car trips – 13% from 2002 to 2019. Distance travelled has fallen in the same period by 10%, from 7193 miles per person per year during 2002 to 6,500 in 2019. Bus use has also fallen (outside London by over 30% in trips and 18% in distance travelled), though rail travel continued to grow throughout this period.

As we have seen, most travel is still by car, and there are reasons for this. The location and design of development can have a big impact on travel patterns; there has been a trend towards new developments being built around the assumption of car ownership and use, with high levels of car parking and limited or no provision for alternatives[13]. As a result, the distance needed to access services and shops has grown[14], and these trips are generally quicker by car.

Another major influence on how people travel is cost. Over the past 10 years, bus fares have increased by 54%, while rail fares have increased by 40% and motoring costs by 16%[15]. For comparison, over that period the cost of living (retail price index) went up by 31% and wages by 19%. This shows that public transport fares have increased by more than inflation, whereas motoring costs have reduced in real terms. Some put this down to Government policy - fuel duty has not been increased over the last 10 years, whereas rail fares have been subject to above inflation increases.

Change in the cost of travel in the last 10 years

Motoring costs, bus rail and coach fares, wages and the cost of living



RAC Foundation (Source: ONS)

12 See for example para 3.2 in "Transport 2010: a 10 year plan for Transport", DETR 2000), https://webarchive.nationalarchives.gov.uk/20081023035324/http://www.dft.gov.uk/about/strategy/whitepapers/previous/transporttenyearplan2000?page=6

13 www.transportfornewhomes.org.uk

14 https://www.gov.uk/government/statistical-data-sets/journey-time-statistics-data-tables-jts

15 https://www.racfoundation.org/data/cost-of-transport-index

There have been particular changes in young people's travel. In general, young people are learning to drive later and are driving less than previous generations: "driving licensing among young people peaked in 1992-4, with 48% of 17-20 year olds and 75% of 21-29 year olds holding a driving licence. By 2014, driving licence holding had fallen to 29% of 17-20 year olds and 63% of 21-29 year olds. Between 1995-99 and 2010-14 there was a 36% drop in the number of car driver trips per person made by people aged 17-29, with a fall of 44% for men and 26% for women. Young people generally travel less now, with the total number of trips per person made by young men falling by 28% between 1995-99 and 2010-14, whilst the number of trips made by young women fell by 24%"[16]. However, there has recently been a slight increase in driving tests and licence holding – 46% of young men and 44% of young women aged 17-24 had a full driving licence at the end of 2019, compared with 43% and 41% respectively in 2016[17].

So travel demand was already changing before Covid-19, including reductions in some types of trips[18]. At least some of this is down to the adoption and development of technology, notably online shopping and the ability to work more flexibly, including from home. Covid-19, and the lockdown and restrictions following it, has accelerated these changes in travel, with people working from home, a collapse in public transport use and a substantial increase in cycling and walking. The aftermath of the lockdown saw a slow recovery in public transport use (more on bus than rail), a continued increase in cycling, and car travel returning to pre-Covid-19 levels.

The longer-term impacts of Covid-19 on travel are still to be determined and very uncertain. However, structural trends around how, when and where we travel in the long term are difficult to disentangle from other more immediate changes; notably public concerns about using public transport, and economic impacts from reduced employment[19]. Increased home working and on-line business meetings have led commentators to suggest that investment in superfast broadband may be as important in influencing travel patterns as any conventional transport investment[20].

Alongside this, technological developments are also changing travel and transport. In discussion about future transport trends, there is a lot of focus on autonomous vehicles - self-driving cars and lorry platoons on motorways. It is argued that moves in this direction will have major safety, environmental and economic benefits and there is a "Connected and Autonomous Mobility Roadmap" to 2030[21] setting this out. There are also sceptics about autonomous vehicles[22], who argue that the potential for and possible benefits of fully autonomous vehicles are being over-hyped and raise concerns about the impact they might have on public transport usage, on physical activity and on city streets.

However, technology is changing travel now, especially with the vast increase in data on travel and transport networks. This data is being used to give better information to key stakeholders in the transport system, from end-users to planners and managers. Mobile phones and the apps that go with them are already transforming travel with the development of journey planning tools and transport services on demand. Although discussion of this is dominated by Uber, there is a wide range of demand responsive transport services. Examples include electric scooters, where trials have been initiated, and e-bikes. "Mobility as a Service" is the integration of various modes of transport, information and payment functions into a single mobility service and is being trialled in various forms. Regulations governing a lot of this technology have been reviewed by the Government[23].

In addition, there is strong support for electrifying the vehicle fleet to address the UK's decarbonisation targets; it is Government policy to phase out sales of petrol, diesel and hybrid cars and vans by 2040, and possibly much earlier[24]. There has been increased electrification of the railways and electric and hydrogen buses are being introduced. The Government is promoting research into alternatives to kerosene for aircraft[25] and there is also interest in hydrogen, especially for heavy goods vehicles.

Freight transport

As well as passenger travel, goods are moving around too. Here there are two sorts of statistics – "goods lifted" – the tonnage of goods moved around, and "goods moved" – the distance the goods are moved, measured in billion tonne km. Tonnage moved around has reduced slightly over the years, from 1822 million tonnes in 2007 to 1440 million tonnes in 2019, reflecting the move away

16 Young People's Travel – What's Changed and Why? Review and Analysis, The Centre for Transport & Society, UWE Bristol* & Transport Studies Unit, University of Oxford, January 2018 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/673177/young-peoples-travel-whats-changed-exec-summary.pdf

17 https://www.transporttimes.co.uk/news.php/How-do-we-feel-about-cars-531/?utm_source=Transport+Times&utm_campaign=fb1e3d797b-EMAIL_CAMPAIGN_2018_10_30_11_03_COPY_01&utm_medium=email&utm_term=0_c0cafa3f39-fb1e3d797b-250757565

18 http://www.demand.ac.uk/commission-on-travel-demand/

19 https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic

20 https://www.bbc.co.uk/news/science-environment-52137968

21 https://zenzic.io/roadmap/

22 https://mobilitylab.org/2018/04/23/why-we-need-to-be-skeptical-of-autonomous-vehicles/; https://www.christianwolmar.co.uk/2018/10/the-driverless-car-conundrum/

23 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886686/future-of-transport-regulatory-review-call-for-evidence.pdf

24 https://www.gov.uk/government/consultations/consulting-on-ending-the-sale-of-new-petrol-diesel-and-hybrid-cars-and-vans

25 https://www.gov.uk/government/news/pm-commits-350-million-to-fuel-green-recovery

from heavy industry and towards lighter goods[26]. The long-term trends have been a big increase in road freight and in the size and weight of goods vehicles. More recently, there has been a big increase in van use – in the 20 years from 2000 to 2020, van mileage increased by 56% (though the growth has stabilised in recent years), while mileage by trucks (HGVs) fell by 4% over the same period (for comparison, car mileage grew by 6%)[27]. Road vehicles take most freight – 79% of tonne-kms in 2018 were by road, 13% by water (inland and coastal shipping) and 9% by rail. However, rail has seen its percentage share and tonne-kms grow in recent years; the decline in coal traffic to power stations has been replaced to an extent by increased "inter-modal" traffic, linking ports to the network of inland freight terminals. Again, averages hide big variations: while rail accounts for 9% of freight overall, it takes 35% of traffic at the port of Southampton and around 28% at Felixstowe.

Summary and Conclusions on how we travel

- The link between travel and economic growth has been weakened – at a time of growth in the economy, overall travel has declined. It used to be said that as people grew richer they travelled more, but this is not now the case. Young people in particular are driving less and learning to drive later.
- While car travel remains dominant, walking accounts for a large proportion of trips and a big proportion of local travel, and rail has a sizeable share of longer distance travel.
- While there is a lot of focus on commuting and education travel, in fact leisure travel accounts for more and longer trips and yet has had much less focus by transport planners.
- Influences on travel include changes in land use with much new development being car dependant and in the costs of travel by different modes, for example public transport fares have increased by more than inflation, whereas motoring costs have reduced in real terms.
- The statistics on travel show large differences in travel patterns between different income and age groups, between men and women, and between different types of places. The design and location of new developments influences not only travel patterns, but also the cost of travel by different modes.
- The movement of goods around the country has also undergone big changes, with increases in road freight, but more recently in van traffic. Rail freight has survived the loss of coal traffic and has moved into inter-modal traffic at ports and freight terminals.
- Travel patterns were already changing before Covid-19, but this has changed travel in ways still to be fully determined and likely to be so for a considerable time: uncertainty is now the reality.
- Technological developments are changing travel patterns and options; vehicles are going electric, and use of data, mobile phones and apps are influencing travel patterns. New mobility options, such as electric scooters and e-bikes, have the potential to change travel significantly. There is debate about driverless vehicles but these other technologies may be more immediately important.

26 https://www.gov.uk/government/statistical-data-sets/rfs01-goods-lifted-and-distance-hauled#domestic-road-freight-by-type-and-weight-of-vehicle
27 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886199/prov-road-traffic-estimates-gb-april-2019-to-march-2020.pdf

Section 2
Impacts of current travel behaviour

The increased car ownership and car use noted in section 1 has undoubtedly brought many benefits. It has provided independent mobility for many, personal control of travel and increased the choice in destinations. Cars are very flexible and accessible if affordable and at least appear to offer autonomy, freedom and choice[28]. But there are many downsides to these trends:

Transport and climate change: transport is now the largest source of UK emissions of greenhouse gases (GHG), accounting for 28% of all GHG emissions in 2019 and 34% of carbon dioxide emissions: 20% of total emissions came from road transport. Unlike other sectors, emissions from road transport increased by 6% from 1990 to 2017, though more slowly than the increase in road traffic[29]. The Climate Change Act 2008, amended in 2019, mandates a reduction in emissions of GHG to "net zero" by 2050, with five year "carbon budgets" as stepping stones to this goal. However, the Government's "Decarbonising Transport: Setting the Challenge" shows that the trajectory in transport based on current trends and announced measures falls far short of this goal. Until the Government adopted its "net zero" commitment, GHG emissions from international aviation and shipping were excluded from the national emissions inventory. The inclusion of emissions from these two transport modes extends the gap between transport trends and the trajectory they need to be on to meet the Fifth Carbon Budget (2028-32) as well as the net zero target[30]. The position in Wales and Scotland has been different: in Wales, in 2017 emissions from power stations and heavy industry were a higher proportion than for England and Scotland (14% of emissions were generated by a single coal fired power station, with transport accounting for only 13% of total emissions[31]). In Scotland, transport accounts for 37% of domestic GHG emissions, of which 69% comes from road transport[32].

Air pollution: This is also produced by motor vehicles and has various health impacts; as a 2019 review said, "although air pollution is well known to be harmful to the lungs and airways, it can also damage most other organ systems of the body"[33] and has been linked to dementia, poor lung development in children and many other diseases[34]. These links have been strengthened and the evidence of impacts on many aspects of human health has grown with increased toxicological and epidemiological studies. More recently, air pollution from motor vehicles has also been found to increase the risk of

28 For a summary of the benefits, see https://ec.europa.eu/transport/road_safety/specialist/knowledge/old/safety_versus_mobility_and_quality_of_life/the_importance_of_the_private_car_en

29 https://www.ons.gov.uk/economy/environmentalaccounts/articles/roadtransportandairemissions/2019-09-16, also note analysis in https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/878642/decarbonising-transport-setting-the-challenge.pdf

30 https://www.transportforqualityoflife.com/u/files/1%20More%20than%20electric%20cars%20briefing.pdf

31 https://senedd.wales/Research%20Documents/19-031/19-031-web-eng.pdf

32 https://www.transport.gov.scot/publication/scottish-transport-statistics-no-38-2019-edition/chapter-13-environment-and-emissions/

33 https://journal.chestnet.org/article/S0012-3692(18)32722-3/fulltext

34 http://www.erg.kcl.ac.uk/Research/docs/Personalised-health-impacts-Summary%20for%20Decision%20Makers.pdf

infection and mortality associated with Covid-19[35]. There are many areas in the UK where levels of air pollution are above EU and World Health Organisation (WHO) limits. After various court cases[36], the Government has ordered cities to develop plans to bring pollutant concentration to within EU limit values in the shortest possible time, using Clean Air Zones. These bring together different measures, which can include charging a fee for vehicles not meeting emission standards to enter and move inside a zone[37, 38]. The main pollutants are nitrogen dioxide and particulate matter, which are combustion products from petrol and diesel vehicles. In general, nitrogen dioxide emissions are higher from diesel engines, so there has been a focus on tackling diesel emissions in recent policy. As well as engine emissions, non-combustion particles are generated due to the wear of tyres, brakes and the road surface, and the recirculation of road dust[39].

Road deaths: there are other impacts on health of current (pre Covid) travel patterns. In the 12 months ending June 2019, 1,870 people were killed, around 26,000 were seriously injured and total road casualties were 157,630. These numbers have stayed roughly constant over the last ten years, after a period in which there were significant reductions – road deaths halved between 1994 and 2010. Of the 27,820 killed and seriously injured, 38% were vehicle occupants, 22% were pedestrians, 14% cyclists and 21% motorcyclists. Child pedestrians were 5% of the total. There are deaths and injuries associated with the other modes of transport – rail, aviation and shipping - but these are at very low levels (until the Stonehaven derailment in August 2020, there had been no passenger deaths in train accidents since 2007) and these modes are subject to strict safety regimes.

Physical inactivity: the dominance of car travel combined with low levels of cycling and walking contribute to obesity and the other health problems caused by lack of physical activity. In particular, the lack of independent mobility by children can undermine well-being and child development[40]. There is evidence that children in England have much less independent mobility than their counterparts in Germany[41], and the disparity has been growing.

Road congestion: as a result of high levels of road traffic affecting local and national economies. In 2019, the value of UK motorists' time lost to congestion was estimated at £6.9bn[42].

Severance: caused by high levels of motor traffic impacts individuals and communities. Studies in several countries have shown that high levels of motorised traffic and high traffic speeds discourage walking and limit social contacts between residents on opposite sides of the road and can also limit access to goods and services[43].

35 https://www.medrxiv.org/content/10.1101/2020.04.16.20067405v5
36 https://www.clientearth.org/government-loses-third-air-pollution-case-judge-rules-air-pollution-plans-unlawful/
37 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/863730/clean-air-zone-framework-feb2020.pdf
38 https://www.clientearth.org/uk-air-pollution-how-clean-is-the-air-you-breathe/
39 https://publications.jrc.ec.europa.eu/repository/bitstream/JRC89231/jrc89231-online%20final%20version%202.pdf
40 https://travelwest.info/project/143-essential-evidence-on-a-page-further-evidence-of-declining-independent-mobility-among-children-in-england
41 http://www.psi.org.uk/site/publication_detail/852
42 https://inrix.com/press-releases/2019-traffic-scorecard-uk/
43 https://www.researchgate.net/publication/305988095_Urban_transport_and_community_severance_Linking_research_and_policy_to_link_people_and_places; https://discovery.ucl.ac.uk/id/eprint/1544770/1/01%20What%20is%20community%20severance_JM.pdf

Poor public transport: as car ownership and use has increased, public transport provision has declined, especially in rural areas, and as noted in section 1, fares have increased. Between 2009 and 2019, over 3,000 local authority-supported bus services were cut or reduced. In some areas, local authorities are now not funding any bus services. Funding for school transport declined by 16% between 2013 and 2019[44].

Social exclusion and car dependence: the combination of these trends and impacts contribute to social exclusion and poverty, where those without cars find it difficult or expensive to travel and so are excluded from employment, education and training opportunities, as well as social networks and health services [45,46,47]. This social exclusion hits different groups in society differently. Young people face particular mobility barriers, including the lack of cheap public transport fares to access education, training and employment (there is no requirement for reduced fares for young people and some operators and councils do not offer general reductions)[48]. People with disabilities face extra costs and difficulties in getting around.

Those with cars also suffer disadvantages – they often have to drive more and further because, for the journeys they want to make, alternatives to car use take longer, cost more, or are not available at all. For some shorter journeys, where walking or cycling might be an option, people are concerned about too much traffic going too fast, with poor or no crossing points and, in rural areas or on new housing estates, narrow or non-existent pavements. These factors lock people into dependence on cars, where car use moves from being a choice to a necessity. For some lower income households, this adds to poverty and strains on household budgets[49].

Summary and Conclusions on impacts of current travel behaviour

- There are imperatives to changing and reducing the impacts of current travel patterns. The dominance of the car for personal travel has brought benefits but also huge downsides, both to the vehicle owner and to wider society: health problems from air pollution and lower physical activity, a continued high level of deaths and injuries from road crashes, and economic impacts from congestion.
- There is also social exclusion for those without access to cars, for young people and those with disabilities, and for low income households generally.
- Above all, there is the need to tackle climate change: the transport sector is now the biggest contributor to UK emissions. Therefore, any strategy to tackle climate change must put transport at its centre.

