

Mobility in Wales

Background report for

Llwybr Newydd - the Wales transport strategy 2021

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Introduction

This report is an overview of mobility in Wales in 2020. It covers both transport – how people and goods are moved around and the policies that underpin that – but also mobility in the sense of people's ability to move around to access the opportunities they need. It has been written to inform the development of Llwybr Newydd – the Wales Transport Strategy 2021 – but should also provide background information that is relevant to future policy development. In particular, it shows how issues such as equality, the environment, the economy, as well as culture and the Welsh language have been taken into account.

The Transport (Wales) Act 2006 requires Welsh Ministers to prepare and publish a Wales Transport Strategy. Covering all transport modes and all reasons for travel, it needs to set out our strategic priorities and desired outcomes linked to both wider Welsh Government priorities and local authority plans.

The last transport strategy was published in 2008. Since then, much has changed. COVID-19 has impacted almost every aspect of our lives – and will continue to do so for months and years to come. But even before COVID-19, things had changed. More power was devolved to the Welsh Parliament; the Well-being of Future Generations (Wales) Act 2015 has put sustainability at the heart of all Welsh government policy. The government also published Prosperity for All – the new economic strategy. Brexit has happened, and the Senedd voted to declare a climate emergency. There have also been a range of recent transport policy initiatives such as the decision not to progress the M4 relief road, as well as our new work on disability and access to transport, our work on speed limits and pavement parking.

Before we could draft a new strategy, we needed to understand all of this and more. What are the different transport modes and sectors in Wales and how do they operate? What are the current and emerging policy issues? How does transport play a role in the environment, in society, the economy or culture? How do people experience transport today and what are the barriers that stop them from doing so? And what are some of the key innovations?

This report addresses some of those questions based on background research and extensive engagement with industry stakeholders and users. It complements and builds on other work, especially Chapter 5 (Transport) of the Future Generations 2020 Report.

Acknowledgements

This report was prepared for Welsh Government by Kate Clark with input from internal and external colleagues. We are particularly grateful for the assistance of a wide range of stakeholders including Welsh Commissioners, policy leads, commercial and third sector groups and groups representing people who share protected characteristics. As noted, the report is not a statement of Welsh Government policy. The information in this report was originally gathered to assist with the development of Llwybr Newydd – the new Wales Transport Strategy Consultation Draft, published in November 2020. It has also helped shape the final version of Llwybr Newydd – the Wales Transport Strategy 2021, alongside the extensive feedback from the public consultation.

Terms used in this report

Accessible – transport services and infrastructure that meet the relevant policy and regulatory standards on equality, access, human rights and the Welsh language, recognising the social model of disability.

Acoustic vehicle alerting systems – <u>UNECE Regulation No.138</u> requires all new types of electric and hybrid vehicles to implement adaptive Acoustic Vehicle Alerting Systems (AVAS) from 1st July 2019, and all new electric and hybrid vehicles from 1st July 2021. Approved vehicles emit an artificial sound to alert pedestrians and cyclists of the relative location, speed and direction of the vehicle.

Active travel – for the purposes of this document 'active travel' refers to walking and cycling for everyday journeys – such as to go to work, or education or to access services. Mobility scooters are included under 'walking' in the Active Travel (Wales) Act 2013.

Corporate Joint Committees (CJCs) – the proposed new arrangements to improve regional transport planning in Wales.

Decarbonisation – the actions needed to cut greenhouse gas emissions and move towards a low carbon economy. The Welsh Government is committed to net zero emissions by 2050.

Demand-responsive travel – this is shared private or semi-public transport, based on passenger demand rather than a fixed timetable. Examples in Wales include the fflecsi services run by Transport for Wales.

Devolution – this gives Wales the power to pass legislation and transfers some ministerial responsibilities to Wales. For transport this includes responsibility for roads and buses. Other areas such as rail, ports, and aviation are not devolved and Welsh Ministers work in collaboration with the UK government.

Ecosystem resilience – the capacity of a whole ecosystem to respond to disturbance by resisting damage and recovering quickly.

Equality Act – under the Equality Act 2010 it is unlawful to discriminate against someone because of a protected characteristic. The nine protected characteristics are age, disability, gender reassignment, marriage or civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. Our Strategic Equality Plan sets out our priorities in this area.¹

Five ways of working – the Well-being of Future Generations (Wales) Act 2015 sets out five ways of working that public bodies need to think about to show they have applied the sustainable development principle. They are long-term, prevention, integration, collaboration and involvement.

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¹ https://gov.wales/equality-plan-and-objectives-2020-2024

Future Wales – the National Plan 2040. This is the national development framework that sets out where we think we should try to grow and the types of development we need over the next 20 years to help us be a sustainable and prosperous society.²

Heavy goods vehicles – the European Union term for vehicles over 3.5 tonnes – light commercial vehicles are under this weight.

Highways Authorities – have a duty to assert and protect the rights of the public to use and enjoy any highway for which they are an authority. As the Highway Authority for the motorway and trunk road network in Wales, Welsh Ministers must maintain them at public expense and comply with other regulations.

Hydrogen vehicles – use electricity produced through a chemical reaction between hydrogen and oxygen. Either the electricity powers the car or charges a battery which powers the vehicle. The hydrogen fuel is stored in a high-pressure tank.

Infrastructure – transport infrastructure includes all the things that enable transport services to operate – streets and roads, railway lines and active travel networks such as cycle-paths, footpaths and road allocation. It also includes associated structures such as stations, bridges, embankments, car parks, signage, signalling, bus stops and transport interchanges and the soft estate – land and greenspace associated with transport. Ports and harbours, airports, and freight and logistics facilities are also important.

Integrated responsive travel – this replaces standard bus services with more responsive services that are also integrated with other kinds of transport. Transport for Wales is piloting this in Wales.

Land-use planning system – this is the process of regulating land-use for wider public benefit, including social and environmental outcomes.

Light goods vehicles (LGVs) – the smaller vans that deliver goods and provide services.

Llwybr Newydd – means 'new path' in Welsh. This is the title for the Wales Transport Strategy 2021.

Micro-mobility – small lightweight vehicles driven by users personally and operating at speeds of under 25km hour. They can include cycles or scooters including electrically-powered ones.

Mobility as a service (MaaS) – this is a shift away from personally-owned transportation to services that enable people to plan, book, pay for and use a variety of different types of transport.

National Transport Delivery Plan (NTDP) – once Llwybr Newydd has been finalised, Transport for Wales (TfW) will develop a National Transport Delivery Plan that sets out specific investment priorities.

² https://gov.wales/future-wales-national-plan-2040

National well-being goals – the seven national well-being goals are set out in the Well-being of Future Generations (Wales) Act 2015. They are: a prosperous Wales, a resilient Wales, a healthier Wales, a more equal Wales, a Wales of cohesive communities, a Wales of vibrant culture and thriving Welsh language and a globally responsible Wales.

National well-being indicators – there are 46 well-being indicators that demonstrate progress against the seven national well-being goals. The Welsh Government reports on these annually.

Planning Policy Wales 10 (PPW10) – the Welsh Government's guidance for making planning decisions. It is supplemented by Future Wales – the National Plan 2040.

Private hire vehicles (PHV) – vehicles such as minicabs, some school and daycare centre transport services and chauffeur services. Journeys must be prebooked via a licensed private hire vehicle operator.

Private light vehicles (PLVs) – motorbikes and small cars that are efficient in terms of energy use, road space and materials.

Protected characteristics – under the Equality Act 2010 it is illegal to discriminate against people on the grounds of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex or exual orientation. These are known as protected characteristics.

Public service vehicles (PSV) – vehicles that carry more than eight passengers for hire or reward.

Public transport – transport services available for public use, typically on fixed routes or schedules, that charge a fixed fare. In Wales public transport includes bus and rail services.

Senedd – the democratically elected body that represents the interests of Wales and the Welsh people.

Social model of disability – this makes an important distinction between impairment and disability. It recognises that people with impairments are disabled by barriers that commonly exist in society. These barriers include physical, attitudinal, environmental, systemic, linguistic and economic barriers which can prevent disabled people's inclusion and participation in all walks of life.

Soft estate – the green spaces and land associated with strategic transport infrastructure – particularly the Strategic Road Network. It may include biodiversity or historic environment assets.

Strategic Road Network (SRN) – the motorway and trunk road network in Wales.

Sustainable development principle – under the Well-being of Future Generations (Wales) Act 2015 public bodies must act in accordance with this principle, which means that they must act in a manner which ensures that the needs of the present

are met without compromising the ability of future generations to meet their own needs.

Sustainable transport – transport modes that contribute to decarbonisation including walking and cycling, public transport and low or zero emissions vehicles.

Sustainable transport hierarchy – guides planning decisions and gives priority to active travel and public transport, followed by ultra-low emission vehicles and finally private vehicles. It is set out in Planning Policy Wales (PPW) 10.

Taxis and PHV standards – taxis and private hire vehicles are high risk environments, and so subject to statutory licensing, particularly for children and vulnerable adults. The UK Government sets and enforces statutory licensing standards.

Transport for Wales (TfW) – the body established by Welsh Government to deliver transport priorities in Wales.

Transport mode – the way that passengers or goods are transported by air, water or land. The modes include vehicles, rail, ships (maritime), air (aviation). Increasingly people see transport journeys as involving many different types of transport modes (multi-modal).

Transport sector – organisations that provide services to move people or goods. They may be in the private, public or voluntary sector. Examples in Wales include freight and logistics organisations and community transport providers.

Ultra-low emissions vehicles – cars or vans that emit very few greenhouse gases – technically 75gm/km CO₂ or less. They may be electric, hydrogen or hybrid vehicles.

Ultra-low emissions zones – areas where vehicles, including cars and vans, need to meet ultra-low emissions standards or they have to pay a charge to drive within the zone.

Wales and Borders Franchise – a franchise is a contract to operate passenger railway services. Services on the Wales and Borders lines are currently operated by Transport for Wales.