44 https://bettertransport.org.uk/sites/default/files/research-files/future-bus-funding-arrangements.pdf
45 https://www.sciencedirect.com/science/article/pii/S0967070X12000145,
46 https://bettertransport.org.uk/sites/default/files/research-files/Transport-and-social-exclusion-summary.pdf
47 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784685/future_of_mobility_access.pdf
48 https://bettertransport.org.uk/sites/default/files/research-files/No_Entry_final_report_definitive_0.pdf,
49 https://www.cogitatiopress.com/socialinclusion/article/view/1081

Section 3
Current Government Policies

There is no single, national transport policy document covering England, or the UK as a whole, so it's not possible to find the Government's transport strategy in one place. Instead, the Government's strategy (and its precursors) is split across a number of policy documents issued over the last two years or so:

- The Future of Mobility Grand Challenge (January 2019)
- The Future of Mobility Urban Strategy (March 2019)
- Decarbonising Transport: Setting the Challenge (March 2020)
- Inclusive Transport Strategy (July 2018)

By contrast, both Scotland and Wales have overarching national transport strategies; the Scottish Government has recently updated its strategy and the Welsh Government is updating its strategy at present.

In addition, all three countries have national planning or development policy frameworks that influence transport significantly.

For the UK, there are four overarching policy statements. The first is the **"Future of Mobility Grand Challenge"**, one of four challenges originally set out in the Government's industrial strategy in November 2017[50]. A "Future of Mobility Strategy" was produced in January 2019[51] which looked at future scenarios for transport and set out ten "priority areas" for the UK Government to consider:

1 **Consider transport as a system, rather than loosely connected modes.**

2 **Consider the wider objectives that the transport system can help to achieve.**

3 **Outline a clear, long-term national vision and set goals that are mindful of varying local priorities.**

4 **Understand that geography is key to ensuring outcomes are practical at local and regional levels.**

5 **Examine the specific challenges facing rural areas.**

6 **Integrate passenger transport with freight, alongside housing priorities, when making planning decisions.**

7 **Use a scenarios approach to explore different futures, identify opportunities and help mitigate the unintended consequences of new transport modes, technologies and/or trends.**

8 **Use both hard and soft measures to achieve the scale of change needed.**

9 **Consider the impact of future technologies on revenues and costs.**

10 **Consider prioritising walking and cycling when allocating land use for transport to promote wider social benefits.**

50 https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future, November 2017
51 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/780868/future_of_mobility_final.pdf

Following this, the **"Future of Mobility Urban Strategy"** published in March 2019[52] includes an important set of principles (para 1.4):

1. **New modes of transport and new mobility services must be safe and secure by design.**
2. **The benefits of innovation in mobility must be available to all parts of the UK and all segments of society.**
3. **Walking, cycling and active travel must remain the best options for short urban journeys.**
4. **Mass transit must remain fundamental to an efficient transport system.**
5. **New mobility services must lead the transition to zero emissions.**
6. **Mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight.**
7. **The marketplace for mobility must be open to stimulate innovation and give the best deal to consumers.**
8. **New mobility services must be designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users.**
9. **Data from new mobility services must be shared where appropriate to improve choice and the operation of the transport system.**

The third important policy statement, **"Decarbonising transport: Setting the Challenge,"** was published in March 2020[53] and is expected to lead to a full policy document around late 2020 / early 2021. The Transport Secretary's foreword sets out some clear objectives:

- Public transport and active travel will be the natural first choice for our daily activities. We will use our cars less and be able to rely on a convenient, cost-effective and coherent public transport network.
- From motorcycles to HGVs, all road vehicles will be zero emission. Technological advances, including new modes of transport and mobility innovation, will change the way vehicles are used.
- Our goods will be delivered through an integrated, efficient and sustainable delivery system.
- Clean, place-based solutions will meet the needs of local people. Changes and leadership at a local level will make an important contribution to reducing national GHG emissions.
- The UK will be an internationally recognised leader in environmentally sustainable, low-carbon technology and innovation in transport.
- We will lead the development of sustainable biofuels, hybrid and electric aircraft to lessen and remove the impact of aviation on the environment and by 2050, zero emission ships will be commonplace globally.

This policy statement is potentially very significant and there is an increasing consensus among researchers that tackling carbon emissions from transport will require reductions in road traffic and motor vehicle use as well as moves towards electric vehicles[54].

The fourth Government transport policy document is the **"Inclusive Transport Strategy"**[55]. This was produced in July 2018, aimed at "achieving equal access for disabled people." This Strategy not only brings together policies, regulation and funding in different areas, but also covers issues such as staff training, information and awareness. The Strategy aims to deliver "equal access for disabled people using the transport system, with assistance if physical infrastructure remains a barrier" by 2030. A progress report was produced in July 2019[56].

Together, these four strategies set out clear directions and principles for overall transport policy in the UK (though some of their provisions apply only to England).

52 https://assets.publishing.service."gov.uk/government/uploads/system/uploads/attachment_data/file/846593/future-of-mobility-strategy.pdf
53 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/878642/decarbonising-transport-setting-the-challenge.pdf
54 See for example Local government and decarbonising transport - Professor Jillian Anable and Professor Greg Marsden, https://www.local.gov.uk/sites/default/files/documents/Professor%20Jillian%20Anable%20and%20Professor%20Greg%20Marsden.pdf
55 https://www.gov.uk/government/publications/inclusive-transport-strategy/the-inclusive-transport-strategy-achieving-equal-access-for-disabled-people
56 https://www.gov.uk/government/publications/inclusive-transport-strategy/the-inclusive-transport-strategy-summary-of-progress

Alongside these overarching transport policies, there are separate policy documents and investment strategies for different transport modes in England:

- **Railways:** Under the 2005 Railways Act, the Department for Transport (DfT) has to produce a "High Level Output Specification" (HLOS) setting out its objectives for the railways, accompanied by a Statement of Funds Available (SOFA), for the five year "control periods" that govern rail planning and spending. The last one was produced in 2017, covering the Control Period 6 (2019-2024)[57]. This is under review as part of wider reform for the railways and the Government has now initiated a 30 year "Whole Industry Strategic Plan" (WISP). The WISP is intended to link with wider policies, especially the decarbonisation strategy, and is likely to be published in 2021;
- **Roads:** Under the 2015 Infrastructure Act, the DfT has to produce a Roads Investment Strategy (RIS) every five years, accompanied by a SOFA. The second Roads Investment Strategy (RIS 2) was published in March 2020[58] covering the 2020-25 period and made £27.4 bn available for trunk roads in England;
- **Cycling and walking:** The 2015 Infrastructure Act also requires the DfT to produce a Cycling & Walking Investment Strategy every five years. The first was published in 2017[59] and a report on progress was published in February 2020[60]. However, Government published a more ambitious strategy on cycling and walking in July 2020 as part of a wider anti-obesity strategy[61]. This strategy has wider implications for transport planning in England, discussed in more detail below.

The Government is also committed to completing this suite of strategies with a **National Bus Strategy,** due later in 2020.

As noted already, unlike in England, there are overall transport strategies in Scotland and Wales. In **Scotland**, the latest National Transport Strategy (NTS 2) was published in February 2020[62] and sets out "an ambitious

57 https://www.gov.uk/government/publications/high-level-output-specification-2017; https://www.gov.uk/government/publications/railways-statement-of-funds-available-2017
58 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872252/road-investment-strategy-2-2020-2025.pdf
59 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874708/cycling-walking-investment-strategy.pdf
60 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/863723/cycling-and-walking-investment-strategy-report-to-parliament.pdf
61 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/863723/cycling-and-walking-investment-strategy-report-to-parliament.pdf
62 https://www.transport.gov.scot/our-approach/national-transport-strategy/

and compelling vision" for the next 20 years. The "Strategic Transport Projects Review" is underway now and will set out a programme of "potential transport investment opportunities for the period 2022-2042."[63] Scotland also has its own rail strategy with its own "High Level Output Specification" (HLOS)[64].

In **Wales** the Transport (Wales) Act 2006 requires Welsh Ministers to produce a Wales Transport Strategy, setting out their policies and how they will be discharged. The strategy following this act was produced in 2008[65], and is now under review[66, 67]. There is also a National Transport Finance Plan, which is regularly updated[68].

The Welsh transport strategy and policy decisions are subject to other Welsh legislation, notably the **Well-being of Future Generations Act, Wales 2015** and the **Active Travel Act Wales 2013**. The Well Being of Future Generations Act "requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change"[69]. The Act established a Future Generations Commissioner who has been vocal about aspects of transport, including the previous plans for the M4 Relief Road. The Active Travel Wales Act requires local authorities to improve facilities and routes for pedestrians and cyclists.

As well as these transport strategies, each country has **national planning policies** which influence transport. In England, there is the National Planning Policy Framework (NPPF), the latest version of which was published in February 2019[70]. This has a whole section on "Promoting sustainable transport" which starts with the statement that "Transport issues should be considered from the earliest stages of plan-making and development proposals". There is a strong statement that "significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion, emissions and improve air quality and public health" (para 103). The Government is consulting on reforming the English planning system[71], moving towards a simple zoning system; it is currently unclear what this will mean for transport in the development process, but it will be critical.

The Scottish Government has a National Planning Framework, the last version of which was published in 2014. It has been consulting on the next version (NPF 4), now due in 2022. NPF 3 has a whole section on transport including future investment priorities; it sets out the principle of new development being concentrated in cities and towns[72].

In Wales there is a draft "National Development Framework 2020-2040", which was issued for consultation in 2019[73]. The final version has been delayed by Covid-19, but a new strategy, "Building Better Places: Placemaking and the Covid-19 recovery" was produced in July 2020 setting out the Welsh Government's planning policy in the recovery period after the pandemic[74]. Both the draft framework and the post-Covid strategy include a significant role for transport in place-making. The draft National Development Framework includes a specific policy promoting "Sustainable Urban Growth": "Urban growth should support towns and cities that are compact and orientated around urban centres and integrated public transport and active travel networks. Higher density and mixed-use development on sites with good access to urban centres and public transport hubs, including new and improved Metro stations, will be promoted and supported"[75].

In theory, therefore, spatial planning policy in Britain is linked to transport, which is important given that it has a key role in shaping transport policy and patterns. The planning frameworks appear to give priority to sustainable transport and locating new development accordingly. However, research[76] has shown that in practice in England many new housing developments, including planned garden towns and villages, are car-based and have limited or no public transport or local facilities and services. The Transport Planning Society has, with other institutions, produced advice to mitigate this[77], but greater linkage between transport strategies and spatial planning

63 https://www.transport.gov.scot/our-approach/strategy/strategic-transport-projects-review-2/
64 https://www.transport.gov.scot/media/39496/high-level-output-specification-hlos-for-control-period-6-final.pdf
65 https://gov.wales/sites/default/files/publications/2017-09/wales-transport-strategy.pdf
66 https://gov.wales/sites/default/files/publications/2019-02/transport-strategy.pdf
67 https://gov.wales/sites/default/files/consultations/2020-05/wales-transport-strategy-scoping-report-consultation-document.pdf
68 https://gov.wales/national-transport-finance-plan-2018-update
69 https://www.futuregenerations.wales/about-us/future-generations-act/
70 National Planning Policy Framework, February 2019 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf
71 Planning for the Future, August 2020, https://www.gov.uk/government/consultations/planning-for-the-future
72 https://www.gov.scot/publications/national-planning-framework-3/
73 https://gov.wales/sites/default/files/consultations/2019-08/Draft%20National%20Development%20Framework.pdf
74 https://gov.wales/sites/default/files/publications/2020-07/building-better-places-the-planning-system-delivering-resilient-and-brighter-futures.pdf
75 National Development Framework op cit, policy 1https://gov.wales/sites/default/files/consultations/2019-08/Draft%20National%20Development%20Framework.pdf
76 See reports from Transport for New Homes - https://www.transportfornewhomes.org.uk/
77 Better Planning, Better Transport, Better Places, 2019, https://www.ciht.org.uk/knowledge-resource-centre/resources/better-planning-better-transport-better-places/#:~:text=The%20advice,Plan%20to%20delivering%20a%20development.

is needed to tackle climate change, to reduce social exclusion, improve health and to reduce road congestion. The new Welsh draft framework and the Covid-19 update appear to be clearer and more detailed than the planning frameworks in England and Scotland in linking planning policy to transport investment and objectives. However, the current systems of levies and planning obligations do not allow public bodies to capture systematically the increased land value from zoning land for development or from transport investment projects. We return to this in section 7 below.

As well as planning policy, transport strategies and policies are influenced by other legislation, including the amended **Climate Change Act 2008**, which requires the Government to reach net zero carbon emissions by 2050, with five-year carbon budgets on the way. The Committee on Climate Change reports on these budgets has increasingly flagged up transport as an area where much more progress is needed, both at a UK level and in each country. The **Equalities Act 2010** also influences transport policies and decision-making because it protects people from discrimination. It has been used to promote access to public transport for disabled people and to oppose reductions in public transport services. Transport policies and priorities are influenced by the **National Infrastructure Commission** (NIC), which advises the Government on infrastructure needs and solutions, including in transport[78]. For example, the NIC recommended more spending on intra-urban/local transport, which led the Government to establish the Transforming Cities Fund. Although the NIC's remit covers England and non-devolved infrastructure responsibilities for the UK, there is also a National Infrastructure Commission in Wales which advises the Welsh Government on future infrastructure needs, including in transport.

Summary and Conclusions on current government policies

- Unlike in Scotland and Wales, there is no overarching transport strategy in England or for the UK as a whole. Instead, the "Future of Mobility" and Inclusive Transport strategies, and the current work on a Transport Decarbonisation Plan, are setting de facto policy frameworks for transport, alongside the strategies and frameworks for particular modes. These strategies and the emerging decarbonisation plan are welcome, but at present there is no framework of overarching policies and targets for transport in England or in the UK which can be referred to and which can guide transport planners, planners and local and regional government.
- There are national planning policy frameworks in each country and these set out some links with transport. However, the links with transport strategies and with transport investment are unclear, despite evidence of the clear influence of spatial planning on travel patterns and the importance of planning in reducing the need to travel.
- There is no clear link between the principles and objectives set out in the strategies on the one hand and on the other hand the investment strategies for particular modes and real spending priorities on the ground. This links to issues to do with transport appraisal, which we cover in detail below.

78 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/585374/NIC_framework_document_web.pdf

Section 4
Local and regional transport and spatial planning

The transport strategies and policies of the UK, Scottish and Welsh Governments are not the whole picture. Much transport is run, planned and managed below these national governments and their agencies.

In England, there are a wide variety of different arrangements for transport[79]. For example, a number of district councils come together in city regions, such as Greater Manchester and the West Midlands, to form combined authorities; some but not all of these have directly elected mayors. In London there are 32 boroughs and the City of London Corporation. The Greater London Authority is separate from and has separate powers to these, and the Mayor of London and London Assembly are directly elected.

Outside the cities, there is a patchwork of different council arrangements. Many areas are covered by county councils, which are responsible for transport, with lower tier district councils responsible for more local services, including planning. However, the trend has been towards single "unitary" councils combining all functions. Some of these cover whole counties, such as Cornwall or Herefordshire; others cover cities, such as Nottingham or smaller rural areas – for example the previous county of Berkshire is now run by six smaller unitary councils and Cheshire is now run by two.

Nearly all of these local transport authorities produce local transport plans (LTPs) in some form, as required by the Transport Act 2000 and some produce specific strategies for parts of their area. However, overlaying these arrangements are Local Enterprise Partnerships (LEPs). LEPs are appointed groupings of local authorities and business groups which prepare local enterprise strategies. These LEPs have been used as channels for transport investment, overtaking the LTPs.

There is also a recognition that transport needs to be planned at a broader level. Therefore, the Government has encouraged the establishment of sub-national transport bodies (joint groupings of local authorities) to produce regional transport strategies. These can become statutory bodies with legal status, though only Transport for the North (TfN) has so far done this. Sub-national transport bodies have now been established in all English regions and are developing transport strategies for those regions. There are other joint groupings, such as Transport for the East Midlands.

At the other end of the scale, district councils as planning authorities include transport policies in their local plans. Parish and town councils have increasingly taken an interest in local transport, though they have no statutory powers to do this. However, they can prepare neighbourhood plans, which can include transport policies, and some fund transport services.

The local authorities in England responsible for transport have a range of powers and duties. For example, they have a duty to manage and maintain roads in their areas, to provide free travel on public transport for older people, and the disabled, and to provide transport to schools for students who live further away. They receive funding for these functions (see below). Authorities can also promote and receive Government funding for transport schemes, such as roads, railways, busways and trams.

However, local authorities have limited control over aspects of transport. Buses outside London are deregulated, so bus operators have freedom to decide which services to provide and what fares to charge. Rail services are run under contract to the DfT and the infrastructure, including stations, is owned by Network Rail. Strategic roads are run and managed by Highways England, a Government body.

79 https://commonslibrary.parliament.uk/research-briefings/sn05735/

In principle, the Government is in favour of local authorities having more powers, including over transport[80]. It has legislated for combined authorities with mayors and has reached "devolution deals" with many areas to create these mayoral combined authorities. There have been similar deals for areas without mayors, including Cornwall. The Government has also given local authorities more powers over bus services through the Bus Services Act 2017, which allows for partnerships and franchising of local bus services.

The Government has also agreed to more local involvement in local rail services. In some cases, local transport authorities have taken over the contracting for local services, as in London for the "Overground" services and in Merseyside with the Merseyrail network. Elsewhere, there are joint arrangements in the North of England and in the West Midlands: TfN jointly manages the Northern and Trans-Pennine services with the DfT; and the West Midlands Rail Executive, comprising 14 transport authorities, jointly manages the West Midlands Trains franchise with the DfT.

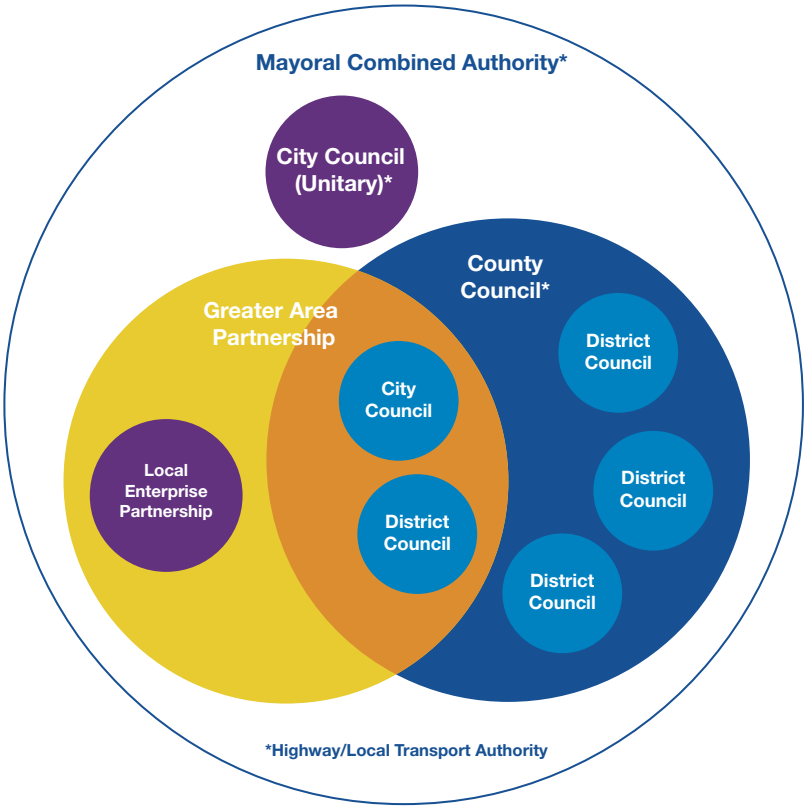
Many city regions have local transport bodies, responsible to the mayor and combined authority, to manage and plan local transport services. The Greater London Act 1999 gave Transport for London (TfL) a statutory basis and the authority to manage most transport in London, including strategic roads. Other areas have similar bodies – Merseytravel, Transport for the West Midlands and so on - though with fewer powers. These have their own business plans which set out their finances and objectives.

The move to transport planning at a city region level in English cities compares well with some other countries which do not have this. Even in big cities, such as New York and Toronto, mayors manage only small parts of the city and there is constant conflict between them and the wider regional body or bodies. Germany has created transport partnerships – Verkehrsverbunds – to bring together different authorities and transport operators so as to coordinate public transport services and fares. Although these produce high quality public transport networks, they do not deliver the same level of city-region wide strategic transport planning and are not responsible to elected officials.

Some areas have a number of overlapping bodies with different transport powers. For example, the West of England Combined Authority covers the area around Bristol and Bath and comprises three district councils with an elected mayor, a "West of England Local Enterprise Partnership" of four district councils, and a West of England Joint Committee. One of the districts, Bristol City Council, also has a directly elected mayor. Cambridgeshire has a mayoral combined authority which covers transport, but overlaps with Cambridgeshire and Peterborough councils which also have transport powers. This can make it confusing for transport users and citizens in these areas who want clear accountability for and knowledge of who plans and runs transport in their area.

80 See for example the Prime Minister's speech 13 September 2019 in Rotherham: https://www.gov.uk/government/speeches/pm-speech-at-convention-of-the-north-in-rotherham

Typical example of local governance arrangements in England



Although there is devolution, the Government is prepared to take control of local authorities' activities and direct them if necessary. For example, the Government has supported local public transport networks with funding during the Covid-19 lockdown and recovery. The intervention to support TfL has come at the price of significant interventions, such as cancelling free fares for 11-18 year olds and Government nominated directors on TfL's Board.

More radical intervention is proposed in the Government's active travel strategy for cycling and walking[81]. This will establish Active Travel England, a new body with an inspectorate and commissioner to fund and promote cycling and walking. The Government envisions Active Travel England will "perform a similar role to Ofsted from the 1990s onwards in raising standards and challenging failure". This body will have the power to remove funds from local authorities where their active travel schemes are not up to standard. Its assessment will be "taken into account when considering funding allocations for local transport schemes". However, the strategy also offers new powers to local authorities – more control over strategic roads for mayors and combined authorities, and powers for all authorities to enforce "moving traffic offences," such as blocking yellow box junctions and driving in bus lanes, without relying on the police.

In **Wales and Scotland**, the sub-national picture is perhaps more straightforward. The Scottish Parliament and Welsh Government have their own delivery bodies – Transport Scotland and Transport for Wales (Trafnidiaeth Cymru), which manage and deliver transport services. Although rail services are devolved, rail infrastructure mostly remains part of Network Rail, which is GB-wide and responsible to the UK Government. In March 2020, Transport for Wales took over the Cardiff Valley lines infrastructure from Network Rail.

At local level in Wales, there are four regional consortia of transport authorities. These prepare local transport plans[82], and some have developed cross border studies[83]. Although these consortia were downgraded to forums in 2014, the concept of statutory "joint committees" is being revived in a new Local Government Bill. Below these consortia, there are 22 local authorities in Wales, each with transport responsibilities. Some of these produce local transport plans, but most rely on the regional consortia.

81 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf
82 E.g. http://www.tracc.gov.uk/fileadmin/user_upload/LTP-FINAL-2015/Final_Joint_LTP_for_Mid_Wales_30-01-15.pdf.
83 http://www.tracc.gov.uk/index.php?id=138&L=1%27A%3D0

Scotland has seven Regional Transport Partnerships which bring together local authorities and others to prepare regional transport strategies[84]. At local level, local authorities prepare local transport plans and strategies – for example, Aberdeen has a sustainable urban mobility plan and Edinburgh has a city mobility strategy. These local authorities also have powers to manage public transport, traffic and to charge for road use and parking.

Local spatial planning: in GB it is and has always been separate from transport planning. In much of England, the transport authorities and planning authorities are different. This separation is reducing as more areas move towards unitary status. However, the operation of the spatial planning system (and plan making that underpins it) and the sub-national and local planning systems for transport, are completely separate and have, with brief exceptions[85], been subject to separate Departments at national level. This is mirrored in Wales and Scotland, where spatial and transport planning is carried out by separate departments and Ministers. Only in London is there some genuine integration: the Greater London Act 1999 requires the Mayor to produce three statutory and interlocking strategies – a transport strategy, the London Plan and an economic development strategy. These are all produced by the Greater London Authority.

The separation of transport from the planning system continues in relation to the authorisation of transport projects. While many are subject to the local planning system, the bigger schemes are dealt with through a separate process of Nationally Significant Infrastructure Projects (NSIPs), under the Planning Act 2008. National Planning Statements (NPSs) underpin these projects, including a "National Networks" NPS and an aviation NPS. The 2014 NNNPS does not take account of the commitment to achieving net zero carbon emissions by 2050 and is not explicitly supportive of active and sustainable travel. National Rail and the Strategic Road Networks in all three countries are outside the local transport or spatial planning regime. As noted already, even sub-national transport bodies in England have limited influence over rail services and strategic investment by Highways England and Network Rail in their areas. Proposed planning reforms in England, as already noted, hardly mention transport so may – without intending to – reinforce the disconnect between planning and transport.

Summary and Conclusions on local and regional transport and spatial planning

- In England, local and regional transport planning is in a state of evolution, with the introduction of mayors and combined authorities in the city-regions and single authorities elsewhere. City-region authorities are helpful for strategic transport planning and for managing transport across travel to work areas and English cities are better organised in this respect than many others around the world where transport planning is fragmented.
- On the downside in England, transport is fragmented. It is handled by a range of unitary, combined, sub-national and public-private partnerships, sometimes geographically separated and other times overlapping and competing. There are also the sub-national transport bodies, which are developing

84 https://www.transport.gov.scot/our-approach/strategy/regional-transport-partnerships/
85 For example when planning and transport were both part of the Department of Environment, Transport and the Regions – DETR – between 1997 and 2001

regional transport strategies, and Local Enterprise Partnerships as channels for some transport investment.

- This is the result of successive reforms by different Ministers and Governments and has created complex structures, making it difficult for the public to know who is accountable. Local authorities do not generally have a full range of powers over transport, including public transport and major roads, and there is a disconnect between planning and transport, which new planning reforms may worsen. Only London has genuine integration between transport and spatial planning, and other city-region mayoral combined authorities do not have the same levels of powers that the London Mayor and the Greater London Authority do. There are numerous overlapping transport plans at different levels, as well as separate spatial plans, which makes understanding the objectives and plans for each area challenging for transport planners and makes consistency and coherence of policy and practice difficult.
- The Government's setting up of Active Travel England marks a new approach to raising standards and increasing funding for active travel locally, with relatively draconian powers over local authorities. It is as yet unclear how this will work out in practice.
- Wales and Scotland have also seen different approaches to local and regional transport bodies, with variable support for regional consortia or partnerships and local transport authorities. Wales is seeing a move back towards stronger regional transport groupings.

Section 5
Transport planning skills and capabilities

From previous sections we have seen that good transport planning is essential to keep Britain moving. It is critical to the future of the economy, the state of our environment and how we tackle climate change. It is also about changing people's attitudes towards travel to encourage use of sustainable modes, often replacing journeys by car. Transport planning is about preparing, assessing and implementing policies, plans and projects to improve and manage our transport systems. There is a need for transport planning on a local, regional, national and international level. It involves understanding the link between transport and land use, the future shape of our towns and cities, and the activities which people want to meet quality of life objectives

This section looks at the role of transport planners across the nations, the skills required, their qualifications and professional development to enable them to perform this role.

The role of transport planners

Transport planners have to consider what the future will be like and recognise that their actions as transport planners will help to shape it. They devise ways to address some of the most serious and complex problems facing us all. At different times they will have to think like a behavioural psychologist, a civil engineer, a vehicle engineer, a development planner, a computer analyst, an environmental scientist, a social scientist, a fitness expert, and at least two sorts of economist. They have to be able to work across disciplines and put the pieces of the transport jigsaw all together. They make transparent decisions and communicate complex issues to the public, to key stakeholders, and to politicians.

Transport planning therefore includes a very wide range of disciplines – in fact the wide range of work is one of the big attractions. The work of transport planners touches almost every aspect of our day-to-day lives.

Transport planners work in the public and private sectors, as well as the academic, research, public interest and voluntary sectors. Many switch between sectors as their careers and interests develop.

Many of those in the public sector work for local authorities. Numbers have declined in local authorities in recent years with more work conducted by consultants in the private sector. Local authority transport planners need to have the ability to write briefs, commission consultants and act as an "intelligent client" to manage projects. Others in the public sector work for government departments and agencies. With the devolution of transport powers and funding to Wales and Scotland and to city-regions in England, there are new bodies requiring transport planners to undertake strategic planning and project delivery.

Most private sector jobs are with consultants, and some are with train and bus and coach operators or developers, architect and financing companies with transport interests. The range of consultants employing

transport planners is wide, from large multi-disciplinary consultants operating around the world through medium sized companies specialising in transport planning to small, niche companies with a specialist focus.

Transport planning training

Traditionally one of the main routes into a career in transport planning was from gaining a Masters degree, currently offered by 12 universities around the UK. These were mostly set up in the 1960-70s with Government funding from various Research Councils (SERC, SRC, ESRCC), which also provided scholarships. This funding was withdrawn reducing the number of full-time UK Masters students and increasing the reliance of Universities on foreign students.

The annual census of Transport Masters Students conducted each year by TPS shows that in 2018/9 the total number of students studying for a Transport Masters at the 12 UK universities was the lowest recorded in the past 4 years. The total number of full- and part-time students was 344, compared with 381, 376 and 352 in the previous three years respectively.

The most significant decline is in the number of UK students which dropped from 208 to 129 – a fall of nearly 38% compared with the previous year. On the international front, students from the EU/EEA have dipped a little but remain buoyant. By contrast the numbers coming from the rest of the world has shown an encouraging increase of 34%, reversing a decline in the previous three years.

We are awaiting the census figures for the current academic year, but it is anticipated that the numbers of students enrolling will be low and may even bring into question the continuing viability of such courses.

Transport planning professional development and qualifications

The publication of the Government's "Ten Year Transport Plan" in 2001 prompted a significant demand for transport planners, whose numbers increased by 50% in three years. Employers started to employ more undergraduates from diverse backgrounds requiring on the job training to provide them with the requisite skills.

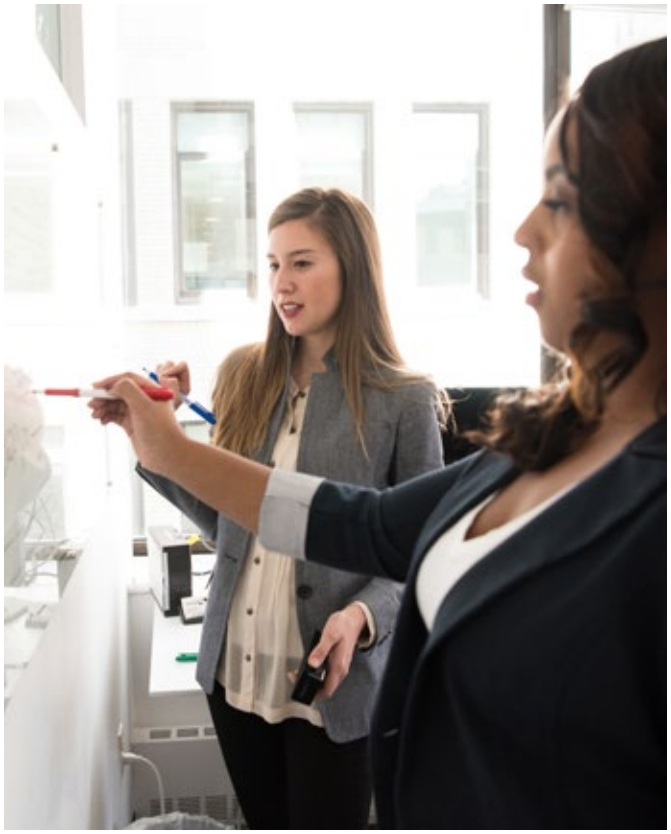
With an estimated 8,000 transport planners working across all these employers, transport planning has emerged as a distinct profession over the last 50 years, separate from transport engineering and urban planning but combining some of the skills from both of these professions, and many others. It has evolved significantly over this time reflecting the shifts in transport policy. In the era of "predict and provide" and increase in road schemes and transport capacity, most transport planners had a background in civil engineering or mathematics. With a shift in focus to managing demand and the promotion of alternatives to the car, transport planners now come from a much wider range of disciplines.

Alongside this increasing diversity of backgrounds there was a desire for a professional body to act as the home for transport planning. The Transport Planning Society (TPS) was formed in 1997 with two main objectives - to provide a voice for transport planners and to establish professional recognition in the form of nationally recognised qualifications. This led to the development of a National Occupational Standard for Transport Planning (NOS) in 2007 and in 2008, based on these standards, TPS and CIHT jointly launched the Transport Planning Professional (TPP) qualification. In 2019 this qualification received chartered status, so those with TPP can become a Chartered Transport Planning Professional (CTPP).

For graduates entering the profession, the TPS launched a Professional Development Scheme (PDS) which provides a "gold standard" training scheme covering both technical and interpersonal (communications, management) skills, which has been adopted by major employers, including all the largest consulting firms plus TfL, Transport Scotland and Network Rail. Since 2019, those who successfully complete the PDS can use the title Incorporated Transport Planner (IncTP).

In 2015 the Transport Planning Technician Apprenticeship was launched, followed in 2019 by a Degree Apprenticeship. Approximately 40 young people a year undertake the Technician Apprenticeship and about 15-20 per year join the Degree course. However, it has recently been reported that the Leeds College of Building had 43 places for new transport planners on the Transport Planning Technician Apprenticeship course for the next academic year, but only a handful of places had been confirmed at the time of writing. Employers are also reportedly finding it difficult to train up staff on furlough and when home working.