Wales Infrastructure Investment Plan – this document sets the context for investment in infrastructure in Wales including transport infrastructure.

Well-being of Future Generations (Wales) Act 2015 – this act is about improving the social, economic, environmental and cultural well-being of Wales. It requires public bodies listed in the Act think more about the long-term; work better with people, communities and each other; look to prevent problems and take a more joined-up approach.

Welsh transport appraisal guidance (WelTAG) – a framework for assessing the impact and benefits of proposed transport interventions such as schemes to upgrade roads. It is aligned with the seven national well-being goals.

This report is not a statement of Welsh Government policy.

Mobility in Wales background report for Llwybr Newydd: the Wales Transport Strategy 2021

1 Transport in Wales

The first step is to understand transport in Wales. Transport involves many different ways in which we move people and goods, from walking and cycling, through to public transport (buses and rail), aviation, shipping, private cars and motorbikes and hire vehicles such as taxis. Transport also includes transport services – bus, rail and other transport modes – and the physical infrastructure that helps us to travel and move those goods – cycle tracks and footpaths, streets and roads, the railway network, ports and airports, transport hubs, signage and barriers, parking, electric charging points and other facilities.

This section describes transport modes and sectors in Wales, and some current policy initiatives and challenges.

1.1.1 Transport trends

Llwybr Newydd has been informed by a more detailed Transport Data and Trends report.³ That report highlights key transport trends:

- transport in Wales is responsible for 17% of Welsh greenhouse gas emissions
- despite growth in rail, private cars will remain the dominant mode of transport in Wales in the short to medium term, a trend that is exacerbated by COVID-19 (see below)
- although long distance rail travel is forecast to grow significantly (151% by 2043), this is set against a relatively low baseline in comparison to car use which is forecast to grow by 16.7% by 2030⁴
- three quarters of all public transport journeys are made by bus (more than 100 million passenger journeys a year in Wales)
- although there has been a downward trend in the number of passenger journeys on local bus services over the past decade, in part related to reduced funding for subsidised services, local bus is far more significant than rail in relation to number of passenger journeys undertaken.

³ Transport Data and Trends (Data Report) https://gov.wales/llwybr-newydd

⁴ Department for Transport Road Traffic Forecasts 2018, Reference Case

1.1.2 Active travel

Active travel includes walking and cycling as a mode of transport – usually to get to work or go shopping, to access services or to see friends. We also walk or cycle simply for enjoyment. Active travel infrastructure includes pavements, footpaths, shared use paths, cycle tracks, foot and cycle bridges and underpasses, associated facilities such as cycle parking and benches and, to some degree, the 1,690 mile (2,720 km) National Cycle Network in Wales, managed by Sustrans.⁵

Of all forms of transport, walking and cycling have the most benefits – they are good for our health, deliver benefits to communities, benefit the economy, cost the least and have the lowest carbon and wider environmental impact.

In order to make it easier for more people in Wales to walk and cycle, we have been working with authorities to integrate walking and cycling routinely into new development, which is now a key part of Planning Policy Wales 10, and with third sector organisations to engage with communities on local improvements.

Our 2013 Active Travel Act requires local authorities to plan integrated walking and cycling networks for all their larger places – roughly all cities, towns and villages with a population of more than 2,000 people. To make these networks a reality, local authorities need to develop new and improve existing walking and cycling routes every year. We have supported this work through the Active Travel Fund, established in 2018 and previous grant schemes. We have also been working to integrate active travel with other forms of transport, so it is easier to walk to and park cycles at stations, for example. Through the Safe Routes in Communities Programme and now our Active Journeys Programme we have funded hundreds of schemes to enable children to walk, scoot and cycle to school for two decades.

As well as new physical infrastructure, other interventions can help promote walking and cycling. Cities such as Cardiff have introduced bike share schemes where users can hire a bicycle on a short-term, low-cost basis which have contributed to a local increase in cycling. The Cycle to Work scheme is a UK Government initiative which allows employers to loan cycles and cyclists' safety equipment to employees as a tax-free benefit. We have also been looking at other ways to make it easier, safer and more comfortable to walk and cycle including our review of pavement parking which poses real barriers to walking and how lower default speed limits in urban areas can improve conditions for walking and cycling (see 2.3.5 below).

Despite these initiatives, we have not yet turned the curve in the long-term trend of fewer people walking and cycling at an all-Wales level, though local data indicates a steep rise for cycling in authorities such as Cardiff, where the most recent BikeLife survey found that 22% of residents cycle at least once a week.⁶ There were also

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⁵ https://www.sustrans.org.uk/national-cycle-network/the-national-cycle-network-in-wales/

⁶ https://www.sustrans.org.uk/media/5946/bikelife19_cardiff-v73_eng_web.pdf

increases in people walking and cycling for travel and exercise associated with the COVID-19 lockdown, though the longer-term impact is not yet known.

Active travel (walking and cycling) still only accounts for around 15% of journeys to work or places of study in Wales – cars hugely predominate.⁷ In 2013-14, 60% of adults aged 16- 64 in Wales had access to a cycle, while more than 90% had learned to ride one.⁸

Looking ahead, the greater uptake of e-bikes has significant potential to increase mode shift (see 4.3 below). Other innovations such as e-scooters are likely to increase the number of users on the cycle network as an alternative to car use however there are also concerns around pedestrian safety.

It is important that new walking and cycling infrastructure does not make it harder for disabled people or people with pushchairs to safely access bus stops and public transport. Disabled people are concerned that active travel initiatives exclude them (see annex one).

1.1.3 Public transport

Bus and rail journeys are the principal forms of public transport in Wales. Despite this, public transport currently makes up a small proportion of motorised journeys.

1.1.4 Bus

Bus is the principal form of public transport in Wales. More than three in every four public transport journeys in Wales are by bus.⁹

As in other countries, bus use in Wales is heavily concentrated in more densely populated areas, with lower usage in more rural areas. Around 70% of the population live less than a 400m walk from a bus stop with at least one bus per hour. The number of passenger journeys undertaken by local bus in Wales declined by 22% between 2008/9 and 2018/19. During this time there was also shrinkage in bus networks as a result of cuts in budgets. Despite this decline, recent years have seen a slight recovery in bus use, with the number of passenger journeys rising by 2.2% between 2016/17 and 2018/19.

Wales' local bus services are operated by around 80 private sector companies except for two municipal companies in Cardiff and Newport, with a mix of commercial and supported routes. Long distance scheduled coach services connect

⁷ Table TSGB0108. The National Survey for Wales 2019/20

⁸ National Survey for Wales, Welsh Government, 2013-2014 https://gov.wales/national-survey-wales-results-viewer

⁹ Transport Data and Trends (Data Report) https://gov.wales/llwybr-newydd

¹⁰ Analysis undertaken by Transport for Wales, 2019

¹¹ StatsWales, Vehicle kilometres and passenger journeys on buses and coaches by year,

https://statswales.gov.wales/Catalogue/Transport/Roads/Public-Service-

Vehicles/vehiclekilometresandpassengerjourneysonbusesandcoaches-by-year . Original source: Public Service Vehicle Survey, Department for Transport

Wales with the rest of the UK, provided by National Express and Megabus. Approximately 74% of bus kilometres travelled are commercial services, with the remaining services subsidised by local authorities.¹² In 2015, there were around 2,150 buses in operation in Wales.¹³

Welsh Government oversees policy on buses in Wales and provides financial support to local authorities for bus services that are commercially unviable through the Bus Services Grant. Our voluntary Bus Quality Standard explains what is expected of local bus services that receive funding from the grant, including cleanliness, information, uniforms, customer complaints, and information about service changes and the requirement for disability and equality training.¹⁴

We were the first government in the UK to introduce universal free bus for older people and disabled people, and continue to support a range of free and concessionary bus travel schemes in Wales (see 2.3.2).

The longer-distance TrawsCymru strategic bus network is the backbone of the public transport network outside the main metro areas and on corridors not currently served by rail. Secondary services feed into the TrawsCymru network, and TrawsCymru services feed into the rail network at key stations. Full TrawsCymru® branded services need to meet service standards, such as connecting to hospitals, and linking town centres and communities. The services are procured and managed by local authorities. Over the last ten years we have invested significantly in new services, enhanced frequencies, more environmentally friendly buses and better facilities at key interchanges, as well as fare incentives and free travel schemes.

Looking ahead, there are a range of challenges for the future of bus in Wales. The Low Carbon Delivery Plan commits us to achieving a low emissions bus fleet by 2028 but this will require significant investment if it includes existing as well as new vehicles (see below).

If more people replace private car journeys with bus, this could reduce emissions and congestion by default but there are challenges in growing bus use. Passenger numbers are stable or falling in part driven by the reduction in services, reduction in funding and lack of consistent information (see annex one). In urban areas buses can be delayed by congestion, by pinch points and by a lack of coordination on highway maintenance. Rural services can also face delays, caused by road works and other factors that may impact on connectivity with other public transport services. As a result of the pandemic many users have lost confidence in the safety of bus services. In response, Transport for Wales has launched a new collaborative demand responsive scheme in urban areas, where commercial bus services were

¹² StatsWales, Vehicle kilometres and passenger journeys on buses and coaches by year,

https://statswales.gov.wales/Catalogue/Transport/Roads/Public-Service-

Vehicles/vehiclekilometresandpassengerjourneysonbusesandcoaches-by-year. Original source: Public Service Vehicle Survey, Department for Transport

¹³ https://gov.wales/sites/default/files/publications/2017-08/transforming-bus-investment-in-wales-the-welsh-bus-fleet.pdf

¹⁴ https://gov.wales/sites/default/files/publications/2018-01/voluntary-welsh-bus-quality-standard.pdf

struggling to operate (see 4.7 below). There are also limits to the extent to which the public sector can influence services in a deregulated environment (see 2.3.3 below).

1.1.5 Rail

The rail network in Wales covers just under 2,400 km of track and carries 1,340 train services per day. 15 Train operators provide predominantly east-west services in the north and south of Wales, with the Heart of Wales line and the Cambrian line serving mid-Wales. North-south rail travel is routed along the Marches line, which lies partly in Wales and partly in England. Trains serve both passengers and freight.

Our Data Report notes that rail journeys in Wales are growing, but not as fast as in other parts of the UK. There were 31 million rail passenger journeys starting and/or ending in Wales in 2018-19, an increase of 0.2% compared with the previous year. 16 Over two thirds of rail journeys were within Wales. Cardiff was the most common destination for within-Wales rail trips, accounting for 41% of all rail journeys.¹⁷ Until 2020 there was continued growth in rail usage, although the rate of growth had slowed. Growth in recent years has been driven by rail trips that both start and end in Wales rather than for rail trips to/from other parts of Great Britain.¹⁸

Responsibility for rail infrastructure in Wales remains with the UK Government, except for the Core Valley Lines, which was transferred to Welsh Government in March 2020.

Network Rail is the asset owner and rail network operator and the UK Government sets out the enhancements that will be delivered and the funding available. Network Rail is monitored by the Office of Rail and Road (formerly the Office of the Rail Regulator). 19 Network Rail's Long-Term Planning Process (LTPP) provides the UK Government's framework for strategic planning up to 30 years into the future. The Welsh Route Study sets out a vision for rail provision in Wales to 2043.²⁰

Welsh Government has invested £150m in rail enhancements in Wales, including station improvements and more services including a new service between north Wales and Liverpool.

Transport for Wales was initially set up to deliver rail services, and the Wales and Borders franchise has recently been awarded through Transport for Wales (operations commenced October 2018). Three other train companies operate in

¹⁵ Railway Upgrade Plan - Wales 2017-18, Network Rail, 2018 https://cdn.networkrail.co.uk/wpcontent/uploads/2017/06/Railway-Upgrade-Plan-Update-2017-Wales.pdf

¹⁶ Regional Rail Usage - 2018-19 Statistical Release, Office of Road and Rail, 2020 https://dataportal.orr.gov.uk/ media/1742/regional-rail-usage-2018-19.pdf

¹⁷ Rail Transport, April 2017 to March 2018, Welsh Government, 2019 https://gov.wales/sites/default/files/statistics-andresearch/2019-04/rail-transport-april-2017-to-march-2018-824.pdf

¹⁸ Regional Rail Usage - 2018-19 Statistical Release, Office of Road and Rail, 2020 https://dataportal.orr.gov.uk/media/1742/regional-rail-usage-2018-19.pdf

¹⁹ https://www.orr.gov.uk/

²⁰ cdn.networkrail.co.uk/wp-content/uploads/2016/11/Welsh-Route-Study.pdf

Wales – CrossCountry, Great Western Railway and Avanti West Coast. Community rail partnerships also play a role in supporting services (see 1.9.2 below).

Welsh Government is also working with Transport for Wales on three new metro packages – in south east Wales, south west Wales and north Wales. The new metros will include new rail services, new stations and strategic park and ride sites, as well as associated bus services. The aim is to provide quicker journeys, better connections, greater capacity and more frequent services, as well as more accessible services, cheaper tickets and greener services.

In response to the decline in passenger numbers due to COVID-19, Transport for Wales Rail Ltd (a publicly owned subsidiary of Transport for Wales) takes direct control of rail services on the country's railway from February 2021. This replaces the current joint venture of Britain's Amey and French-owned firm Keolis with a new partnership between Transport for Wales, Keolis and Amey, to continue to deliver rail services and the ongoing Core Valleys Lines transformation programme.²¹

It has been argued that overall investment in rail infrastructure in Wales is lagging behind the rest of the UK and Welsh Government is keen for rail to be fully devolved (see 2.3.1).

1.1.6 Road, streets and parking

The network of roads and streets in Wales are a shared resource, used predominantly by cars, but also by bus and community transport, freight and goods vehicles. The road network also supports walking and cycling.

Welsh Ministers are directly responsible for operating, maintaining and improving the trunk roads of the Strategic Road Network (SRN), working with two Trunk Roads Agents in Wales. They have a statutory duty to maintain the highway and its assets under the Highways Act 1980. All other roads are maintained and kept safe by local authorities, including 'A' roads, local streets or rural lanes used for leisure and agriculture.

1.1.7 Car, van and motorcycle travel

Cars, motorcycles and vans are the predominant form of transport on the roads. Perhaps because of the rural nature of Wales, private cars account for the overwhelming majority of journeys in Wales. Combining data from 2011 and 2012, private cars accounted for 69% of all trips and 84% of distance covered in a year.²²

In 2018, there were 1.9 million licensed vehicles, of which 1.6 million were cars.²³ Car traffic has been steadily growing and without significant change car

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²¹ https://gov.wales/welsh-government-take-rail-franchise-under-public-control

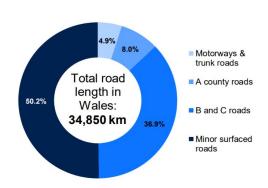
²² Personal travel in Wales 2012, Welsh Government, 2013 https://gov.wales/sites/default/files/statistics-and-research/2019-01/personal-travel-2012.pdf

²³ Road Traffic 2018, Welsh Government, 2019 https://gov.wales/road-traffic-2018-html

miles/kilometres are forecast to grow by 16.7% by 2030.²⁴ Road traffic in Wales reached the highest ever recorded level in 2018 at 29.4 billion vehicle kilometres.²⁵ While traffic flow is dominated by the private car (78% of vehicle flow), the greatest percentage increase between 2017 and 2018 was for motorcycles which currently represent only 1% of vehicle flow.²⁶

Although cars are the predominant form of transport, and car ownership is increasing, around 13% of households in Wales do not have access to a car and so rely on other forms of transport.²⁷

Wales continues to have the highest proportion of people travelling to work by car (80%) compared to the regions of England or Scotland.²⁸ The proportions of people driving, walking or cycling, traveling by rail



and using buses to work have remained relatively stable over the past 15 years (although COVID-19 has recently affected this).²⁹ An average one-way personal trip in Wales, where someone is travelling to reach a specific destination covers 8 miles (12.8km) in 2012. The average car journey is 9 miles (14.5 km) and the average trip by local bus is 6 miles (9.6km). A typical walking trip is less than a mile.³⁰ Longer distance inter-regional journey patterns are dominated by east-west flows, particularly cross-border between Wales and England.³¹

Section 4.3.3 looks at current progress on electric vehicles and electrification, whilst other sections of the report look at issues associated primarily with car travel including air quality.

1.1.8 The Welsh Strategic Road Network (SRN)

The Welsh motorway and trunk road network (SRN) includes over 75 miles (120 km) of motorway and over 1,000 miles (1,600 km) of trunk road. Although it accounts for just 5% of the total Welsh road network, it carried more than one third of all traffic - 11.2 billion vehicle kilometres in 2018.³² It is vital to the economy,

²⁴ Department for Transport Road Traffic Forecasts 2018, Reference Case https://www.gov.uk/government/publications/road-traffic-forecasts-2018

²⁵ Road Traffic 2018, Welsh Government, 2019 https://gov.wales/road-traffic-2018-html

²⁶ Welsh Government analysis of average annual daily flow (AADF) data.

²⁷ National Survey for Wales, Welsh Government, 2019-2020

²⁸ Department for Transport *Transport Statistics Great Britain 2019*:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/870647/tsgb-2019.ndf

²⁹ Well-being of Wales 2018-19, Statistics for Wales, 2019 https://gov.wales/well-being-wales-2019

³⁰ Personal travel in Wales 2012, Welsh Government, 2013 https://gov.wales/sites/default/files/statistics-and-research/2019-01/personal-travel-2012.pdf

³¹ Analysis of 2019 mobile phone network data undertaken by Transport for Wales, June 2020

³² Road Traffic 2018, Welsh Government, 2019 https://gov.wales/road-traffic-2018-html

connecting people and communities, businesses and customers, and enabling access to vital social, economic and cultural services.

Some routes are of international importance as part of the Trans European Road Network with a key role in enabling passenger and freight movement across Europe. 'A' roads on the SRN also have potential significance as a conduit for utilities, broadband and pipelines, although this needs to be carefully managed as this can potentially conflict with wider safety and operating priorities, and can add to congestion. The roadside verges and soft estate can also have a biodiversity value (see 3.1.4).

Our Performance Framework for 2019 links expenditure on roads to the national well-being goals, reporting on issues such as sustainability, active travel, safety and improved safety, reliable services, economic development, efficiency and cost effectiveness. The main areas of expenditure include the maintenance and operation of the trunk and motorway network, rolling out of Intelligent Transport Systems and measures to mitigate potential environmental impacts from road transport, including climate change, air quality and noise. We also fund traffic officers and traffic information systems to reduce congestion, and improve journey times, as well as work to respond to incidents including extreme weather events.

One of the biggest challenges in the operation of the SRN is the need for regular maintenance to keep the network operating safely. There are over 3,700 structures on the SRN including the carriageway, embankments cuttings, drainage, vehicle restraints, lighting, signals, tunnel equipment, signage, road markings, sound barriers, landscaping, depots and buildings.

Soon, nearly 50% of the SRN will be over fifty years old. Much of it was originally built to historical design standards and lighter vehicle weights. It now carries much more traffic than it was designed for and as traffic grows, there are fewer opportunities to carry out major maintenance without disruption.