It is clear from this that the profession now has a full suite of professional qualifications to offer, but much of this is very recent and is still becoming established, and faces some challenges in the current conditions. This is reflected in the fact that although there is high awareness and value on the qualifications, there has been relatively low take up so far, as demonstrated in the results of the TPS skills survey.



Transport planning skills and qualifications survey

Against this background, we conducted a survey to find out more about the perspective of those employing transport planners at present. We had responses from 17 varied organisations, including SMEs, transport operators, multi-national consultancies, local councils and Transport for Wales. These cover a significant number of transport planners and other transport professionals.

We asked them about the main roles that their transport related employees have – transport planners were in the lead alongside data specialists, which reflects the increasing use of data in planning and managing transport networks, as noted in section 1.

We asked what skills employers are looking for when recruiting new employees for transport projects, and we also asked about skills shortages. Two thirds of those responding said that there are skills gaps between the actual skills that their transport planners have, and the skills that are desired by the organisation. These can be broadly divided into technical skills and interpersonal skills - employers pinpointed the need for critical thinking skills

Main roles of transport employees

The University of Hertfordshire Smart Mobility Unit

and the ability to communicate and collaborate across organisations to improve integration across transport and town planning professions and to overcome barriers between sectors. Comments on skills required included:

Technical skills

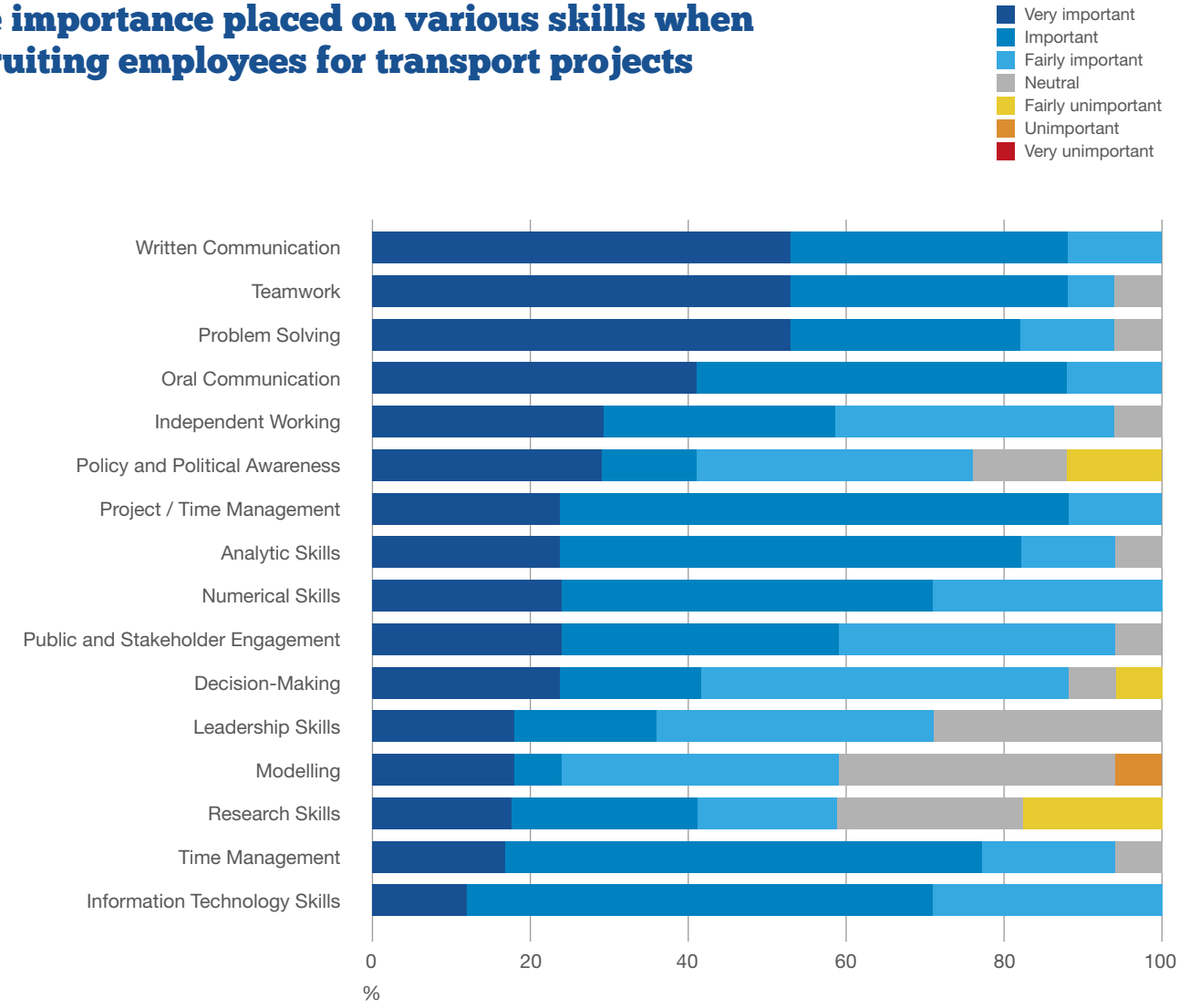
- More in-depth knowledge of digital and information technology.
- Greater data analytics skills.
- Good knowledge of GIS (Geographic Information Systems) skills.
- Ability to work with big data and modelling (specifically strategic modelling) skills.
- Detailed understanding of decarbonisation and climate change.

Interpersonal skills

- People with a combination of report writing, oral presentation and technical/analytical skills.
- Project and time management skills.
- Problem solving and teamwork skills.
- Consultation and strong communication skills at a local level.

Asked what qualifications employers are looking for, most are looking for Transport Planning Professional (TPP) qualifications (77%) and the Professional Development Scheme (PDS) run by the Transport Planning Society (65%). However, currently, of the employers we surveyed, around half have no employees with the Transport Planning Professional (TPP) qualification.

The importance placed on various skills when recruiting employees for transport projects



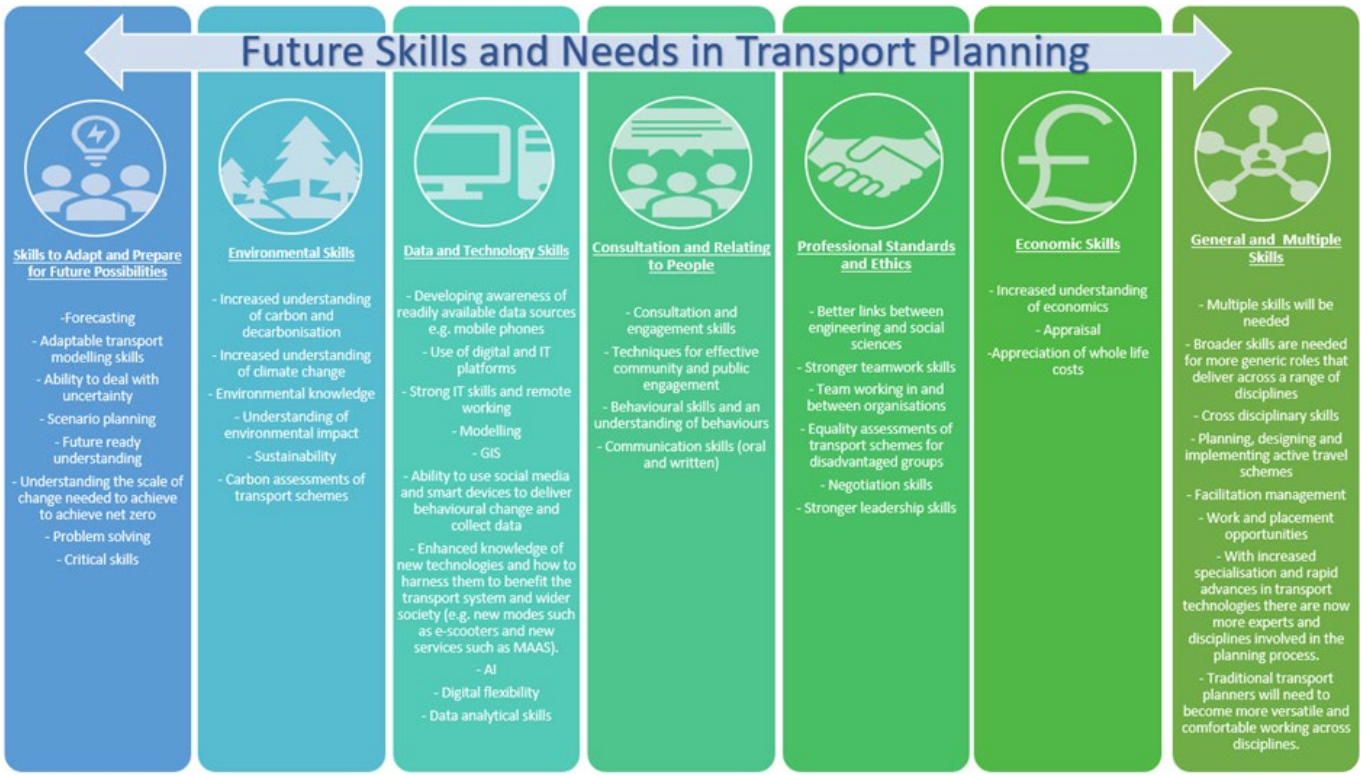
The University of Hertfordshire Smart Mobility Unit

Most employers are also looking for academic qualifications – 77% for a Masters degree and 88% for an undergraduate degree. 41% were looking for apprenticeships and/or degree apprenticeships. However, qualifications sought were dependent on the role – clients of consultancies want to see senior staff with professional qualifications, but at least one employer said that relevant work experience is more important than academic qualifications.

Nearly all of the employers surveyed offer training and support to their employees, most of it in house, on site or on the job, though some (28%) outsource it to external providers. Most fund their employees to complete transport-related training, the majority of which is through relevant professional courses. There is also funding for Masters courses and apprenticeships.

In the survey we also asked about future skills and needs in transport planning. The responses were as shown:

Future Skills and Needs in Transport Planning



The University of Hertfordshire Smart Mobility Unit

This shows the expectations for a wide range of skills in the future, including data and economics, but also being able to consult with and relate to people. Unsurprisingly, given the analysis in section 2, environmental skills and the understanding of climate change and decarbonisation, also feature strongly. Employers think that future transport planners will need to be able to adapt and prepare for future possibilities, with an ability to deal with uncertainty and undertake scenario planning for a range of different futures. They will also need not just to know about new technologies like e-scooters and Mobility as a Service (MAAS) but to understand how to harness them to benefit the transport system and wider society.

Summary and Conclusions on transport planning skills and capabilities

- Transport planning has become an established profession in the last 50 years and continues to show its importance, given the need to tackle key issues such as decarbonisation, air pollution, congestion, health and now the impacts of Covid-19 on mobility. Devolution of transport powers and funding is creating new organisations who need high-quality transport planners to plan for the future and deliver transport projects that create attractive places and meet people's travel needs.
- Our survey showed that employers of transport planners are finding skills gaps when they recruit. Interpersonal skills – teamwork, problem solving, time management and numerical and analytical skills – are highly prized. Digital knowledge and skills with data analytics, GIS, programming and strategic modelling are also seen as important, and people who can combine strong technical skills with being able to communicate well, break down silos and relate to people are most valuable.
- Employers expect to be looking for a broad range of future skills in transport planners to deliver transport policies and plans: such as scenario planning, public engagement and involvement, decarbonisation, active travel, and harnessing new mobility and technology for the benefit of society.

- The transport planning profession now has chartered status and there are many routes to a suite of professional qualifications – including achieving Chartered Transport Planning Professional (CTPP) status, IncTP through the Professional Development Scheme, and the apprenticeships leading to TPTech. These appear to be highly valued by employers but need to be encouraged further. Nearly all employers support and many fund the training and professional development of the transport planners they employ.
- The TPP is recognised by Transport Scotland and some English transport agencies as a relevant or essential qualification for everyone carrying out transport projects. It is not currently adopted by the Department for Transport or by Local Authorities in their procurement procedures or when recruiting transport planners.
- The transport planning profession faces a really challenging time due to the pandemic. In local authorities, officers have been redeployed to Covid emergency measures whilst private sector consultants have found that although some areas of work have remained resilient, they have had to cope with major reductions in other areas, especially major infrastructure projects.
- Nevertheless, there are grounds for some optimism, particularly around a sustainability agenda that supports the decarbonisation of the transport system and with the Government likely to invest in transport infrastructure to stimulate the economic recovery. It needs to be recognised that transport planners are key players in the recovery - for healthy, active lifestyles through the promotion of walking and cycling, for the fight against obesity as well as in the decarbonisation of transport - and will continue to play a pivotal role in society in future.

Section 6
Transport spending and investment

The transport and location choices which people and businesses make are shaped by the transport infrastructure and services they have access to. So "following the money" to identify where funding goes in transport is important and will help us understand how far transport funding is aligned with policy objectives.

Across the country, there are two types of transport spending: first, spending by national governments on national transport infrastructure and services – principally strategic roads and the railways; and second, spending which goes via local and regional authorities to pay for local services and the maintenance, upgrading and construction of transport infrastructure. National governments also fund local authorities and transport operators to provide specific services which are required legally. Examples include school transport and free travel for the elderly and disabled.

With Covid-19, additional emergency funds, totalling around £5.8bn up to September, have been made available to transport operators and local authorities to keep public transport services running during the lockdown. Local authorities are also getting funding to alter road layouts to support physical distancing by pedestrians and to encourage active travel. However, each country in Great Britain has different approaches to spending and different funding streams.

In **England**, major national funding streams for transport are based around the national strategies and investment plans for specific modes (see section 4 above). For rail, there is the five-year funding High Level Output Specification (HLOS) and the Statement of Funds Available (SoFA) which set the framework for infrastructure investment. The current Control Period 6 funding for the period 2019-2024 is focused on maintenance and renewal of the existing railway infrastructure[86]. This allows for spending by Network Rail of £47.9bn, with funding from the Government of £34.7bn.

A separate stream of rail funding exists through the letting of contracts or franchises to run passenger rail services. In the past, these contracts have set out the services the Government wanted to provide, and bids were invited to run them. While some contracts for more profitable commuter and longer distance services saw operators offering payments or "premiums" to the Government, others for local and regional services required Government funding. Until recently, the premiums were greater than the subsidies – in other words, the Government was making money overall on the railway franchises. As the Office of Rail and Road briefing put it, "between 2010-11 and 2017-18, train operating companies (TOCs) paid more in premiums to the government than they received in central government grants. However, in 2018-19, train operators received £417 million (net) from the government. This is compared with a net payment to government of £227 million in real terms in 2017-18"[87].

As well as these streams of funding, there are specific rail funds. In particular, there is "access for all" funding to improve accessibility at railway stations. The Government committed up to £300m up to at least 2024[88], including £20m for smaller projects. Other specific funds include the "Cycle Rail" programme, which funds cycle parking and access at railway stations[89] and the National Station Improvement Programme, set at £70m for the 2019-24 control period[90]. Funding for enhancements to the rail network is decided using the stages in the "Rail Network

86 https://www.gov.uk/government/publications/railways-statement-of-funds-available-2017/railways-act-2005-statement-of-funds-available-2017

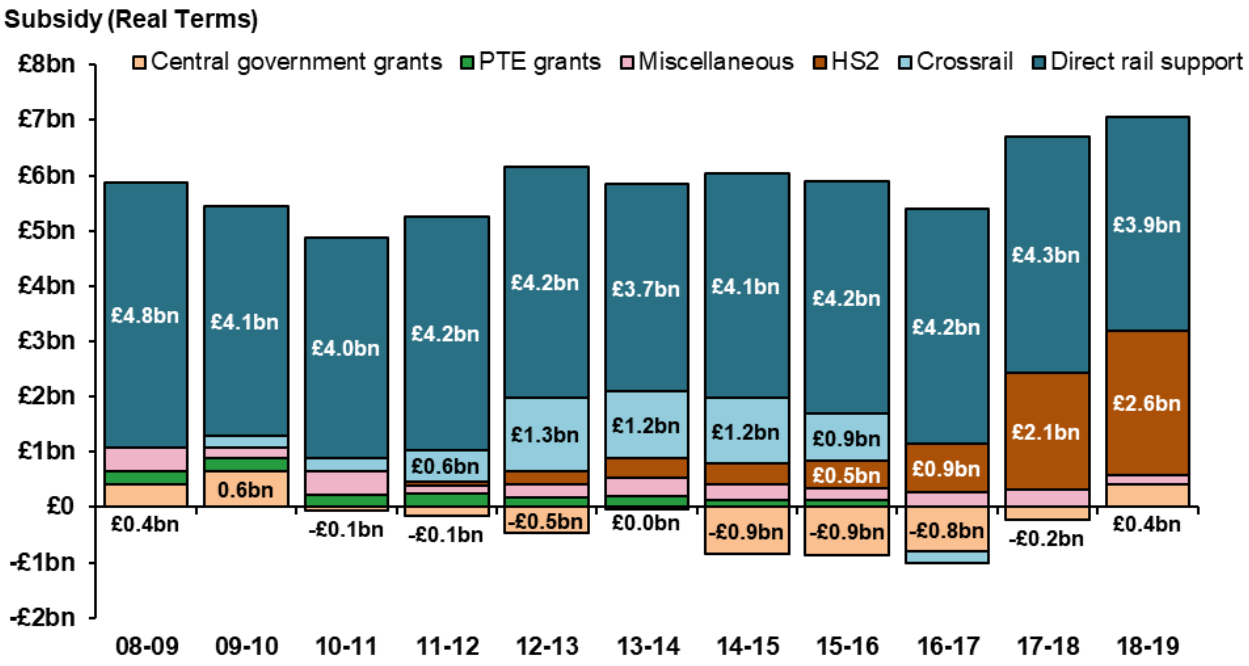
87 https://dataportal.orr.gov.uk/media/1547/rail-finance-statistical-release-2018-19.pdf

88 https://www.gov.uk/government/publications/inclusive-transport-strategy/the-inclusive-transport-strategy-achieving-equal-access-for-disabled-people#funding

89 Detailed funding here https://www.gov.uk/government/publications/cycle-rail-fund-awards#:~:text=The%20cycle%20rail%20fund's%20purpose,cycle%20facilities%20at%20railway%20stations.&text=Cycle%20rail%20fund%20winners%20for,2020%20to%20March%202021%2C%20released.