Once a road is constructed, natural processes and wear-and-tear cause deterioration of individual components from the road surface to bridge bearings and traffic signposts. Components also suffer accidental damage – for example light vehicles can damage the road pavement, but HGVs can cause damage to the foundations and the infrastructure supporting them. In 2018/19 there were nearly 60,000 recorded defects on the SRN.³³

In order to address this, we have adopted a more systematic approach to asset management to manage, maintain and operate the SRN in a way that is safe and minimises disruption. Highways Asset Management Plans ensure that repairs are undertaken at optimum times. The Lifecycle Planning contained within them, recognises that there are key stages in the life of each asset type where investment

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³³ There is also data about road condition in the annual reports on locally maintained roads submitted by local authorities as part of the Highways Refurbishment Grant, and in the Asset Management Strategy for the SRN.

options need to be considered to ensure that each part of the asset achieves its full expected life, at minimum cost.

However, there is currently a maintenance backlog for all roads of around £0.5bn.³⁴ This has grown because the level of investment has not kept up with the amount of deterioration. In 2018-19, 6.4% of the motorway network and 2.8% of the trunk road network required close monitoring, compared to 4.9% and 1.8% respectively in 2017-18. The condition of the local road network is notably worse than the trunk roads and motorways. During 2018-19, 4% of A county roads, 5% of B roads and 14% of C roads were in poor condition.³⁵

Because of the size of some of the assets and the scale of the network covering all parts of Wales, maintenance costs can be high. There are more than 1,100 bridges and if just one major bridge deteriorates beyond repair, repairs can cost up to £100m (as is the case for the A494 River Dee bridge).

Some of the other challenges in relation to the SRN include the need to deal with drainage and flooding, particularly in the light of extreme weather events which are likely to become more frequent.

1.1.9 Unadopted roads

There are 20,000km of unadopted roads in Wales – around 95% of the road network.

The Unadopted Roads Taskforce has been looking at how to deal with unadopted roads including the maintenance backlog. Their final report was published in October 2020. They note the difficulty of finding reliable information about the length and condition of unadopted roads. Recommendations include the need for a central resource to assist with funding local unadopted roads and to ensure that they become part of the adopted highway network.³⁶

1.1.10 Road safety

Road traffic injuries happen every day on Welsh roads and can have tragic consequences, but such incidents can be avoided. Since 1994 there has been progress and the number of incidents has fallen, although there is still scope for improvement. As a Highway Authority we have a legal duty to constantly monitor and improve the network to address safety issues. We have well-developed inspection, monitoring and emergency maintenance regimes in place to ensure the SRN is safe on a day-to-day basis. The key issue is how to continually improve safety. Our Road Safety Framework for Wales sets a vision for a continued reduction in the number of people killed and seriously injured on Welsh roads, with

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³⁴ Data on the bridge maintenance backlog of £945m is at https://gov.wales/sites/default/files/publications/2020-11/atisn14420.pdf. Other data from internal Welsh Government analysis of Local Authority data.

³⁵ https://gov.wales/road-lengths-and-conditions-april-2018-march-2019

³⁶ https://gov.wales/unadopted-roads-wales-final-report

the ultimate aspiration of no fatalities. By 2020, compared to the average for 2004-2008 the aim was to see:

- 40% fewer people killed and seriously injured on Welsh roads
- 25% fewer motorcyclists killed and seriously injured on Welsh roads
- 40% fewer young people (aged 16-24) killed and seriously injured on Welsh roads.³⁷

The framework notes that a disproportionate number of young people are injured in road traffic collisions. There is a rise in casualties as people grow older and an increased likelihood of two-wheeled motor vehicle accidents when people initially pass their test and in middle age. It also noted an increase in collisions involving cyclists and the need to address safety issues. The Active Travel Act (see above) was one of the key measures for doing this and shifting journeys onto public transport can also improve safety.

In 2019 police forces in Wales recorded 4,330 road accidents involving personal injury, 108 (2.6%) more than in 2018. Although this represents a small increase, over the long-term accidents have fallen. In 2019, progress against the published accident targets indicated that

- the number of people killed or seriously injured has dropped by 15.1% against the 40% target
- the number of young people killed or seriously injured ha dropped by 41.4% against the 40% target and
- the number of motorcyclists killed or seriously injured have dropped by 2.3% against the 25% target

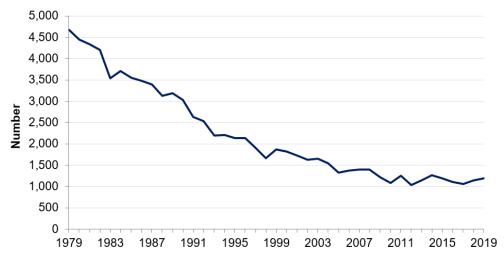
Due to the increase in police recorded road accidents in 2019 the progress on each target has worsened since 2018.³⁸

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³⁷ https://gov.wales/road-safety-framework-wales

³⁸ https://gov.wales/police-recorded-road-accidents-2019-html#section-46317

Chart 2: Number of killed or seriously injured casualties on Welsh roads, 1979 to 2019



Source: Road accident statistics, Welsh Government

Although there has been a reduction in children involved in road traffic collisions, children in deprived communities are more likely to be killed or seriously injured on the roads, so the framework sets out measures to address this including targeting grant support for safety measures to more deprived areas. The framework also analyses the causes of accidents, including the role of drink-driving, of speed, of careless driving, the role of seatbelts and the use of mobile phones. It also looks at what highways authorities can do to reduce collisions, including reactive and proactive analysis, and encourages new schemes to include road safety impact assessments.

Some of the interventions that we have funded to address safety include 20mph speed limit zones, traffic calming, local enforcement measures such as speed cameras and traffic officers, and educational initiatives such as driver training, the national cycle training schemes and traffic awareness training for children.

1.1.11 Regulation of vehicles

The regulation of vehicles plays an important role in safety, in addressing environmental concerns, and in ensuring that public money is well spent and that operators are treated fairly. Regulation also addresses issues such as the reliability of bus services.

The Traffic Commissioners for Great Britain are independent regulators for the Heavy Goods Vehicles (HGVs) and Public Service Vehicles (PSVs) industries and their professional drivers. Collectively, they are a non-departmental tribunal and licensing authority, sponsored by the Department for Transport (DfT). Their mission is to promote safe, fair, efficient and reliable passenger and goods transport through effective licensing and regulation of the commercial vehicle industries. Wales has

had its own Traffic Commissioner since 2016.³⁹ They hold public inquiries and have powers to issue sanctions such as fines. The annual report sets out key issues and performance statistics. In 2018-19 for example, the Traffic Commissioner for Wales dealt with 615 bus and coach Operators Licenses and 4,710 goods vehicles Operators Licenses covering nearly 20,000 vehicles.⁴⁰

In parallel, the Driver and Vehicles Standards Agency (DVSA) carries out driving tests, approves driving instructors and MOT testers, carries out tests to ensure lorries and buses are safe to drive, does roadside checks on drivers and vehicles and monitors vehicle recalls. There is potential for closer working between the Welsh Government and DVSA to improve road safety.

1.1.12 Car parking

The provision of parking for private cars is relevant to land-use planning and new residential, retail and industrial developments, how we plan for new transport infrastructure and manage existing infrastructure. It is vital that parking provision is thought of early on in any development as insufficient provision has wider implications on the surrounding area, such as economic impact, equality and accessibility issues and discouraging modal shift.

There are National Safety Standards for car parking provision associated with new development, which include guidance on the provision of parking for residential and other developments, and best practice on the number, size and layout of parking spaces reserved for people with disabilities.

The Blue Badge system is a UK-wide system that enables people who meet the eligibility criteria to maximise their independence by improving their access to services and facilities – whether as a driver or passenger. In Wales responsibility lies with the Welsh Government, but the system is administered by local authorities.

There are many challenges around car parking provision. Whilst restricting the availability of parking might encourage more people to use bikes or public transport, access to facilities and services is still required for delivery vehicles and vulnerable users. Pavement parking is an ongoing issue in many towns and residential areas creating unsafe routes for pedestrians, especially vulnerable users.

In town centres, the loading and unloading of goods can cause delays and compromise the safety of other road users. Car parking provision can be a barrier to other policy goals such as active travel and public transport use. Residential streets with on-road parking are unable to facilitate vehicle charging, thus reducing potential uptake of greener vehicles.

³⁹ https://www.gov.uk/government/organisations/traffic-commissioners/about

⁴⁰ Traffic Commissioners for Great Britain, *Annual Report to the Secretary of State* 2019-20. https://www.gov.uk/government/publications/traffic-commissioners-annual-report-2019-to-2020

1.1.13 Taxis and private hire vehicles

Taxis and private hire vehicles (PHVs) provide a service when alternative public transport is not available or viable. The sector makes a significant contribution to the night-time and tourism economy in many of our communities. Across Wales there are approximately 5,000 licensed taxis, 5,400 private hire vehicles (PHVs) and 12,000 licensed drivers.⁴¹

Taxi and PHV licensing were devolved under the Wales Act 2017. The 22 local authorities in Wales can set policy and conditions to ensure that licensed vehicles are suitable and safe, and drivers are considered fit and proper.

The industry is changing fast – the introduction of app-based booking and hailing systems has made it quicker and easier for customers to hire vehicles. In some areas this has led to an increase in cross-border hire and has highlighted the inconsistencies in licensing standards across Welsh local authorities.

Some areas of Wales have an oversupply of licensed vehicles; in other parts of Wales there can be a lack of licensed vehicles. The age of the legislation can make it difficult to enforce as local authorities do not have the power to take enforcement action against drivers/vehicles operating in their area that are licensed elsewhere.

We have developed a vision for taxis and PHVs that aims to update Wales's taxi and PHV licensing system to make it fit for a modern Wales. We want to create one consistent standard applied across Wales that promotes safety, contributes to a cleaner environment, improves the customer experience, and is accessible to all. We have been working with local authorities, the industry and other partners to address some of these issues (see 2.3.4 below).

1.1.14 Aviation

Aviation in Wales covers the transport and recreational elements of flying, including airports, passenger, and cargo flights, as well as private aviation. Cardiff airport is the only international airport. It serves much of south Wales, although passengers travelling to and from Wales make extensive use of airports across the border. Over 1.6 million passengers used Cardiff International airport in 2018, with 83% flying to international destinations and 17% using domestic routes.⁴²

There are a number of smaller airports in or around Wales including those at Caernarfon, St Athan, Swansea, Llanbedr, Welshpool and Pembrey as well as

⁴¹ StatsWales, Licenced taxis and private hire vehicles by local authority and survey year, 2019

https://statswales.gov.wales/Catalogue/Transport/Roads/Public-Service-Vehicles/licencedtaxisandphvs-by-localauthority-surveyyear

⁴²https://www.caa.co.uk/uploadedFiles/CAA/Content/Standard_Content/Data_and_analysis/Datasets/Airport_stats/Airport_data_2019_annual/Table_01_Size_of_UK_Airports.pdf

Hawarden freight airport near Chester. There are also a range of air strips, air bases and helicopter bases.⁴³

The intra-Wales air service provides a passenger service between Anglesey and Cardiff airports. In 2018-19, the operator Eastern Airways reported that 15,000 passengers flew between Anglesey and Cardiff. Around 1,500 tonnes of freight were moved through Cardiff airport in 2018.⁴⁴

Aviation in Wales connects Wales to a global economy and facilitates inward investment and trade. Over 80% of Welsh exports are used by people in other parts of the UK, and given the geography of Wales, good air connectivity plays a vital role in helping Welsh businesses to find new markets.⁴⁵ Aviation also helps to encourage inward investment and make Wales more accessible as a destination.

Although aviation is important to the economy of Wales, aviation policy is not currently devolved to the Welsh Government, but we work closely with the UK Government in delivering our objectives. Welsh Government also plays a direct role in aviation through its ownership of Cardiff airport.

Emissions from international flights to and from Wales represent less than 1% of total transport emissions.⁴⁶ Despite this, one of the biggest challenges for aviation in Wales and elsewhere is climate change. By 2050 aviation will be the largest emitting sector in the UK – even with strong progress on technology and reduced demand.

Over and above the direct emissions from flights, airports also play a role in reducing carbon emissions through the operation of terminals, ground transport and infrastructure, and there is a significant warming effect arising from non-CO₂ emissions such as water vapour, aerosols and nitrogen oxide.⁴⁷ Cardiff airport's Environmental Flight Path sets out its priorities for reducing emissions from aviation.⁴⁸

Although regional airports generate benefits for local economies, they incur many of the same costs and overheads as larger airports, such as air traffic control, security, and border controls, resulting in disproportionate impacts on their operations. Air Passenger Duty disadvantages smaller regional airports and can act as a disincentive to the introduction of new routes including more long-haul destinations.

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⁴³ https://ourairports.com/countries/GB/WLS/airports.html

⁴⁴ Air Transport in Wales during 2018, Welsh Government, 2019 https://gov.wales/sites/default/files/statistics-and-research/2019-05/air-transport-2018.pdf

⁴⁵ https://www.cardiff.ac.uk/__data/assets/pdf_file/0010/698869/input-output-tables-2007-final-30-6.pdf

⁴⁶ Prosperity for All: A Low Carbon Wales, Welsh Government, 2019 https://gov.wales/sites/default/files/publications/2019-06/low-carbon-delivery-plan_1.pdf

⁴⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813342/non-CO2-effects-report.pdf

 $^{48\} https://www.cardiff-airport.com/news/2019/09/20/cardiff-airport-unveils-its-environmental-flight-path/$

1.1.15 Ports and shipping

Wales has 32 ports, seven of which – Milford Haven, Cardiff, Holyhead, Newport, Port Talbot, Fishguard and Swansea – are classed as major seaports. Milford Haven is the largest port in Wales and the largest liquid bulk port in the UK. Holyhead, Fishguard and Pembroke Dock provide key roll-on, roll-off ferry links with Ireland for the whole of the UK and mainland Europe for the transport of passengers and cargo. Newport, Cardiff, Port Talbot and Swansea specialize in bulk shipments.

In 2018, Welsh ports handled around 49.2 million tonnes of freight including significant volumes of ferry traffic, oil and gas, containers, steel, biomass, and bulks as well as other offshore renewable cargoes.⁴⁹ In 2016, Welsh ports handled over two and half million passenger journeys on ferries.⁵⁰ The Low Carbon Delivery plan notes that shipping represents around 11% of Welsh transport emissions. The ports sector in Wales is largely privately owned and deregulated, as in the UK generally.

Ports and harbours policy in Wales is currently non-devolved, except for fisheries. The Wales Act 2017 brings Welsh ports within the Welsh Minister's competence, except for Milford Haven, due to its status as a critical energy port. Ahead of this, the policy and planning framework for ports development in England and Wales is set out in the UK Government's National Statement of Policy for Ports (NPS).⁵¹ The NPS is a part of the planning system established under the Planning Act 2008 to deal with nationally significant infrastructure proposals. It provides the framework for decisions on proposals for new port development, development proposals and where relevant, to associated development, such as road and rail links.

The Welsh National Marine Plan sets out our wider policies for the marine sector, including ports and shipping. It also covers shipping including established navigation routes for commercial cargo and passenger vessels, navigation of smaller vessels and associated aids to navigation such as lighthouses, buoys and telecommunications equipment which play an essential role in the movement and safety of maritime traffic.⁵²

Our Ports Infrastructure Fund helps ports promote Wales for investment. It helps stimulate exports to new and existing markets, promotes green growth and more renewable energy projects as well as tourism businesses.

Key issues for ports in Wales are around the capacity of ports such as Holyhead to accommodate larger cruise ships – although this will need to be re-evaluated in the light of COVID-19. In relation to Brexit, there are also issues around the need for customs services and it is vital to consider transport links from the port to destination that are not entirely dependent on road (see below).

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⁴⁹ https://gov.wales/sites/default/files/statistics-and-research/2020-05/summary-statistics-regions-wales-2020-629.pdf

⁵⁰ Welsh Ports: National and Regional Engines for Growth, British Ports Association, 2017

https://www.britishports.org.uk/system/files/documents/welsh_ports_a4_brochure_v9_english_0.pdf

⁵¹ https://www.gov.uk/government/publications/national-policy-statement-for-ports

⁵² https://gov.wales/welsh-national-marine-plan-document

1.1.16 Freight and Logistics

Freight transport moves goods from one place to another for commercial reasons; logistics covers all of the processes that underpin an organisation's supply chain, including purchase, manufacture, storage and transport. Freight transport involves shipping, heavy goods vehicles (HGVs) and aviation, and depends on infrastructure such as ports, rail, roads, airports, and pipelines. Logistics also includes storage and warehousing, and light goods vehicles (LGVs) – the smaller vans that deliver goods and provide services. The line between freight and logistics is increasingly blurred.

Total freight tonnage carried by ports in Wales and on the road network in Wales is generally declining but total vehicle kilometres travelled by light goods vehicles has increased by 38% since 2008. In 2019 there were 6,491 million tonne kilometres carried by road haulage in Wales, which represents an 8% decrease since 2008.⁵³

Across Great Britain, total rail freight moved was 16.6 billion net tonne kilometres in 2019-20 – the lowest total since the time series began in 1998-99.⁵⁴

As well as supporting manufacturing and industries, freight and logistics are integral to the food that we eat and the consumer items that we use, as well as to waste collection and recycling and the supply and support for hospitals and other public services.

The freight and logistics sectors play a key role in the economy. UK Freight Planning to 2035 notes that the sector employs between 1.7 to 2.2 million people across 63,000 to 192,735 companies, representing up to 8% of the UK workforce. These companies have a collective turnover of £770 billion and a GVA of circa £55–96 billion, which equates respectively to 26% and 11 % of the total economy. ⁵⁵

Freight also impacts on the environment. Although total freight mileage is less than that of passenger mileage, its impact on congestion, air quality, CO₂ emissions and road traffic incidents are all significant.⁵⁶ The UK Road to Zero report on reducing emissions from road transport notes that large, long-haul HGVs are the most challenging segment of the freight sector in terms of developing zero emissions options.⁵⁷ The industry has been taking action to address this – for example, last year, 1.63bn HGV kilometres or 7 million HGV journeys were avoided in Great Britain by transporting freight via rail.⁵⁸

⁵³ Department for Transport Road freight statistics 2019 (Table RFS0121)

⁵⁴ https://dataportal.orr.gov.uk/statistics/usage/freight-rail-usage-and-performance/

⁵⁵ https://ciltuk.org.uk/Portals/0/Documents/News/cilt_freight2035.pdf

⁵⁶ UK Future of Mobility Report, p 100.

⁵⁷ https://www.gov.uk/government/publications/reducing-emissions-from-road-transport-road-to-zero-strategy

⁵⁸ Impact on Road Haulage – Table 13.8, Office of Rail and Road https://dataportal.orr.gov.uk/statistics/usage/freight-rail-usage-and-performance/

There is no overall strategy for freight and logistics in the UK but the UK Rail Freight Strategy focuses on innovation and skills, network capacity, track access charging and telling the story of rail freight.⁵⁹ Welsh Government supports rail freight infrastructure in Wales through Freight Facilities Grants to organisations who shift freight movements from road to rail.⁶⁰

A Wales Freight Strategy was published in 2008. Since then, a 2014 task and finish group and a 2016 freight working group have both also made recommendations. These groups identified the need to shift freight from road to rail, to support intermodal transfer facilities and freight quality partnerships. They looked at the need to improve access to ports and support for port development, including better road and rail-freight connections to the main freight ports. Brexit could also have major implications for freight and logistics in Wales, including opportunities such as Freeports, the potential for new business models and shared logistics, as well as the potential for costs and delays (see 2.2.8).

1.1.17 Third sector

There is an important, growing and active third sector in Wales engaging with transport and travel, including community transport, community rail partnerships and local voluntary groups such as station friends and walking and cycling clubs.