90 https://www.raildeliverygroup.com/files/Publications/2018-06_transformational_partnerships_nsip.pdf; https://www.networkrail.co.uk/communities/passengers/station-improvements/national-stations-improvement-programme/

Breakdown of net government support to the rail industry in real terms, Great Britain, 2008-09 to 2018-19



Rail Finance 2018-19, Office of Rail and Road

Enhancements Pipeline"[91]. The Government also has separate funding for "Restoring your railway"[92] (known as the "Reversing Beeching" fund). This includes an "ideas fund" to develop new proposals for rail reopening; an "accelerating existing proposals" fund to take existing ideas forward, and a "new stations fund". All of these separate funding streams are subject to bidding – mostly from train operators or local authorities, and specific amounts are allocated to each bidding round.

There is a separate grant regime to support freight going by rail. The Mode Shift Revenue Support covers freight on the railways and inland waterways but does not have a large budget – £17.5m was allocated in 2019-20[93].

The Government has given the go-ahead to the first stage of the High Speed 2 (HS2) scheme between London and Birmingham, and this is separately funded. The official Oakervee review[94] suggests total costs range from £80.7bn to £87.7bn at 2019 prices, with the first phase to Birmingham costing £40.4bn to £43bn. It should be noted that this is over a nearly 20-year period. As the ORR review notes[95], some spending on HS2 has already been made.

However, Covid-19 has completely changed the context. Since the lockdown on 23 March, the Government suspended rail franchises and required the rail operators to sign "Emergency Measures Agreements" (EMAs), under which they are running trains to Government specification of times and fares. Since lockdown, the Government has allocated £3.5bn to EMAs, of which £0.6bn related to 2019-20 and £2.9bn to 2020-21[96].

Strategic roads in England have the five-year RIS, similar to the railways. The latest of these, RIS2, covers the period 2020-25, and includes funding of £27.4bn, including £14.1bn of upgrades. There are also "designated funds" totalling £936m, covering "Environment and Wellbeing", "Users and Communities", "Innovation and Modernisation" and "Safety and Congestion". Most of the remaining funds are allocated

91 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840709/rail-network-enhancements-pipeline.pdf
92 https://www.gov.uk/government/publications/re-opening-beeching-era-lines-and-stations/re-opening-beeching-era-lines-and-stations#accelerating-existing-proposals
93 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/864460/review-revenue-support-freight-grant-schemes.pdf
94 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/870092/oakervee-review.pdf
95 https://dataportal.orr.gov.uk/media/1547/rail-finance-statistical-release-2018-19.pdf op cit
96 https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2020-06-10/57951/

to maintenance (£6.7bn), renewals (£4.1bn) and operation of the strategic road network (£1.1bn)[97].

Local transport funding: there are a wide range of funding streams for local transport in England.

- **Major Road Network and Large Local Major Schemes:** the strategic road network is just 2% of the road network in England by length – the rest is managed by local authorities. Outside the strategic road network is the Major Road Network (MRN), comprising roads deemed to be important economically[98]. In addition, the Government created a "Large Local Majors" fund for road projects which are too large to be funded by individual local authorities. In the 2018 Budget, the Government committed the money it receives from Vehicle Excise Duty to a National Roads Fund. This Fund would support the Road Investment Strategy 2 (RIS2), expansion or upgrades to the MRN and the Large Local Majors schemes. The Government has allocated £3.5bn funding to the MRN and Large Local Major schemes in principle for the 2020-25 period, with the first 15 of these announced in the March 2020 Budget[99]. Proposals for upgrades to the MRN and for Large Local Majors schemes are channelled through the sub-national transport bodies described in section 4.
- **Road maintenance and other road funding:** there are many different funding sources here, including[100]:
  - Local highways maintenance needs-based funding - £674m 2020-21.
  - Local highways maintenance incentive/efficiency funding - £151m 2020-21.
  - Pothole Action fund: £50m 2020-21 and the Potholes Fund: £500m 2020-21.
  - Local highways maintenance challenge fund: £93m 2019-20; allocated £100m 2020-21 (but this was distributed as part of other funding).
  - Local pinch point funding: £150m 2021-23 for small scale road schemes to tackle congestion at pinch points.

  Councils also get **"integrated transport block"** funding towards small scale schemes locally.

  With Covid-19, the Government has also funded a £1.7bn Transport Infrastructure Investment Fund to improve and repair roads and bridges and tackle potholes on local roads[101].

- **Bus funding:** buses outside London get public funding through three main routes: Bus Service Operators Grant (BSOG), which is paid to operators as a rebate on fuel duty; concessionary travel payments, where local authorities receive Government funding which they use to reimburse operators for free travel for older people and those with disabilities; and subsidies for socially necessary bus services which local authorities can fund if operators do not provide them commercially. In addition, there are school transport contracts to meet statutory requirements for longer distance school journeys. As well as these, there are competitions for specific funding: there have been successive rounds of "Green Bus Funding"; in February 2020 the Government launched competitions for a "rural mobility fund" to experiment with new forms of bus services in rural areas; and to create an "electric bus town" by making all buses in a town electric[102]. A "hydrogen bus town" has also been suggested as a forthcoming competition. These competitions formed part of a £200m funding package for buses[103], which included £30m to councils in 2020-21 to reinstate withdrawn services. With Covid-19, all this has changed: the £30m is will be used to

97 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872252/road-investment-strategy-2-2020-2025.pdf: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/910866/5-year_Delivery_Plan_2020-2025_FINAL.pdf – see Annex A p65

98 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/670527/major-road-network-consultation.pdf

99 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/824019/2018-2019-dft-annual-report-web.pdf; https://www.highwaysmagazine.co.uk/New-major-road-network-and-large-local-major-schemes-announced/5487

100 https://www.gov.uk/government/publications/roads-funding-information-pack/roads-funding-information-pack#contents

101 https://www.gov.uk/government/news/multi-billion-pound-road-and-railway-investment-to-put-nation-on-path-to-recovery

102 https://www.gov.uk/government/publications/a-better-deal-for-bus-users/a-better-deal-for-bus-users

103 https://www.gov.uk/government/publications/a-better-deal-for-bus-users

preserve existing services, rather than to introduce new ones; and by mid-August, the Government had made available an extra £600m for buses, with rolling funding guaranteed into the autumn[104]. Light rail systems in a number of English cities have received £90m up to September to keep services running. TfL received a £1.6bn finance and funding package to maintain transport services in the city[105], though this has come with some requirements and conditions attached, as we noted in section 5.

- **Transforming Cities Fund:** the Government has given £2.5bn to English cities for 2018/19 to 2022/23 to invest in new and upgraded transport services and infrastructure. Around half has been given to the Mayoral Combined Authorities (£1.08 billion) on a devolved basis with the remaining £1.28 billion allocated across 12 cities by competition. New light rail lines, bus priority measures and cycling networks are among the projects being funded[106]. This follows a NIC report which recommended the Government should give greater priority to intra-urban transport[107].
- **Active travel funding:** the Government has announced £2bn of funding towards cycling as part of its policy of promoting active travel (see section 4). £225m was made available during the Covid-19 lockdown to install "pop up" cycle lanes and other measures for physical distancing. Now, the remainder is now released on a competitive basis to local authorities, with strict requirements on how it is spent[108].
- **Access fund** (now in its last year unless renewed): this funding supports initiatives to promote cycling and walking to work[109]. It is a continuation of the £1bn Local Sustainable Transport Fund which ran from 2011-2016[110]. The fund was used for local transport packages of measures and was considered to be very successful.

In addition, transport schemes are funded through other sources. The Local Growth Fund[111] channelled through LEPs, has funded a lot of transport projects[112]. The Housing Infrastructure Fund supports investment, including transport, that "unlocks" housing development. In practice, much of this goes to new roads and junctions[113]. There have been other recent funding competitions including the "Getting Building Fund"[114] and the "Brownfield Fund"[115], which have funded transport schemes. Other local authority funding streams, such as business rates, pay for transport schemes and services, and as we note in section 7, there is also transport funding through the planning system, via the Community infrastructure Levy and section 106 payments.

Many local transport services are provided by different public bodies. The NHS funds non-emergency patient transport; education authorities and institutions provide transport to travel to schools and colleges; social services departments have fleets of vehicles for older people and for children; and many public and private employers provide staff transport services. This ends up as a patchwork of different bespoke services. It has been argued that co-ordinating them would give better services at less cost, and a programme of "Total Transport" pilots was run from 2015-17 in more rural areas in England[116]. The evaluation found that some progress had been made, but also that integration, especially with the NHS, had proved difficult.

Scotland: Transport project priorities are set out in the Strategic Transport Projects Review[117], first published in 2009. A new review is currently underway, set to be published this year and will set out a programme of potential transport investments for the period 2022-2042. However, transport projects also form part of the Infrastructure Investment Plan[118], set out in 2015 but now revised with a new draft in September 2020. Trunk road spending in Scotland has been increased over recent years, reaching £1bn in 2017-18 and falling back to just over £800m in 2019-20. There are plans for a further £6bn of spending on dualling the roads between Perth and Inverness and between Inverness and Aberdeen. Total rail spending in 2019-20 was around £1bn, and bus funding around £300m[119].

104 https://www.gov.uk/government/news/government-extends-coronavirus-support-for-buses-and-trams-total-funding-tops-700-million
105 https://www.gov.uk/government/news/government-grants-transport-for-london-funding-package
106 https://www.gov.uk/government/publications/apply-for-the-transforming-cities-fund#:~:text=The%20Transforming%20Cities%20Fund%20aims,2017%20by%20the%20Prime%20Minister.
107 https://www.nic.org.uk/wp-content/uploads/NIC-Transport-Connectivity-1-Final-Report.pdf
108 https://www.gov.uk/government/news/2-billion-package-to-create-new-era-for-cycling-and-walking
109 https://www.gov.uk/government/news/64-million-government-funding-to-encourage-more-cycling-and-walking-to-work
110 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886152/local-sustainable-transport-fund-impact-summary-report-document.pdf
111 https://www.gov.uk/government/collections/local-growth-deals#history
112 Recent analysis is not readily available, but in 2015 LEP transport plans included £3.4bn on 444 transport schemes https://bettertransport.org.uk/sites/default/files/research-files/LEP%20Watch%20update%202016_0.pdf
113 https://www.transportfornewhomes.org.uk/wp-content/uploads/2020/06/garden-village-visions.pdf
114 https://www.gov.uk/guidance/getting-building-fund
115 https://www.gov.uk/government/news/1-3-billion-investment-to-deliver-homes-infrastructure-and-jobs
116 https://www.gov.uk/government/publications/total-transport-feasibility-report-and-pilot-review
117 https://www.transport.gov.scot/our-approach/strategy/strategic-transport-projects-review/
118 https://www.gov.scot/publications/national-mission-local-impact-draft-infrastructure-investment-plan-scotland-202122-202526/
119 https://spice-spotlight.scot/2019/12/04/you-get-what-you-pay-for-20-years-of-devolved-transport-policy/

There is a range of specific transport funding streams in Scotland:

- Rail: the funding for Network Rail for the 2019-24 Control Period 6 has been set at £4.85bn in the "Statement of Funds Available" in January 2018[120]. In addition, the Scottish Government subsidises the Scotrail franchise – in 2019-20 this subsidy totalled £417m[121].
- Active travel: spending on active travel is budgeted at £85m for 2020-21, according to the February 2020 Scottish Budget, but the September 2020 Programme for Government 2020-21 promised "new funding of over £500 million over five years for active travel infrastructure, access to bikes and behaviour change schemes"[122]. Some of this is delivered through funds administered by partner organisation, such as Sustrans Scotland, Paths for All and the Energy Saving Trust. The Energy Saving Trust also administers a Low Carbon Travel and Transport Challenge Fund for active travel and low carbon hubs and paths. In the latest competitive round for this Fund in October 2019, £8m was available from the European Regional Development Funding (ERDF), with match funding from Transport Scotland;
- Concessionary travel for older and disabled people – and others including young carers;
- Bus priority: investment of £500m was announced in the Scottish Government's programme 2019-20[123].
- Bus Service Operators Grant: this was revised in April 2019 to include a green incentive for low emission buses; there has also been funding through a Green Bus Fund.

The Scottish Government also funds ferries and air services to Scottish islands; in 2017-8 these cost £237m and £51m respectively[124]. Other funding has also been used for transport projects. For example, City Deal money is funding the refurbishment of Glasgow's High Street Station[125].

During the Covid-19 lockdown and restrictions, the Scottish Government has supported bus and rail operators with extra funding (£250m for rail, £110m for buses) and has also funded active travel infrastructure and bus priority as part of a "Transport Transition Plan"[126].

120 https://www.transport.gov.scot/media/41425/sofa-2019-24-25-jan-2018.pdf
121 https://spice-spotlight.scot/2019/12/04/you-get-what-you-pay-for-20-years-of-devolved-transport-policy/
122 https://www.gov.scot/publications/scottish-budget-2020-21/pages/11/; https://www.gov.scot/publications/protecting-scotland-renewing-scotland-governments-programme-scotland-2020-2021/pages/5/
123 https://www.gov.scot/binaries/content/documents/govscot/publications/publication/2019/09/protecting-scotlands-future-governments-programme-scotland-2019-20/documents/governments-programme-scotland-2019-20/governments-programme-scotland-2019-20/govscot%3Adocument/governments-programme-scotland-2019-20.pdf
124 https://www.transport.gov.scot/media/43243/transport-scotland-annual-report-and-accounts-2017-18.pdf p7
125 https://www.railbusinessdaily.com/councillors-approve-up-to-10m-city-deal-funding-to-transport-scotland-for-glasgow-station-work/
126 https://www.transport.gov.scot/coronavirus-covid-19/transport-transition-plan/

Wales: the Wales Infrastructure Investment Plan project pipeline[127] sets out clearly the planned projects. These amount to:

- £1.6bn for roads projects;
- £738m for the South Wales Metro;
- £50m for active travel routes;
- £63m for pinch point schemes;
- £30m a year for grant funding for local authority projects (including Local Transport Fund, road safety and safe routes in communities[128]). However, new guidance suggests that in 2020-21 £65m is likely to be available[129].

There is also £350m for a new station at Llanwern and an as yet unfunded commitment to a North East Wales Metro. The Future Generations Commissioner for Wales (see section 4 above) criticised the balance of funding in the investment plan, with around 64% committed to road projects. She argued that the next budget should commit to £240m on active travel, public transport and electric vehicle infrastructure[130]. It should however be noted that in June 2019 the Welsh Government cancelled a planned relief road for the M4 in South Wales, with the First Minister citing the impact on the Gwent Levels[131], and set up a commission to look at alternatives.

In common with England and Scotland, the Welsh Government has with Covid-19 made extra funding available to local authorities for active travel and road safety schemes, with £15.4m in June followed by a further £38m in July[132].

Rail spending via Transport for Wales in 2019-20 included £187m funding for Transport for Wales rail services and £581m capital spending, including £516m to take over the Core Valley Lines infrastructure from Network Rail[133]. The UK Government is contributing some £43m of funding to railways in Wales, including for electrifying the core valley lines, redevelopment of Cardiff Station and other upgrades[134].

Revenue spending on roads and transport by local authorities in 2018-9 came to £267m[135].

Summary and conclusions on transport spending and investment

- **Governments have been providing significant funding for public transport, especially rail, and have continued to do so through the pandemic. They have also provided significant new funding for active travel.** As we noted in section 4, the active travel funding and support represents a big change in transport planning, and transport planners have largely welcomed it.
- **However, significant funding in all three countries is still going on major road projects, and this appears to run counter to published transport objectives and strategies.** The Governments are committed to decarbonising transport which, as we saw in section 3, will require a reduction in car travel as well as a move towards electric vehicles. Yet the £27bn Road Investment Strategy in England, the £6bn for major dual carriageways in Scotland and the £1.6bn for new roads in Wales appear not to allow for this. This throws into sharp relief issues of the forecasting, modelling and appraisal underpinning transport schemes (see section 8 below).

127 https://gov.wales/sites/default/files/publications/2019-11/wales-infrastructure-investment-plan-project-pipeline-2019_0.pdf
128 Details of 2020-21 allocation here: https://gov.wales/written-statement-local-transport-grants-and-ultra-low-emission-vehicle-transformation-fund
129 https://gov.wales/sites/default/files/publications/2020-01/local-transport-grants-guidance-2020-to-2021.pdf
130 https://www.futuregenerations.wales/news/welsh-government-must-show-us-their-carbon-impact-assessments-says-future-generations-commissioner-for-wales/
131 https://gov.wales/m4-corridor-around-newport-decision-letter
132 https://gov.wales/written-statement-active-travel-and-road-safety-funding-allocations-local-authorities-2020-21
133 Transport for Wales annual report 2019-20, https://trc.cymru/sites/default/files/inline-files/TfW%20Annual%20Report%202019-20.pdf
134 https://www.gov.uk/government/news/multi-million-boost-from-uk-government-for-welsh-railways-to-level-up-infrastructure-and-improve-journeys-for-passengers
135 https://statswales.gov.wales/Catalogue/Local-Government/Finance/Revenue/Transport/roadsandtransportrevenueexpenditure-by-authority

- **Transport spending is in silos:** both national and local transport funding in all countries has tended to be given to specific transport modes. The rail funding regime (and in England the strategic and major roads funding) with five-year investment strategies has tended to amplify this and has led, in the worst cases, to investment silos. For example, on the Oxford-Cambridge corridor, the Government is funding the East-West rail link and has separately been developing a new expressway (though some of this is paused) through Highways England. Underlying this appears to be an assumption that road and public transport largely serve different markets. Yet it is clear that investment in either affects the other[136]. At the other end of the scale, we noted the wide range of bespoke local transport services provided by different public bodies, and the potential for co-ordinating these through "Total Transport" schemes.
- **Local authorities do not have long term funding for transport.** Unlike national transport funding, local authorities in all three countries do not have a long-term funding framework. Instead, funding is given on an annual basis, is divided into many different funds (some under the control of other bodies such as LEPs and Homes England) and in many cases is subject to competition and bidding. An exception is the Transforming Cities Fund, which is a longer-term fund, giving cities the opportunity to plan and spend effectively. The new active travel policies in each country do include promises of long-term funding for walking and cycling.
- **Funding for local measures to support zero carbon and sustainable transport is limited.** As we have seen, much local transport capital funding is based on major roads. There are new funding streams; the Transforming Cities fund is funding a mix of public transport and active travel as part of improving connectivity within cities, and as noted active travel funding has recently been made available. However, outside cities, there is very limited funding which local authorities can use to invest in transport projects apart from major roads.
- **Small projects and packages of small measures are very good value for money but have not been a feature of recent Government funding.** There has been an impressive collection of evidence, including the Eddington Report in 2006[137], showing smaller scale projects and packages of these return high value for money. We have noted the importance and success of the Local Sustainable Transport Fund and other programmes, such as Sustainable Travel Towns and Cycling Cities and Towns. Despite this, national governments and local authorities and bodies have emphasised and prioritised large projects.
- **Transport funding tends to focus on capital projects; revenue funding to support services and staff is very limited.** However, some transport services such as local bus and community transport services, and new services like car clubs, can never be profitable yet can be very valuable, especially for addressing social exclusion and for connecting rural and suburban areas. The assessment of the Local Sustainable Transport Fund projects suggested that the mix of revenue and capital funding had been a major strength of the programme[138].

136 See https://www.transporttimes.co.uk/news.php/A-Misbegotten-Motorway-331/
137 https://webarchive.nationalarchives.gov.uk/20081230093524/http://www.dft.gov.uk/about/strategy/transportstrategy/eddingtonstudy/
138 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738267/meta-analysis-of-lstf-large-projects-final-report.pdf

- **UK policy on public transport has focused on users paying most or all of the costs of the transport services.** For example, there have been annual fare rises at or above inflation to ensure passengers paid a greater proportion of the costs of running the railways. This is despite the Government receiving a net income from rail franchises until recently. Similarly, the Government grant for TfL was withdrawn in 2017, leaving London one of the few world cities to run its public transport without government support. This has resulted in higher fares than in other countries, and underplays the wider social, economic and environmental benefits of a high quality public transport network. The dramatic reduction in public transport use following Covid-19 will change the funding arrangement significantly. Rather than higher fares, some have argued for lower or even zero fares, especially on local public transport, to be part of the package of measures needed to support efforts to decarbonise transport[139].
- **Public engagement in setting spending priorities has been very limited.** The overall strategies and the plans for different modes set out in section 3 are the subject of consultation and public engagement. However, there is very limited discussion and public involvement in decisions on spending priorities, at local and national levels, such as the Infrastructure Investment Plans in Wales and Scotland. In England, Local Enterprise Partnerships have been criticised for their lack of transparency and accountability[140].

139 https://www.transportforqualityoflife.com/u/files/180317%20Fare-free%20buses_%20time%20to%20raise%20our%20sights.pdf

140 "LEPs' role has expanded rapidly and significantly but they are not as transparent to the public as we would expect, especially given they are now responsible for significant amounts of taxpayers' money. While the Department has adopted a 'light touch' approach to overseeing Growth Deals, it is important that this doesn't become 'no touch'. The Department needs to do more to assure itself that the mechanisms it is relying on ensure value for money are, in fact, effective." Amyas Morse, head of the National Audit Office, 23 March 2016

Section 7
Transport taxation and charges

Another important influence on the transport choices people and businesses make is the taxation and charges levied on transport.

These can be summarised as follows:

- **Fuel duty:** is a tax on the sale of fuel and is included in the price paid for petrol or diesel at the point of purchase. It is also subject to VAT. Currently petrol and diesel pay the same rate (57.95 pence per litre). This rate has been frozen since 2011, following a 1 pence per litre cut, meaning fuel duties have fallen by 17% in real terms since 2010–11 (at a cumulative cost to the exchequer of £5.5 billion by 2019–20). Other fuels, such as LPG or aviation fuel have different rates[141]. Red diesel (not for road transport use) is subject to lower fuel duty (11.14 pence per litre) - currently, the Government is consulting on restricting its use to rail and agricultural sectors only[142]. Fuel duty was forecast to raise £28.4bn in 2019-20.
- **Vehicle Excise Duty (VED)** is a tax on every vehicle using the public roads. It is paid each year, with a larger sum paid at registration. From 2001 to 2017, VED was proportional to the carbon dioxide (CO_2) emissions of the taxed vehicle, with vehicles grouped in bands. The bands for annual charges were abolished in 2017, transforming VED essentially into a sales tax, with a flat rate for all vehicles after the first year. Currently, the Government is consulting on changing VED: options include creating a more granular system for the tax level at registration; increased taxes on more polluting vehicles; and returning to the original VED structure by reintroducing CO_2-based charges for the annual tax after registration[143]. VED was forecast to raise £6.5bn in 2019-20[144].
- **Company cars:** are a perk for some employees are taxed as a benefit in kind. The charging regime is a percentage of the total value of the car, graduated according to the car's CO_2 emissions. The system has been changed[145] to reflect the move towards more rigorous vehicle tests and this is expected to increase income from company car taxation[146].

Phasing out the sales of new petrol, diesel and hybrid cars and vans by 2040 (or earlier) is forecast to reduce receipts sharply from fuel and vehicle taxes. The Institute of Fiscal Studies is one of many to suggest fuel and vehicle taxes should be replaced with a system of road pricing[147]; others have suggested a charging mechanism based on distance travelled, time of day, location and level of emissions[148]. The Wolfson Economics Prize in 2017[149] was awarded to Gergely Raccuja for proposals on how to implement this.

A road user levy exists for heavy goods vehicles and is based on the weight, axle configuration and emissions (based on VED) of the vehicle. Non-UK vehicles pay the levy based on the number of days they are in the UK[150]. This tax has been suspended for 12 months from 1 August 2020.

Passengers on flights departing from the UK pay **air passenger duty** (APD), which ranges from £13 for the least expensive seats on shorter flights to £515 for seats in small planes travelling longer distances[151].

141 https://obr.uk/forecasts-in-depth/tax-by-tax-spend-by-spend/fuel-duties/
142 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/899174/Consultation_on_reforms_to_the_tax_treatment_of_red_diesel_and_other_rebated_fuels.pdf
143 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/871749/VED_final.pdf
144 https://obr.uk/forecasts-in-depth/tax-by-tax-spend-by-spend/vehicle-excise-duty/
145 https://www.gov.uk/government/publications/review-of-wltp-and-vehicle-taxes
146 https://www.rossmartin.co.uk/sme-tax-news/3892-company-cars-review-of-wltp-and-vehicle-taxes
147 https://www.ifs.org.uk/uploads/GB2019-Chapter-9-A-road-map-for-motoring-taxation-update2.pdf
148 https://bettertransport.org.uk/sites/default/files/research-files/Covid_19_Recovery_Renewing_the_Transport_System.pdf
149 https://policyexchange.org.uk/wolfson-winner/
150 https://www.nidirect.gov.uk/articles/hgv-road-user-levy
151 https://obr.uk/forecasts-in-depth/tax-by-tax-spend-by-spend/air-passenger-duty/

It was projected to raise £3.7bn in 2019-20. The aviation industry has tended to oppose APD and has tried, unsuccessfully, to get the Government to reduce or abolish it. The tax is devolved to the Scottish Government, which plans to replace it with an "Air Departure Tax"; it had proposed reducing it but decided against this on climate change grounds[152]. There have been proposals to replace APD with a "frequent flyer levy", which it is argued would be fairer[153].

As well as these national charges, there are **local charges on transport.** Authorities can charge for on-road parking, some off-street parking and can fine those who either do not pay or overstay. Income and spending on parking by each local authority in England and Wales goes into a separate "parking account." Any surplus can be used only for transport, parking provision or environmental improvement[154].

There are some charges for using certain roads and bridges, for example, the "Dart charge" for the Dartford Crossing and the privately-run M6 Toll in the Midlands. There are a few other tolled river crossings, such as the Humber Bridge and the Mersey and Tyne Tunnels. Charges for using the Skye Bridge and those across the River Severn, the Forth and the Tay have been abolished over the last 20 years.

Local authorities have powers to impose **charges for road use.** These can be used to tackle congestion, pollution and manage traffic generally. Examples include the congestion charge applied in Durham and London's Ultra Low Emissions Zone. Other cities are planning to introduce charges for some vehicles as part of their Clean Air Zones[155] to improve local air quality.

Also, local authorities have powers to impose **a levy on workplace parking** spaces. So far, only Nottingham City Council has used these powers, applying a charge of £424 (2020-2021) per parking space for employers with more than 10 parking spaces. The charge is uprated annually using the retail price index. Money raised from the levy has to go into transport investment: in Nottingham, this has funded new tram lines, the redevelopment of Nottingham Station and a network of bus services. Nottingham has some of the highest public transport use per head outside London[156] and has been able to comply with clean air targets without further measures. It has also shown reduced road congestion in the survey of traffic congestion by INRIX, unlike most other cities in the survey[157]. Other cities and councils are

now planning to use the levy powers. The power to put in a workplace parking levy was recently extended to councils in Scotland under the Transport Act 2019.

The levy applies to employers as employee parking spaces at workplaces are generally outside the personal tax system and not taxed as a benefit in kind. By contrast, if an employer gives their employees all or part of the cost of a public transport season ticket, that is fully taxable as a benefit.

Local authorities can raise funds for transport by applying **levies on new development:** either through the Community Infrastructure Levy (CIL), which applies across an area[158]; or through "section 106 agreements" with individual developers. In both cases, developers contribute to transport infrastructure or services to support the development. As part of its planning reforms, the Government has proposed a new national consolidated infrastructure levy on development to replace CIL and Section 106, but there is at present little detail on this and its implications for transport[159].

Business rates and business taxes can be used to fund transport projects. In London, a "supplementary business rate" has been levied as part of the financing for the

152 https://www.gov.scot/policies/taxes/air-departure-tax/#:~:text=Air%20Departure%20Tax%20(ADT)%20is,collection%20of%20its%20replacement%2C%20ADT.
153 http://afreeride.org/
154 https://www.gov.uk/government/publications/civil-enforcement-of-parking-contraventions/guidance-for-local-authorities-on-enforcing-parking-restrictions
155 https://inrix.com/press-releases/2019-traffic-scorecard-uk/https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/863730/clean-air-zone-framework-feb2020.pdf
156 https://bettertransport.org.uk/blog/better-transport/winning-policy-nottinghams-workplace-parking-levy
157
158 https://www.gov.uk/guidance/community-infrastructure-levy
159 https://www.gov.uk/government/consultations/planning-for-the-future

Crossrail project[160]. The extension of the Northern Line to Battersea has been funded partly by retaining future business rates from businesses locating to the area[161].

However, local authorities in Britain have limited revenue raising powers for transport compared to those in other countries[162]. Examples include the "versement transport" in France (an employers' payroll tax dedicated to transport), "tourist tax" in Switzerland and local sales and property taxes in Germany and the US.

Summary and conclusions on transport taxation and charges

- **Motoring taxes and charges do not at present align with and support decarbonisation targets.** The 10-year freeze on fuel duty has resulted in motoring costs reducing in real terms, while public transport fares have increased. This trend runs counter to Government policies on mobility and climate change and does not promote the use and purchase of low emission vehicles. Any persistent shift from public transport to private car use in response to Covid-19 may challenge further Government's ambitions to decarbonise transport. In the longer term, with the commitment to phase out petrol and diesel vehicles, the Government will lose much of its income from motoring taxes. This offers the opportunity to review future ways to charge for vehicle ownership and road use, including radical ideas such as an "eco-levy" to pay for improved and cheaper public transport[163].
- **Local authorities do not have many powers to raise funding for transport.** Local and regional authorities in other countries have a wider range of funding sources to use than authorities in Britain do[164]. Capturing the land value uplift from new transport projects, as local authorities elsewhere can do, could also generate significant sums.
- **Local authorities do not make use of the existing charging powers they have on transport.** So far only Nottingham has used the workplace parking levy powers and there has been very limited use of business supplements, improvement districts and other powers to fund transport and to manage traffic and congestion.

160 https://www.london.gov.uk/what-we-do/business-and-economy/promoting-london/paying-crossrail-business-rate-supplement#:~:text=In%20April%202010%2C%20the%20Mayor,value%20of%20over%20%C2%A370%2C000.

161 http://content.tfl.gov.uk/nl-factsheet-i-web.pdf

162 https://www.transportforqualityoflife.com/u/files/7%20Transforming%20transport%20funding%20to%20meet%20our%20climate%20targets.pdf

163 https://www.transportforqualityoflife.com/u/files/6%20An%20Eco%20Levy%20for%20driving%20-%20cut%20carbon,%20clean%20up%20toxic%20air,%20and%20make%20our%20towns%20and%20cities%20liveable.pdf

164 https://www.transportforqualityoflife.com/u/files/7%20Transforming%20transport%20funding%20to%20meet%20our%20climate%20targets.pdf

Section 8
Transport appraisal, past, present and future

In section 6 we noted transport spending priorities do not reflect the objectives in the transport strategies outlined in sections 3 and 4. This section looks at the decision-making on transport policies, the tools used by transport decision-makers and the issues relating to these.

Decisions on transport are informed by modelling of current travel patterns by mode, by forecasts of future transport patterns and by appraisals of options and their benefits and costs in a "predict and provide" approach. Much of this work is directed by the Government, through guidance and research, especially via the Transport Appraisal Guidance or TAG (previously known as webTAG).

These tools have their roots in the 1950s and 1960s, when there was not only a rapid increase in both road and air travel and a policy to invest in these, but also recognition of the need to support public transport. Delivering infrastructure to meet the growing demand for mobility across all modes could not be left to market forces or the whims of politicians. Therefore, a framework was developed to give what was thought to be objective advice on transport priorities and funding to show which projects were good value for money.