1.9.1 Community transport

Community transport schemes provide passenger transport outside the commercial public transport network, with volunteers often playing an integral part in delivering such services. Typical services include transport to school, healthcare facilities, supermarkets and to community venues for well-being activities to reduce social isolation. Services include social car schemes, minibus operators and dial-a-ride schemes. Most are demand responsive, taking people from door to door. This sector meets the travel and social needs of people who would otherwise be denied the ability to get around – including households who do not have access to a car.

Over 100 community transport schemes operate in Wales. Services may be provided by organisations where community transport is their main purpose, or by those where transport is a secondary to their main activities, such as schools, sports clubs and association and faith groups. For example, Pembrokeshire County Council supports the coastal bus service that enables people to access walks beaches, boat trips, local villages and attractions. The service helps locals and

⁵⁹ https://www.gosv.uk/government/uploads/system/uploads/attachment_data/file/552492/rail-freight-strategy.pdf 60 https://gov.wales/rail-freight-facilities-grant-guidance-applicants

⁶¹ The Welsh Transport Strategy (2008) - https://gov.wales/transport-strategy; Welsh Freight Strategy 2008
2014https://gov.wales/wales-freight-strategy; The Report of the Freight Task and Finish Group 2014
https://gov.wales/wales-freight-task-and-finish-group-report; The Report of the Freight Working Group 2016
https://gov.wales/wales-freight-working-group-report

visitors get to the coast without having to use a car and facilitates access to the Coast Path.⁶²

The Community Transport Association (CTA) is a national charity that represents and supports providers of community transport through advice and guidance, quality assured training, and helping to form public policy that affects the sector, with support from Welsh Government.

Some of the challenges faced by community transport schemes include the uncertainty of funding, the lack of integration with other forms of transport, lack of recognition of the role of community transport and difficulties in recruiting, training and retaining volunteers. The level of service provided by community transport does not necessarily meet the demand, and there is significant variation in the availability of services across Wales. The sector report not feeling part of the wider transport system and not feeling included in strategic planning.

In 2015 the Senedd's Enterprise and Business Committee carried out an inquiry into bus and community transport services in Wales, noting issues such as the need for a dedicated strategy, a better understanding of best practice, support for community transport and powers around buses and integrated ticketing.⁶³

During COVID-19, many community transport schemes rapidly moved from passenger transport to assisting with the relief effort. Schemes partnered up with community voluntary councils, foodbanks, and health services to get food parcels, essential medication, and welfare packages to people shielding at home. Services have since resumed their normal operation, although with significantly reduced passenger capacity due to the current physical distancing requirements.

1.9.2 Community rail

Community rail brings together local volunteers and groups, rail operators, local councils and other partners to engage communities and help them get the most from their local railways and stations.

Community rail partnerships build awareness and positive relationships between communities and rail providers to improve access to rail, feed into the rail industry on local needs and promote the use of rail as part of sustainable and healthy mobility. Passenger growth can be three percent higher on community rail lines than other comparable lines. Community rail activities can also benefit health, well-being, social inclusion, enable wider access to opportunity via sustainable means, and support local regeneration and economic development.⁶⁴

In Wales there are six community rail partnerships: the new (2020) South West Wales Connected, the Cambrian Railways Partnership, the Conwy Valley Rail

⁶² https://www.pembrokeshirecoast.wales/plan-your-visit/travel-and-parking/coastal-buses/

⁶³ https://business.senedd.wales/mglssueHistoryHome.aspx?IId=13447

⁶⁴ https://communityrail.org.uk/wp-content/uploads/2019/04/Acorp-Value-of-Community-Rail-12019-V3.pdf

Initiative, the Borderlands Railway Partnership, the Heart of Wales Line DevCo, the Chester – Shrewsbury Rail Partnership and more are planned or in progress.

Alongside community rail partnerships, 137 stations in Wales have been adopted by local volunteers who carry out gardening, creative projects and other activities. This delivers value to well-being and community cohesion, makes stations more welcoming and inclusive, and creates a sense of local ownership towards 'their' station. Some are driving forward bigger projects at and around stations, such as returning disused station buildings to community uses (for example as social enterprises or community spaces) or developing modal integration.

The Department for Transport (DfT) has supported community rail schemes since the original Community Rail Strategy was published in 2005. The 2020 UK community rail development strategy, Connecting Communities with the Railway, aims to provide a voice for the community, to promote sustainable healthy accessible travel, bring communities together and support diversity, inclusion and social and economic development. ⁶⁵

The Community Rail Network is a UK-wide umbrella body that supports, advises and champions community rail partnerships, station friends groups and other community groups engaging with their railways and stations at a local level. They help set up new groups and share best practice across the movement. They support Wales and Borders community rail partnerships, helping them to develop their impact and achieve accreditation by the Welsh Government. Accreditation enables the partnerships to bid for funding under the Community Rail Development Fund, administered nationally for the UK Government.

Transport for Wales provides support and leadership for community rail in Wales. As well as nurturing station adoption, the programme includes activities to engage with schools, sports clubs and youth organisations to promote safety, discourage anti-social behaviour and take pride in local stations. They are also looking at opportunities to enhance biodiversity, and support arts and cultural projects. The team is also working on links with other policy areas including rail safety, health and well-being and working with social enterprises to reduce loneliness.

1.9.3 Historic railways and navigable canals

Wales has a rich transport heritage (see 3.5 below) including operating, volunteer-lead heritage transport services. Eleven historic small steam railways make up the Great Little Trains of Wales which provide visitors with short rail experiences. Scenic routes such as the Cambrian Coast Line, the Conwy Valley railway and the more modern Heart of Wales line are also popular with tourists. 66 The Ffestiniog, Llangollen and Welsh Highland railways provide some normal passenger services.

There are four major historic canals in Wales – the Llangollen Canal, Montgomery Canal, Monmouthshire and Brecon Canal and Swansea Canal. Constructed in the

⁶⁵ https://www.gov.uk/government/publications/community-rail-development-strategy

⁶⁶ https://www.visitwales.com/info/travel-trade/fact-sheets/railways-in-wales

late 18th /early 19th centuries to carry coal, iron and agricultural products to the ironworks and finished products to market, they were connected to networks of horse-drawn tramways. Most were replaced by railways or other forms of transport and ceased trading in the early twentieth century. Much of the network is no longer navigable, although some of the routes form footpaths or are important wildlife havens.⁶⁷ The navigable canal network in Wales is maintained and managed by the Glandŵr Cymru – the Canal and River Trust in Wales – who manage leisure boating as well as caring for the canals and associated infrastructure including basins, aqueducts, locks and other infrastructure. The network is increasingly important for leisure, wildlife and the associated footpath network.

1.9.4 Voluntary groups

There are a range of other voluntary transport organisations in Wales that promote walking, cycling and other forms of transport. They can play a vital role in delivering services and also in engaging communities in transport initiatives.

Sustrans is the charity making it easier for people to walk and cycle. In Wales, Sustrans cares for the National Cycle Network – a series of traffic-free paths and quiet on-road cycling and walking routes.⁶⁸ The group is also actively involved in initiatives around walking and cycling including working with schools on the Active Journeys programme to make it easier for children to walk, scoot or cycle and providing learning resources for teachers.

Living Streets Cymru is part of the UK charity for everyday walking, which seeks to create a walking nation. Following the Active Travel Act 2013, the group has been working with us on initiatives such as pavement parking and with local authorities to improve streets for walking and cycling.⁶⁹

1.1.18 The impact of COVID-19

The impact of, and response to, COVID-19 has been changing on a weekly, daily and even hourly basis and will continue to do so beyond the publication of Llwybr Newydd, despite the advent of a vaccine. This section provides a snapshot of COVID-19 related transport issues at the time of writing and some of the potential policy issues for Llwybr Newydd.

Before COVID-19 private car use was growing, public transport use was broadly stable or falling overall and there was a growth in light goods vehicle traffic. Active travel (walking and cycling) was increasing in only a small number of places as a result of interventions such as shared bikes, remaining stable at a national level.

COVID-19 has changed travel behaviours with sectors that have been able to work at home considerably reducing their commuting. Those needing to travel prefer to walk, cycle or use their own cars rather than public transport. Light goods vehicle

⁶⁷ https://canalrivertrust.org.uk/wales

⁶⁸ https://www.sustrans.org.uk/about-us/our-work-in-wales/

⁶⁹ https://www.livingstreets.org.uk/about-us/wales

traffic increased in line with the growth in online shopping and with less traffic, some people turned to cycling. At the deepest point of lockdown public transport across the UK dropped by 87% from normal usage, walking and cycling by 83% and car trips by 81%. However, private car use rebounded rapidly and by July was back to 80% of pre pandemic use, whilst public transport use remained at 30%. Rail footfall was around 12-15% of pre-COVID-19 use.⁷⁰ There are also changes in travel patterns, with more evenly spread public transport and road use during the day. Reduced traffic flows have significantly reduced NO₂ and so improved air quality.⁷¹

Ideally we would use what has happened to change travel permanently, travelling less, getting people out of their cars and travelling more sustainably. However as noted, car use and congestion are already returning to pre-COVID-19 levels.

COVID-19 has highlighted the importance of key workers – health and emergency services personnel, care workers and social providers, cleaners who keep premises and people safe and retail workers. Many are low-paid, in part-time or insecure employment, and many have no access to a car so rely on public transport, often late at night or during off-peak periods. It is important not to lose focus on these workers when planning future transport services.

Lockdown and the impact of COVID-19 has affected attitudes to public transport. Initial findings from Transport for Wales' study of perceptions of using public transport during the epidemic suggest that more people are keen to return to using public transport, but there is a shift towards using it less for commuting and more for leisure, influenced by current government guidance to work from home where possible. The initial results also identified concerns about the priority given to rail rather than bus in Wales.⁷² There is risk that people will prefer to use their cars rather than public transport, particularly those who want to retain social distancing. This could easily exacerbate the trend of stable or falling public transport use.