There are three main elements:

- **Forecasts:** the Government or its agencies produce forecasts for future travel, especially road traffic[165]. The rail industry has a "passenger demand forecasting handbook"[166] and there are also official aviation forecasts[167]. The road traffic forecasts tend to give weight to personal income, employment, population levels and fuel costs as the main determinants of future car ownership and road traffic. The Government has a National Trip End Model[168] which forecasts the growth in journeys made – origins and destinations – up to 2051, and this is used both for the national forecasts, and in local and regional transport modelling. A range of forecasts are produced, using different assumptions about future levels of travel (both trips and distances). The Scottish and Welsh Governments have similar forecasts – the "Transport Model for Scotland" projects a 27% growth in car kilometres between 2015 and 2035[169];
- **Models:** these forecasts are used in computer models which include representations of the different national transport networks and allocate journeys between them. They also assign the journeys to different routes through the networks. There is a national transport model which has grown up over time but this is not suitable for individual schemes which have their own models tailored specifically for them. These have to be in line with Government guidance and use the same underlying national forecasts for total travel;
- **Economic appraisal:** the Government's "Transport Appraisal Guidance" or TAG[170] explains how to assess transport projects, measures and programmes. Use of this guidance is mandatory for any transport intervention requiring Government approval. This appraisal process develops options

165 https://www.gov.uk/government/publications/road-traffic-forecasts-2018
166 https://www.raildeliverygroup.com/pdfc/about-the-pdfh.html
167 https://www.gov.uk/government/publications/uk-aviation-forecasts-2017
168 https://data.gov.uk/dataset/11bc7aaf-ddf6-4133-a91d-84e6f20a663e/national-trip-end-model-ntem
169 https://www.gov.scot/publications/scottish-governments-climate-change-plan-third-report-proposals-policies-2018/pages/12/
170 https://www.gov.uk/guidance/transport-analysis-guidance-webtag

for tackling a transport issue and evaluates the impacts of these options. This also includes advice on modelling.

These appraisals are used to provide the evidence for a business case for investments. This follows the guidance from the Treasury "Green Book": the Strategic case, the Economic case, the Commercial case, the Financial case and the Management case[171]. TAG informs the Economic Case by enabling the development of a cost benefit analysis with a ratio of benefits to costs (BCR)[172]. The TAG overview says that "to aid consistent decision-making, monetary valuations are applied to the respective impacts to enable comparisons in cost-benefit analysis." Where monetary values cannot be derived reliably, they are to be presented in accordance with the severity of impacts or benefits.

This approach has been subject to significant criticism by the transport planning profession for a number of years. The key issues are:

- **Use of social cost benefit analysis (CBA) rather than cost effectiveness against objectives:** this long running challenge to CBA points to the weaknesses of basing Government decisions on people's willingness to pay and the willingness of others to be compensated[173]. There are also three practical criticisms: first that not all relevant impacts can be measured precisely; second that of those that are measured not all can be given a price; and third that even the existing impacts which are monetised use inconsistent methods of valuation. The result has been undervaluing of key impacts, in particular health, climate change, social balance and local environments. More specific examples of this are given below;

- **Dominance of travel time by motorists in valuations:** although the guidance says all impacts should be assessed, in practice the valuation of travel time tends to dominate. Savings in travel time are derived from the forecasts and models: future traffic levels are applied to existing road networks which results in increased congestion. Options for relieving this congestion are assessed. Monetary values are assigned to the resulting savings in travel time and discounted over 60 years. Small time savings, sometimes a few seconds per trip, can yield substantial benefits when multiplied by the numbers of vehicles and journeys over 60 years, outweighing other factors (costs). The valuation of travel time has come from business costs, surveys of travellers and their "willingness to pay" to avoid traffic delays. Yet it is not clear that travellers value, or even perceive, small time savings[174]. The time savings are also theoretical; they use a comparison with a congestion-free future that never happens, since at a local level time savings are rapidly consumed in extra travel;
- **Other road users are undervalued:** those on foot, bikes or in buses are assigned a lower value of time than car drivers, especially those on business and trips at peak hours. For example, the resource cost values (2010 prices) in the appraisal guidance are £16.61 per hour for car drivers and £9.41/hour for pedestrians, cyclists and bus passengers[175]. Some transport models do not even count journeys on foot, yet we have noted in section 1 that these account for around a quarter to a third of journeys. The value of time discrepancy means measures to give priority to pedestrians, cyclists and buses or trams over cars tend to score badly in transport appraisals because they result in delays to cars. Yet, as we have noted in section 3, it is Government policy to support active and sustainable transport measures and there is significant public funding being devoted to this;

171 https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

172 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/427073/webtag-tag-overview.pdf

173 For example see Buchan, K (2008) Decision-making for sustainable transport, Green Alliance, London https://www.green-alliance.org.uk/resources/Decision%20making%20for%20sustainable%20transport.pdf

174 Welch, M. and Williams, H.C. (1997) 'The Sensitivity of Transport Investment Benefits to the Evaluation of Small Time Savings'. Journal of Transport Economics and Policy vol. 31, pp231-254 http://www.bath.ac.uk/e-journals/jtep/pdf/Volume_XXX1_No_3_231-254.pdf

175 https://www.gov.uk/government/publications/tag-data-book, table A1.3.2

- **Measures relying on changing travel behaviour will score badly.** Appraisals are often based on the models projecting past travel patterns into the future. This affects the Government's **"levelling up" agenda:** increased investment in transport networks in the North and the Midlands will score relatively poorly because of previous low demand in these regions. For example, in 2015 when the Northern Rail franchise was being renewed, the economic assessment of replacing the old "Pacer" trains in the North of England was so poor that the Secretary of State had to issue a Ministerial direction to authorise new trains[176]. The historical lock-in within the model forecasts affects **new housing development** also. For example, schemes and strategies based on higher levels of active travel and bus use will be shown as unrealistic given the low level of cycling and the decline in walking and use of buses. "Garden towns" often have masterplans proposing high levels of active and sustainable travel. However, transport assessments of these tend to show very high car use and very low use of alternatives, because previous developments have had these characteristics. As a result, transport investment to support new developments tends to be based on meeting high levels of car use[177];
- **BCR and monetary values dominate:** the five-stage business case in theory gives equal weight to each stage, including the strategic case where objectives are set out and different options are tested to meet these objectives. In practice, there is a tendency for the economic case, with BCR, to dominate decision-making. In addition, there is a tendency for the factors given monetary values, such as time savings, to dominate decision making, even though TAG urges equal treatment of monetary and non-monetary factors. A consequence, for example, is less emphasis being given to the natural environment because its monetary value is not quantifiable easily;
- **Appraisal and business cases tend to discriminate against marginalised and poorer groups:** There are a range of ways in which the transport forecasting, modelling and appraisal system, and the business cases they contribute to, entrench inequalities:
  - **The system misses those who wish to travel, but cannot** ("suppressed demand" in economists' language). Examples include: people with disabilities without access to an accessible transport service; those on low incomes who cannot afford to travel; and people living in more rural and suburban areas who cannot drive and have limited or no public transport available. Because these people are not making journeys at present, models and business cases do not include them. Because the models fail to include these groups, the forecasts show low demand for public transport and accessible services. The result is a weak case for reduced fares and increased services or accessibility improvements;[178]
  - **Impacts of road traffic on poorer people and areas tend to be underestimated.** We noted in section 2 that current travel patterns result

176 https://www.gov.uk/government/publications/pacer-vehicles-withdrawal-confirming-the-ministerial-direction

177 https://www.transportfornewhomes.org.uk/the-project/garden-villages-and-garden-towns/

178 An example of this is the "My Ticket" scheme in the Liverpool City Region, which offers young people in full time education reduced fares across the whole bus network. It was introduced to improve school attendance by children from poorer households. It was not subject to a formal business case, as there is little guidance for appraising such measures, but the result has been an increase in bus use by young people of 142% http://www.buspartnership.com/_uploads/voluntary/Liverpool%20CR%20top%2010%20achievements%20-%20year%20one.pdf

in social exclusion. Pollution from road vehicles tends to affect poorer people and areas, because houses next to main roads tend to be cheaper and so house poorer people. These spatial issues are not fully considered in many transport appraisals, because modelling will tend to miss impacts on wider networks. Moreover, impacts of air pollution and severance due to high traffic volumes are either not valued sufficiently or are outweighed by values of motorists' time.

As we noted above, those on foot and on buses, who tend to be poorer, are assigned lower values of time than car drivers, who tend to be richer[179].

Beyond these, there are two overarching issues with the appraisal, forecasting and modelling system as currently practised.

The first is **the system produces misleading and often wrong answers.** As we have seen in section 1, travel demand has been changing and there have been reductions in some types of journey and in travel by younger people. This is even more true now with the impacts of Covid-19: travel patterns are changing significantly, with increased home-working and online shopping, though the full impacts are yet to be fully known and uncertainty is likely to be a key factor in the future. Producing misleading or wrong answers is not just a recent problem - the road traffic forecasts have consistently over-estimated future traffic growth[180], leading to over-provision of new roads. Additionally, and importantly, over predicting future traffic has inflated the congestion and delay impacts on motorists from measures to promote active and sustainable travel. Over predictions of road traffic have been accompanied by (sometimes significant) under predictions of demand for rail services, leading to a weaker economic case for new rail lines and stations[181]. Relying on past trends and travel patterns will tend to mislead decision-makers. Importantly, there is limited evaluation of what actually happens with transport measures and schemes. Highways England projects are subject to Post Opening Project Evaluation after one year. Some programmes, such as the Local Sustainable Transport Fund, have been subject to detailed evaluation. However, the Commission on Travel Demand found post-opening evaluations are not generally done for many other transport projects and there is no formal system for learning lessons and improving modelling and appraisal[182].

The second overarching issue is **climate change.** In transport assessments, CO_2 emissions are monetised as a cost[183] which tend to be dwarfed by other economic benefits, principally time savings. For example, in calculating the benefits of grants for taking freight by rail and water instead of by road, the congestion benefits on motorways are 152.7 pence per lorry mile removed (thereby reducing delays to motorway drivers) whereas the greenhouse gas benefits are just 6.7 pence[184]. In a road scheme, any increase in CO_2 emissions (costs) are "traded off" against economic benefits of schemes, principally small time savings. However, this runs against the Government's overarching objectives of tackling climate change and reducing transport emissions[185]. In addition, only marginal changes in carbon are counted – not the total carbon produced by the users of a scheme.

The Government has accepted it needs to address some of these issues. It has committed to reviewing the Green Book to take account of the levelling up agenda. It has set out a "route map for updating TAG during uncertain times." This route map will offer further details on the use of scenarios to take account of uncertainty and to use high CO_2 values in appraisal, pending the release of new social costs of emissions. Finally, the Government is considering an overarching "ecosystems services" approach to valuing natural capital[186]. However, the analysis here suggests these reforms do not go far enough.

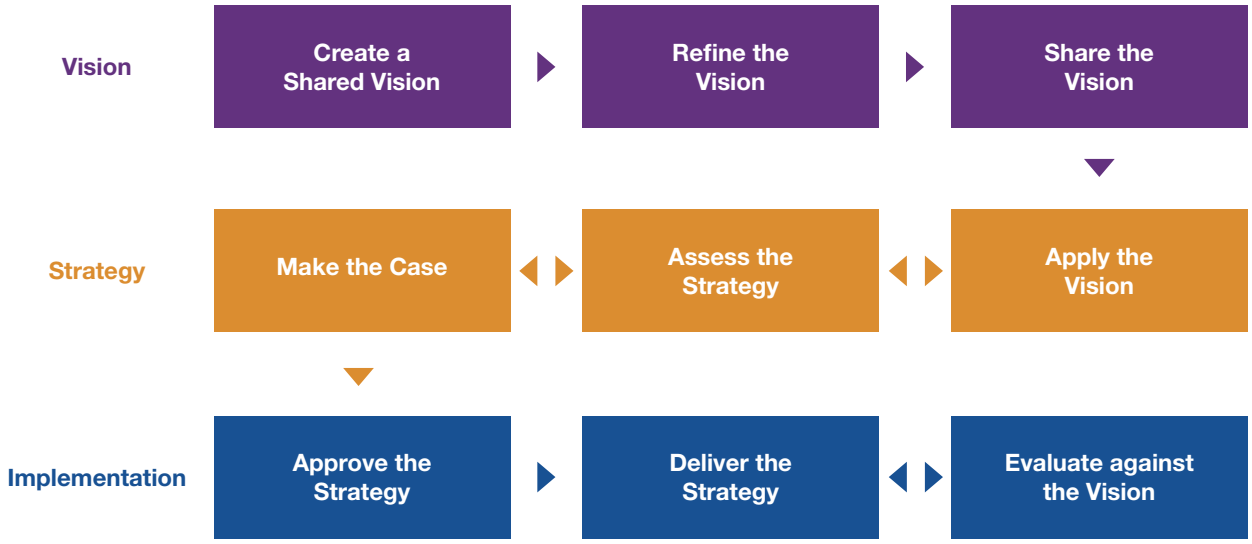
Ways forward

It has been suggested that the Government should urgently conduct **a more fundamental reform of transport appraisal,** the forecasts and modelling that contribute to it and the business cases that result from it. This reform should cover:

- The way in which CO_2 emissions and climate change are evaluated. There is a strong case for treating these as a "showstopper" with a pass/fail test; any scheme, measure or option that increases CO_2 emissions should be rejected before any detailed appraisal.
- The primacy of travel time savings in appraisal and the make-up of those. There is a case for giving more priority to journey time reliability, rather than time savings, since reliability and predictability of journey times matter more to transport users, especially for business and freight trips.

179 However, within the car mode a "national value" of time is used, to avoid discrimination against less affluent areas.
180 https://drgregmarsden.wordpress.com/2017/01/16/prediction-is-very-difficult-especially-if-its-about-the-future/#:~:text=Phil%20Goodwin%20has%20long%20established,as%20shown%20in%20Figure%201.
181 https://bettertransport.org.uk/sites/default/files/research-files/case-for-expanding-rail-network.pdf
182 http://www.demand.ac.uk/wp-content/uploads/2018/04/FutureTravel_report_final.pdf p40
183 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/825064/tag-unit-a3-environmental-impact-appraisal.pdf
184 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/905413/mode-shift-benefit-values-update-document.pdf
185 https://www.transportxtra.com/publications/local-transport-today/news/66363/road-appraisal-makes-carbon-dioxide-uniquely-insignificant--why-and-what-to-do-about-it-
186 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/903176/tag-route-map-2020.pdf

Moving towards an objectives led process



Planning Transport and Development, Peter Brett Associates

- The use of scenarios rather than forecasts in decision-making. Although the Government already does this in principle, the Commission of Travel Demand has shown that in practice, only a narrow range of scenarios is used in scheme appraisal[187].
- The impacts on equalities and low-income groups of current systems.
- The impacts of suppressed demand on key groups and ways to reflect this in business cases.

Beyond this, there is a case for a more radical revision of transport decision-making, moving towards an objectives-led process which allows more public understanding and engagement. This might involve:

- Moving away from "predict and provide" towards what has been called "predict and decide" or "vision and validate", setting out clear objectives and a vision for the future which is used to assess options[188].
- All schemes to be subject to a rigorous planning framework as part of an integrated package, similar to the current process for Development Plans with at least a 15-year horizon (it has also been argued that transport and spatial planning should be brought together into a single framework and tested in an integrated way[189]). Schemes should be tested with both models and real world hard evidence. The planning framework should be based on agreed forward funding (provided locally or nationally) for five years, with funding indications for 10 and 15 years. This links to the comments made in sections 3 and 4 about the need to join up spatial and transport planning.
- Guidance on assessment could still be developed and provided centrally but would be based on nationally agreed objectives on CO_2 emission reductions, air quality, sustainable mode hierarchy, local environment, safety, congestion and so on. Any assessment should be useable in a local context, needs to be fully understandable to non-experts and not incur unnecessary overheads.

187 http://www.demand.ac.uk/wp-content/uploads/2018/04/FutureTravel_report_final.pdf p36

188 See "Better Planning, Better Transport, Better Places", TPS/CIHT/RTPI, 2019, https://www.ciht.org.uk/knowledge-resource-centre/resources/better-planning-better-transport-better-places/#:~:text=The%20advice,Plan%20to%20delivering%20a%20development.

189 BPBTBP report

- The assessment against strategic quality of life objectives should replace the current Strategic Case in the five-stage model and be the overarching gateway to any more detailed analysis. That gateway should include "showstoppers," as suggested for WebTAG by the DfT's own consultants in its 2009 refresh of appraisal and by all the transport professional bodies since. The key is that they would be respected as such.
- The economic case to consist of a cost effectiveness appraisal of a scheme against the objectives identified above and comparing it to other fairly constructed alternatives.
- Within this framework, decision making on all schemes to be delegated to the lowest level of government possible so that local people with local knowledge can decide their priorities with appropriate funding. Schemes within the planning framework would be assessed locally by the appropriate authority (Region or Local Transport Authority). Any Regional authority would be required to ensure, by representation, that local issues were properly addressed in the Plan and scheme approval.
- Testing of the validity of value for money to be performed on a sample of schemes by the Treasury assisted by the DfT and Regional Transport experts.

Summary and conclusions on transport appraisal

Decisions on transport are informed by sophisticated analysis, including modelling of current travel patterns, forecasts of future transport patterns and economic appraisals of policies and project options and their benefits and costs. Much of this work is directed by the Government, though guidance from the Department for Transport based on the HM Treasury "Green Book".

However, this system has been subject to significant criticism. Key concerns are:

- Travel time savings by motorists dominate the economic appraisals of projects and policies, while other road users are undervalued and in some cases not considered at all (some transport models don't count pedestrian journeys).
- The systems are based on past trends continuing so anything that suggests changing past travel behaviour will score badly, including support for poorer communities and reducing car use in new housing developments.
- Monetary values dominate and the "benefit-cost ratio" is given too much emphasis, while the natural environment and other factors which are less easy to value get downplayed.