COVID-19 has shown that for some sectors we can significantly reduce the need to travel leading to longer-term changes in how we work, with less commuting and more homeworking. If that trend continues, it will have important implications for transport, especially as public transport systems are heavily focused on peak hours. There are also downsides to working from home, and so the future may lie for example in local hubs. The Resolution Foundation notes that Wales has a greater proportion of workers on low pay and people who are unable to work from home.⁷³

Crowded parks and public footpaths have shown how important the ability to get out and walk in the open air is to our mental and physical health. With quieter roads there has been a boom in cycling as people feel more confident in using the roads

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⁷⁰ The Impacts of Covid-19 on Travel Patterns in the UK: Third Phase Research Findings, July 2020, Royal HaskoningDHV

⁷¹ https://airquality.gov.wales/reports-seminars/reports

⁷² https://news.tfwrail.wales/news/transport-for-wales-launch-public-survey

⁷³ Resolution Foundation 2020. *Doing what it takes*. https://gov.wales/sites/default/files/publications/2020-01/welcome-to-wales-priorities-for-the-visitor-economy-2020-to-2025-summary.pdf

or have more leisure time. As traffic levels return to pre-COVID-19 levels the issue will be how to retain that increase in cycling and active travel.

Despite a vaccine, we will need to continue to maintain social distancing on public transport in a way that still enables people to travel and transport operators to run viable services for some time. We will also need to continue to protect vulnerable people on public transport, especially when services become busier again. The other issue is how best to protect and retain public transport services for those who need them, if more and more people are able to continue to work from home.

COVID-19 has also affected the taxi and PHV industry. With people not working or working from home, the temporary closure of leisure activities such as bars, cinemas and restaurants, the closure of non-essential shops and school closures, there has been very little demand for taxis and PHV services, and usual sources of work are significantly reduced. Those drivers that have continued to work have mostly transported key workers or have temporarily diversified to delivery work. As social distancing restrictions continue to be in place, this will have a continued impact on the demand for taxis and PHVs, and it may take considerable time for sources of customer bases such as the night-time economy to recover.

Taxi drivers have been adversely impacted by COVID-19 as many are in higher-risk categories. Ninety-eight percent of taxi drivers are men and a large proportion are over 50. Taxi and PHV drivers had some of the highest COVID-19 related death rates for men.⁷⁴

Given the role of international travel in the spread of the virus there is a strong likelihood that attitudes to international travel will change in the long-term and perhaps more so by vulnerable groups such as older people. There will be some practical challenges around restarting international services, including the need to bring equipment and the fleet back online, or where certification has expired. There is a risk that some operators may no longer be in business, or that capacity to deal with these issues are reduced due to ongoing social distancing.

⁷⁴https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronavirusCOVID19r elateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand25may2020#men-and-deaths-involving-COVID-19-by-occupation

2 Transport policy in Wales

2.1.1 Roles and responsibilities

In order to plan effectively for transport in Wales, it is important to understand how transport is governed and the different bodies who are involved in setting policy or delivery. These vary across modes and sectors.

2.1.2 UK government

The UK government plays a central role in transport in Wales and we need to work closely with them to deliver all aspects of this strategy.

The UK Government is responsible for long distance rail services between Wales and England and most rail infrastructure in Wales, including all main lines. Welsh Government has responsibility for services under the Wales and Borders franchise, which are delivered under an Agency Agreement with the UK Government where services run between Wales and England. Welsh Government is also responsible for infrastructure within the essentially self-contained Core Valley Lines - where the railway asset transferred in March 2020, primarily to enable Welsh Government to deliver the Metro transformation.

UK government set UK-wide policy on aviation, ports and maritime transport and oversee regulation of taxis and PHVs, vehicles, public service vehicles and driver training. There are also aspects of transport that have previously fallen within the European Union including the Trans-European Transport Network which now fall to the UK government. Many other policy areas that affect transport, such as telecommunications and aspects of energy policy also fall to the UK government.

2.1.3 Welsh Ministers

Responsibility for bus transport is devolved to Welsh Ministers, who also set policy on school transport, concessionary fare schemes and the Blue Badge Scheme for disabled people. Welsh Ministers are the statutory Highway Authority for the Strategic Road Network – the motorways and major roads in Wales. Responsibility for the Core Valleys line has also been devolved to Wales. We own Cardiff Airport and oversee its operation and lead on active travel including walking and cycling infrastructure.

Teams in Welsh Government support Ministers by providing policy advice, liaising with the UK and local governments and other partners, through delivering legislative and policy reform, developing and delivering strategies, and overseeing grant funding, procurement and other administrative functions.

2.1.4 Welsh Local Authorities

Local authorities play a key role in transport planning and delivery in Wales. Under the 2006 Act, Welsh local authorities have a duty to produce transport plans for safer integrated, efficient and economic transport to, from and within their area, and policies to meet the needs of people living or working in the authority's area or travelling through that area. In 2015, local authorities prepared local transport plans either individually or collectively (see 3.4.3).

Transport planning is also integral to their wider role in economic development, in sustainable development and well-being. Local development plans often contain highways and transport priorities based either on improving transport infrastructure or on bringing sites forward for development.

Local authorities (Neath Port Talbot and Gwynedd Councils) act as Trunk Road Agencies, exercising some of the functions of Welsh Ministers with respect to the operation, maintenance and improvement of the SRN via a delegation under section 6(1) of the Highways Act 1980. They exercise road traffic regulation functions for the local road network, have functions in relation to taxi and private hire licensing and powers to fund bus services and community transport providers, administer the free concessionary bus fares scheme and have a statutory duty to provide home to school transport to pupils who are eligible. They are also responsible for administering the Blue Badge Scheme.

There are overall challenges for local authorities around resourcing and capacity in dealing with transport issues. The COVID-19 crisis has placed additional burdens on local authorities that may already have experienced issues with capacity, resource, and specialist expertise to exercise transport planning functions.

2.1.5 Transport for Wales

Transport for Wales (TfW) is a publicly owned, not-for-profit company set up by the Welsh Government to provide support and expertise for transport projects. TfW oversees the Wales and Borders rail franchise, and it is also developing the South Wales and North Wales Metros. Its role is set out in the <u>annual remit letter</u> and in its five-year business plan. TfW is currently involved in active travel in Wales and in transforming the Core Valley Lines which is central to the development of the South Wales Metro. They provide expert advice on transport matters including transport modelling and analysis, and manage transport projects. They provide concessionary travel card services and have been working on demand responsive travel pilots.

Welsh Ministers are committed to simplifying the current transport delivery arrangements with the aim of TfW taking on more responsibility for delivering services, allowing Welsh Government to focus on strategy and policy. The intention is that TfW will extend its remit beyond rail to be the delivery body for integrated transport on behalf of Welsh Government. This will include planning nationally significant transport infrastructure projects, such as rail network schemes and national TrawsCymru bus routes. Welsh Government will also commission TfW to produce a 5-year National Transport Delivery Plan (NTDP) as part of the implementation of Llwybr Newydd.

2.1.6 Transport operators

In Wales transport services are also delivered by many private sector, community and third sector organisations, including bus companies, airlines, shipping and road transport firms, taxis and private hire vehicles, and companies operating car-sharing and cycle hire firms (see above).

The Confederation of Passenger Transport represents bus and coach operators across Wales while the Rail Delivery Group bring together the companies that run Britain's railway into a single team. A new Coach and Bus Operators' Association Cymru (CaBAC) represents the interests of bus and coach operators in Wales, particularly from the smaller SME, independent and municipal sectors in Wales.

2.1.7 Transport user groups

As well as the third sector transport groups noted above, there are also other active transport user groups in Wales including Bus Users Cymru, part of the wider Bus Users organisation who aim to bring people together through accessible, inclusive transport. Transport Focus is an independent watchdog, working to put the interests of transport users first and to get the best deal for passengers and road users. In Wales their remit covers rail only.

Other third sector organisations such as Disability Wales, the national association of disabled people's organisations in Wales, engage in transport issues and campaigns to ensure that people are treated fairly in accessing transport. ⁷⁷

2.1.8 The Welsh Commissioners

The Commissioners appointed by Welsh Government play a vital role in helping to develop new thinking around transport, and in connecting transport planning with other agendas:

- the Future Generations Commissioner helps public bodies and those who
 make policy in Wales to think about the long-term impact their decisions have.
 The recent Future Generations Report for Wales includes a comprehensive
 review of transport policy and delivery in Wales, in terms of its contribution to the
 national well-being goals⁷⁸
- the Older People's Commissioner protects and promotes the rights of older people throughout Wales, scrutinising and influencing a wide range of policy and practice to improve their lives⁷⁹

⁷⁵ https://bususers.org/about-us/our-mission/

⁷⁶ https://www.transportfocus.org.uk/

⁷⁷ https://www.disabilitywales.org/

⁷⁸ https://futuregenerations.wales/about-us/our-team/

⁷⁹ https://www.olderpeoplewales.com/en/Home.aspx

- the Welsh Language Commissioner promotes and facilitates the use of the Welsh language and ensure that it is treated no less favourably than the English language by imposing duties on some organisations to comply with standards relating to the Welsh language⁸⁰
- the Children's Commissioner tells people why children's rights are so important and looks at how the decisions made by public bodies in Wales, including Welsh Government, affect children's rights⁸¹

The **Traffic Commissioner for Wales** is appointed by the Secretary of State for Transport, and is responsible for the licensing and regulation of those who operate heavy goods vehicles and buses and coaches, and the registration of local bus services.