- Appraisals and business cases tend to discriminate against marginalised and poorer groups, by missing those who want to travel but can't for various reasons and by underestimating the impacts of road traffic on poorer people and areas.
- The cost of carrying out modelling and analysis for authorities as well as the private sector.

There are also overriding concerns that the modelling and appraisal systems undervalue the importance of tackling climate change, and that they can in general produce misleading and wrong answers.

Although the Government has accepted that it needs to address some of the issues it has been slow to do so and there have been suggestions that there needs to be a more urgent fundamental reform of transport appraisal. This would look at:

- The way in which CO_2 emissions and climate change are evaluated and the case for treating them as a "showstopper" with a pass/fail test.
- The primacy of travel time savings.
- The use of scenarios rather than forecasts in decision-making.
- The impacts on equalities and low-income groups of current systems, including the impacts of suppressed demand on key groups.

The case has also been made for a more radical revision of transport decision-making, moving towards an objectives-led process which allows more public understanding and engagement. This would involve moving away from "predict and provide" towards what has been called "predict and decide" or "vision and validate", setting out clear objectives and a vision for the future which is used to assess options.

Section 9
Conclusions and recommendations

Current travel patterns and why they have to change

Travel in Britain is dominated by motor vehicles – cars account for 61% of journeys and 77% of distance travelled in England. Around four-fifths of goods transport in Britain is by vans and trucks. 61% of commuting trips were by car in England (68% in Scotland and 75% in Wales).

Even before Covid, travel was changing. Overall travel – journeys and mileage - has declined in the last 20 years, even with economic growth, and car journeys have fallen, while van traffic has increased by over 50%. Rail use has grown until the onset of Covid and rail has had a sizeable share of longer distance travel and still accounts for a lot of freight, especially to ports.

National averages hide sharp differences between income and age groups and different places. People in low income households travel much less than those in richer households. Young people have been driving less and learning to drive later. People in more rural areas use cars more, especially as bus services have been reduced.

Travel patterns are influenced by the cost of using different modes and by the design and location of new developments. Technological developments are also changing travel patterns and options; vehicles are going electric, and use of data, mobile phones and apps are already changing the way people travel. New mobility options, such as shared cars, electric scooters and e-bikes, have the potential to change travel significantly. Driverless or autonomous vehicles are also being developed, and there is debate about these, but these other technologies may be more immediately important.

The onset of Covid-19 has seen huge immediate changes in travel, with people working from home, a collapse in public transport use and a substantial increase in cycling and walking. The aftermath of the initial lockdown has seen a slow recovery in public transport use (more on bus than rail), a continued increase in cycling, and car travel returning to pre-Covid levels though with different patterns. The longer-term impacts of Covid on travel are very uncertain.

There are imperatives to changing and reducing the impacts of current travel patterns. The dominance of the car for personal travel has brought benefits but also huge downsides, both to the vehicle owner and to wider society: health problems from air pollution and lower physical activity, a continued high level of deaths and injuries from road crashes, and economic impacts from congestion. Above all, transport is now the largest source of UK emissions of greenhouse gases (GHG) so is key to any strategy to tackle climate change.

Previous policies - the built environment and the way in which transport is planned, funded and managed - have created car dependence, which hurts both those with and those without access to cars. Those who have cars have to drive more and further than they might want to because, for the journeys they want to make, alternatives to car use take longer, feel unsafe, cost more, or are not available at all. Those without access to cars - young people, those with disabilities and low-income households generally – face social exclusion and limited access to the education, employment, people, goods and services they need.

So transport policy needs to be more inclusive: it needs to unhook people from car dependence, giving them real travel choices including travelling less. It also has to tackle climate change: the transport sector is now the biggest contributor to UK emissions and previous patterns of surface travel, dominated by private cars and trucks fuelled by oil, must change dramatically.

Transport policies now: transport decarbonisation plans are welcome, but they need to link to spatial planning and to transport spending priorities.

The UK Government and the Welsh and Scottish Governments are responding to these challenges. The Government is developing a Transport Decarbonisation Plan and this is very welcome; the Welsh and Scottish Governments are already working on similar plans. **These plans need to provide a clear route map to net zero by 2050 and to meeting the five-year carbon budgets set under the Climate Change Act along the way. This will involve "avoid, shift, improve" strategies – reducing travel through better planning, shifting travel from low occupancy motor vehicles to shared, active and sustainable transport, and electrifying and improving the motor vehicles remaining. This should inform transport spending priorities.**

However, although there are national transport strategies in Wales and Scotland, there is no transport strategy in England or for the UK as a whole. Although the emerging decarbonisation plan and other strategies like "the Future of Mobility" and Inclusive Transport are welcome, there is no framework of overarching policies and targets for transport in England or in the UK which can be referred to and which can guide transport planners, planners and local and regional government. **The Government should draw up a national transport strategy to consolidate this guidance and link it explicitly to its National Planning Policy Framework .**

Local and regional transport: city-region transport authorities are welcome, but outside these transport and spatial planning is fragmented and in general local authorities do not have the range of powers they need to manage transport effectively

Below the national transport strategies, much transport planning is done at the local and regional level. In England, local and regional transport planning is in a state of evolution. The Government has espoused devolution of transport powers with the introduction of mayors and combined authorities in the city-regions, and potentially more to come. These are welcome; city-region authorities are helpful for strategic transport planning and for managing transport across travel to work areas. Some other countries do not have this: even in some big cities, such as New York and Toronto, mayors manage only small parts of the city and there is sometimes conflict between them and the wider regional body or bodies.

However, outside the city-regions, transport planning in England is fragmented. It is handled by a range of unitary, combined, sub-national and public-private partnerships, sometimes geographically separated and other times overlapping and competing. There are also the sub-national transport bodies, which are developing regional transport strategies, and Local Enterprise Partnerships as channels for some transport investment. Successive reforms by different Ministers and Governments have created complex structures with sometimes overlapping bodies and transport plans at different levels, as well as separate spatial plans, making it difficult for the public to know who is accountable for transport in their area. This complexity makes understanding the objectives and plans for each area challenging for people, planners, politicians and transport planners and makes consistency and coherence of policy and practice difficult. Local transport authorities do not generally have a full range of powers over transport, including on public transport, traffic management and major roads, making it harder for transport planners to tackle the transport issues they face.

The Government's plan for a "Cycling and Walking Commissioner" and a new "Active Travel England" organisation marks a new approach to raising standards and increasing funding for active travel locally, with relatively draconian powers over local authorities. It is as yet unclear how this will work out in practice.

Wales and Scotland have also seen different approaches to local and regional transport bodies, with variable support for regional consortia or partnerships and local transport authorities. Wales is seeing a move back towards stronger regional transport groupings.

Devolution of transport powers and funding to local and city-region transport authorities is welcome and has been shown to work. The Government

should continue with this approach and extend it elsewhere, reducing the fragmentation and complexity of transport decision-making and its links to other aspects. In all three countries, local transport authorities and sub-national transport bodies should have the powers, duties and funding to tackle transport challenges, especially reducing carbon emissions.

Spatial planning and transport planning are separated at national and, in many areas, at local level. This separation does not support the creation of sustainable and attractive places for people to live, work and invest in. The report has highlighted research, including by the TPS, showing that many new housing developments are in locations and layouts that are entirely car dependent. There are national planning policy frameworks in each country and these set out some links with transport. However, the link between these planning policies, transport strategies and investment are unclear and proposed new planning reforms in England could weaken rather than strengthen these links. The Government's statement in its cycling and walking strategy that "we expect sustainable transport issues to be considered from the earliest stages of plan-making and development proposals, so that opportunities to promote cycling and walking are pursued" is welcome and this expectation or requirement should be built into the new planning system the Government is consulting on. The London system, where statutory transport, economic and spatial plans are developed in tandem and inter-linked by a democratically accountable mayor, should serve as a model and be taken forward in the Government's devolution plans. The emerging planning frameworks in Wales and Scotland appear to be promising in focusing new development where it can be well served by active and sustainable transport. **New planning and devolution/local government plans in each country should promote integrated transport and spatial planning so as to reduce the need to travel and help tackle climate change and social exclusion.**

Transport planning is an increasingly valued profession but there are skills gaps. There are now high quality professional qualifications, covering all levels of work, and an established professional development scheme: these need more recognition and support

Transport planning has become an established profession in the last 50 years and continues to show its importance, given the need to tackle key issues such as decarbonisation, air pollution, congestion, health and now the impacts of Covid-19 on mobility. Devolution of transport powers and funding is creating new organisations who need high-quality transport planners to plan for the future and deliver transport projects that create attractive places and meet people's travel needs.

Our survey showed that employers of transport planners are finding skills gaps when they recruit. Interpersonal skills – teamwork, problem solving, time management and numerical and analytical skills – are highly prized. Digital knowledge and skills with data analytics, GIS, programming and strategic modelling are also seen as important, and people who can combine strong technical skills with being able to communicate well, break down silos and relate to people are most valuable.

The transport planning profession now has chartered status and there are many routes to a suite of professional qualifications – including achieving Chartered Transport Planning Professional (CTPP) status, IncTP through the Professional Development Scheme, and the degree apprenticeships leading to TPTech. **These appear to be highly valued by employers but need to be encouraged further.**

The TPP is recognised by Transport Scotland and some English transport agencies as a relevant or essential qualification for everyone carrying out transport projects. **The Department for Transport, the Welsh Government and other authorities in England and Wales should follow practice in Scotland in treating the Transport Planning Professional qualification (TPP), and from now on its associated transport planning qualifications, as essential for staff working on transport projects.**

It needs to be recognised that transport planners are key players in the economic recovery and will continue to play a pivotal role in society in future.

Transport funding needs reform; transport projects which increase carbon emissions must be withdrawn and funding for low and zero carbon transport projects increased and made longer term and more flexible. The cost of using public transport should be reduced.

Governments have been providing significant funding for public transport, especially rail, and have continued to do so through the pandemic. They have also provided significant new funding for active travel. The active travel funding and support represents a big change in transport planning, and transport planners have largely welcomed it. **However, significant funding in all three countries is still going on major road projects, and this appears to run counter to Government transport objectives.** The Governments are committed to decarbonising transport which will require a reduction in car and other vehicle travel as well as a move towards electric vehicles. Yet the £27bn Road Investment Strategy in England, the £6bn for major dual carriageways in Scotland and the £1.6bn for new roads in Wales appear not to allow for this. **Transport projects which increase carbon emissions must be withdrawn and funding for low and zero carbon transport projects and networks increased.**

Transport spending is in silos: both national and local transport funding in all countries has tended to be given to specific transport modes. The rail funding regime (and in England the strategic and major roads funding) with five year investment strategies has tended to amplify this and has led, in the worst cases, to investment silos. **The Government should use sub-national transport bodies to overcome these silos and plan transport on a multi-modal basis.** At the other end of the scale, there are a wide range of bespoke local transport services provided by different public bodies. **Governments and local authorities should promote and fund "Total Transport" schemes** to co-ordinate and bring together these different services and funds.

Local authorities should have a long term funding regime for transport, bringing together different funding streams and with less competition and bidding, so that they can plan ahead and spend effectively. Unlike national transport funding, local authorities in all three countries do not have a long term

funding framework. Instead, funding is given on an annual basis, is divided into many different funds (some under the control of other bodies such as LEPs and Homes England) and in many cases is subject to competition and bidding. An exception is the Transforming Cities Fund which is a longer term fund, giving cities the opportunity to plan and spend effectively. The new active travel policies in each country do include promises of long term funding for walking and cycling.

Funding for local measures to support zero carbon and sustainable transport should be increased. As we have seen, much local transport capital funding is based on major roads. There are new funding streams; the Transforming Cities fund is funding a mix of public transport and active travel as part of improving connectivity within cities, and as noted active travel funding has recently been made available. However, outside cities, there is very limited funding which local authorities can use to invest in transport projects apart from major roads. Funding should move away from a focus and priority for large capital projects. Instead, **there should be more funding for small projects and packages of small measures,** building on the success of the Local Sustainable Transport Fund and other programmes. **There should also be more revenue funding to support transport services** such as local bus and community transport services, and new services like car clubs, which have important social and environmental benefits but will never be profitable in a narrow commercial sense.

The Government should reduce the cost of using public transport and allow local authorities to do so in their areas. Over the past 10 years, public transport fares have increased by more than inflation (bus fares have increased by 54%, while rail fares have increased by 40%, compared with inflation at 31% and wages increased by 19%) , whereas motoring costs have reduced in real terms. Rail fares increases at or above inflation have in fact been a policy of successive governments. Yet this ignores the wider social, economic and environmental benefits of a high quality public transport network, and the impacts in particular of high bus fares on the poorest in society. The dramatic reduction in public transport use during Covid-19 will change the funding arrangement significantly; this is an opportunity for introducing cheaper flexible tickets, reduced fares on local public transport and integrated zonal fares as in London.

There should be greater public engagement and transparency in setting transport spending priorities. There is at present very limited discussion and public involvement in decisions on spending priorities, at local and national levels.

Transport taxation should be reformed to support decarbonisation. Local authorities should have more powers to raise funding for transport and should make greater use of existing powers.

Future motoring taxes and charges should be reviewed to align with and support decarbonisation targets. The 10-year freeze on fuel duty has resulted in motoring costs reducing in real terms, while public transport fares have increased. This trend runs counter to Government policies on mobility and climate change and does not promote the use and purchase of low emission vehicles. Any persistent shift from public transport to private car use in response to Covid-19 may challenge further Government's ambitions to decarbonise transport. In the longer term, with the commitment to phase out petrol and diesel vehicles, the Government will lose much of its income from motoring taxes. A review of future ways to charge for vehicle ownership and road use is needed: revenue-raising options should include more radical ideas, such as an "eco-levy" to pay for improved and cheaper public transport.

Local authorities should have a wider variety of powers to raise funding for transport. Local and regional authorities in other countries have a wider range of funding sources to use than authorities in Britain do. Examples include the "versement transport" in France (an employers' payroll tax dedicated to transport), "visitor lodging levies" in Switzerland and local sales and property taxes in Germany and the US. Capturing the land value uplift from new transport projects could also generate significant sums.

Local authorities should make greater use of existing charging powers. In particular, more places should consider using workplace parking levies, business supplements, improvement districts and other powers to fund transport and to manage traffic and congestion.

Transport modelling, forecasts and appraisal systems need radical reform

The current systems of transport appraisal, forecasts and modelling do not reflect current realities and priorities, notably decarbonising transport, support for disadvantaged people and communities, and the promotion of active travel. The Government should urgently conduct a fundamental reform of these systems and the business cases that result from them. This reform should move away from an old style "predict and provide" approach, projecting forward past trends into the future, towards what has been called "predict and decide" or "vision and validate", setting out clear objectives and a vision for the future which is used to assess options. This objectives-led process should allow more public understanding and engagement in transport decisions. Reform should also cover:

- The way in which CO_2 emissions and climate change are evaluated. Following the transport spending proposals above, these should be treated as a "showstopper" with a pass/fail test; any scheme, measure or option that increases CO_2 emissions should be rejected before any detailed appraisal.
- The inappropriate primacy of travel time savings in appraisal and the make up of those, especially the valuation of small time savings by motorists.
- The use of scenarios rather than forecasts in decision-making. Although the Government already does this in principle, the Commission on Travel Demand has shown only a narrow range of scenarios is used in scheme appraisal in practice. Scenario planning and accounting for uncertainty in future transport strategies, rather than relying on past trends, is the more important with the impact of Covid-19 and the fundamental changes to travel patterns this has brought. The new capabilities of transport data allow much better scenario planning, public engagement and involvement, allowing citizens to shape the areas they live in.
- The impacts of current modelling and appraisal systems on equalities and low income groups.
- The impacts of suppressed demand on key groups and ways to reflect this in business cases.

In conclusion

It is clear from this report that the environment and context for transport planning has changed and is changing further in response the challenges from Covid, but also the long term challenges of decarbonisation. Transport and the way it is planned and integrated into the wider aspects of society including spatial planning will be fundamental to our ability to resolve or address the current challenges of today. Transport spending and taxation need to support decarbonisation, with all agencies and operators given clear remits and incentives to contribute to this overarching goal. The principles and objectives set out in transport strategies should be supported by the investment strategies for particular modes and real spending priorities on the ground and all addressing these wider national society objectives. It is not at present clear that they do this.

London should serve as a model for well-resourced local and regional authorities, combining spatial and transport planning and with their own revenue raising powers, but with requirements for setting pathways to cut CO_2 emissions.

The UK has a tradition of good transport planning. Transport for London is a much-admired transport authority: other city-region transport authorities and the devolved administrations have been able to develop and run effective local transport systems and have ambitions to do more. Governments should give transport planners, especially in local and sub-national authorities, the policies, tools, long term funding, data and freedoms to improve the transport system for all users to provide a better quality of life for people and communities across the nations.