2.1.9 The National Infrastructure Commission

The National Infrastructure Commission was set up in 2018 to take a strategic overview of infrastructure investment in Wales. Their aim is to ensure that infrastructure provides opportunities for social, economic, cultural and environmental well-being, connects markets and people, supports rural and urban economies and enables Wales to look outwards. Their remit includes transport infrastructure and they have been gathering information on this. They note the specific challenges of Wales including the need for more electrification, the challenges posed by the geography of Wales, reducing the need to travel, tackling congestion and looking at east/west connections.⁸²

2.1.10 Funding for transport services and infrastructure

2.1.11 Welsh Government expenditure

The Welsh Government's annual transport budget for 2020/21 is around £925m. This includes capital and revenue funding but excludes match-funding from other sources such as the European Union and UK government. It also excludes economic investment in initiatives such as business development grants to the transport sectors.

The significant areas of revenue expenditure include rail, road and bus. Revenue funding to Transport for Wales includes support for rail and other services. For bus we support concessionary fares, youth travel and provide grants to local authorities to support bus and community transport services as well as annual funding for free bus travel on TrawsCymru. Revenue funding also supports road network asset management and operations including trunk road highway and motorway inspection.

The significant areas of capital expenditure include road network operations, road and rail infrastructure, and sustainable and active travel. The support for rail

⁸⁰ http://www.comisiynyddygymraeg.cymru/English/Commissioner/Pages/what%20we%20do.aspx

⁸¹ https://www.childcomwales.org.uk/

⁸² https://gov.wales/national-infrastructure-commission-wales-annual-report-2019

includes the new metro investments. In 2019 around £37m was invested in active travel, although there was also funding for active travel infrastructure in other projects. Around £29m was allocated to the Ultra-Low Emission Fund for 2020/21 and there is also funding for low emissions vehicles in other schemes such as the North Wales Metro.

2.1.12 The National Transport Finance Plan

The current National Transport Finance Plan sets out our investments in transport from 2017 to 2020 and reviews expenditure from 2015 to 2017.⁸³ It shows how we are delivering the commitments in the previous Wales Transport Strategy. It covers proposed funding for metros, roads, for walking and cycling, for rail, ports, electric charging points and bus infrastructure. Now that the 2021 Wales Transport Strategy has been published, Transport for Wales will be asked to prepare an updated National Transport Delivery Plan.

2.1.3 WeITAG

WelTAG is the Welsh Transport Appraisal Guidance. This is used to assess proposed transport interventions in order to choose the most beneficial scheme, and to compare different schemes. The guidance explains how to plan and develop transport proposals, how to conduct an appraisal and present the results, and provides advice on post-implementation and monitoring.⁸⁴ WelTAG fits with the Treasury Green Book and the five-case business planning process.

WelTAG should be used whenever there is a problem with the transport system. It recognises that not all of the solutions to a transport problem lie within the transport system. It must be applied to all projects funded in part or full by Welsh Government but can also be used in any intervention in transport, regardless of the funding source. It is designed to be evidence based, proportionate and collaborative.

The decision-making process goes through five stages – from strategic outline case, to outline business case, full business case, implementation and post-implementation. The case should be driven by the national well-being goals as well as the Wales Transport Strategy. In 2017 WelTAG was upgraded to take into account the requirements of the Well-being of Future Generations (Wales) Act 2015 and it may be necessary to look again at WelTAG in the light of the Well-being of Future Generations Act 2015 five ways of working.

2.1.4 Legislative and policy reform

Current work is underway on a range of proposals for legislative and policy reform to improve the governance and operation of transport in Wales.

Some of those policy and legislative ambitions were set out in the 2018 White Paper entitled Improving Public Transport. This White Paper sets out a series of proposals

⁸³ https://gov.wales/national-transport-finance-plan-2017-update

⁸⁴ https://gov.wales/welsh-transport-appraisal-guidance-weltag

to improve transport governance in Wales including a new legislative framework for bus services, reform of taxis and other private hire vehicles, improved partnership working between local authorities and changes to concessionary travel.⁸⁵

2.1.5 Devolution of further transport powers

One of the key issues is the further devolution of rail in Wales. Following the cancellation of the electrification of the Great Western Main Line between Cardiff and Swansea we identified long-term and systematic under-investment in Welsh rail infrastructure compared to the UK as a whole, particularly at a time when the UK was committing to major investment in Cross Rail, Transport for the North and High Speed 2. The Case for Investment argued that because of underinvestment Wales has some of the UK's slowest intercity rail speeds, the lowest level of rail ridership and the highest percentage of car journeys. ⁸⁶ Ministers have argued for the full devolution of rail in Wales and a fair funding settlement, to meet both environmental and well-being objectives. ⁸⁷

2.1.6 Concessionary and discounted travel

The Welsh Government was the first government in the United Kingdom to introduce universal free bus travel for older people and disabled people in 2002. Today, people who live in Wales and who are over 60 or meet the criteria for disability are eligible for free bus travel and discounted rail travel.⁸⁸ Free rail travel is currently available on a small number of Transport for Wales rail services for concessionary pass holders.

There are around 600,000 active concessionary card holders, of which around 55,000 are disabled people with a further 21,000 disabled and companion passes, and 2,000 passes issued to blind people and people with loss of sight. Although around 10% of concessionary passes are issued to disabled people, they account for around 25% of free bus journeys in Wales.⁸⁹

There are also a range of discounted travel schemes for young people including MyTravelPass which gives a third off bus travel to young people aged 16-21. This was extended from an upper age limit of 18 to 21 to encourage more young people to use the bus.⁹⁰

Learners in Wales also benefit from free or discounted travel. Under the 2008 Learner Travel Measure, local authorities must assess the needs of learners and provide transport for young learners who live 2 miles (3.2km) or more from the

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⁸⁵ https://gov.wales/sites/default/files/consultations/2018-12/improving-public-transport_0.pdf

⁸⁶ The Rail Network in Wales: The Case for Investment, Professor Mark Barry, 2018

https://gov.wales/sites/default/files/publications/2018-12/the-rail-network-in-wales-case-for-investment.pdf

⁸⁷ A railway for Wales - meeting the needs of future generations

⁸⁸ https://gov.wales/sites/default/files/publications/2019-06/concessionary-bus-travel-scheme-guidance_1.pdf

⁸⁹ Analysis undertaken by Transport for Wales, 2019

⁹⁰ https://mytravelpass.gov.wales/en/

nearest suitable school and for older learners who live 3 miles (4.8km) or more from the nearest school, as well as looking after the needs of children who live in care. 91 Other transport provision is discretionary. For young people in Further Education, local authorities provide some free or subsidised transport if they are over 16 at a local school, between 16 and 19 at a further education college and for those who are over19 studying part time. 92

From time to time there are other free or concessionary travel opportunities such as the offer of free weekend travel on TrawsCyrmu. Between July 2017 and March 2020, we funded free weekend travel across the network. As a result, passenger numbers grew on weekends by 137%.

In 2017, in the light of the rising costs of concessionary and discounted travel in Wales, we consulted on changes to the system.⁹³ There was overwhelming support for retaining the current age eligibility and for permitting companions, as well as for free bus travel for some injured veterans.

2.1.7 Bus reform

The 2018 transport White Paper noted above, also set out proposals for bus reform. The basis for these has been the lack of co-ordination between bus operators, and between bus and rail services, inconsistencies across fleets and the fact that some communities have little or no transport provision. There is also a lack of information for passengers.⁹⁴

The bus sector has been deregulated since 1985 and the legislative framework is commercially-led. As a result, operators can run the services of their choice, set fares and choose vehicles (subject to minimum safety and operating standards). The majority of funding for bus services is provided by Welsh Government including transporting children to school, running socially necessary non-commercial routes and providing free transport for concessionary pass holders. That funding is delivered to around 80 bus operators through 22 local authorities, with an increasingly complex series of funding streams and contracting mechanisms.

The broad aim of the reforms is to better coordinate public transport, to reset the public sector relationship with bus operators, to allow us to exert the appropriate level of control that public funding merits and to develop a long-term investment plan that can support the restart of the economy and wider Welsh Government ambitions.

2.1.8 Taxis and private hire vehicles

The 2018 Transport White Paper originally proposed that licensing functions for taxis and private hire vehicles (PHVs) should move from local authorities to new

⁹¹ https://gov.wales/sites/default/files/publications/2018-03/the-law-on-travel-to-school-easy-read.pdf

⁹² https://gov.wales/help-further-education-transport-costs

⁹³ https://gov.wales/mandatory-concessionary-fares-scheme-wales

⁹⁴ https://gov.wales/written-statement-update-public-transport-wales-bill-and-wider-bus-reform-agenda

Joint Transport Authorities, but there were concerns from consultees, who also felt that the White Paper did not go far enough to effectively reform the taxi and PHV licensing regime and address the challenges faced by the industry and regulators. As a result taxi and PHV licensing was removed from the White Paper for further development.

Taxi and PHV licensing falls under national legislation that applies to both England and Wales. This is primarily the Town Police Clauses Act 1847 and the Local Government (Miscellaneous Provisions) Act 1976. This legislation and any statutory guidance will continue to apply in Wales until new Welsh legislation is implemented. The Minister for Economy, Transport and North Wales indicated that the development of a number of quick fixes would be considered ahead of legislative change to address some of the problems associated with the current licensing regime.

A Task and Finish Group comprising Licensing Authority representatives from each region in Wales and the Welsh Local Government Association (WLGA) is working on short-term measures to deliver a more consistent approach to licensing and longer-term proposals for legislation in line with the aim and themes of the vision statement.

2.1.9 Default speed limits and pavement parking

We are also working on proposals for a default 20 mph speed limit in town centres and residential areas and doing more to prevent pavement parking. The overall aim is a safer and cleaner environment, with a sense of place and improved connectivity for pedestrians and cyclists.

Default speed limits

A task force has made recommendations on how best to implement a default 20 mph speed limit in built-up areas in Wales to improve road safety, make walking and cycling safer, increase active travel, facilitate more cohesive communities, reduce traffic noise and improve air quality. We have also commissioned the Wales Centre for Public Policy to identify successful behaviour change interventions which could encourage compliance with a default 20 mph limit. In future the need for proactive enforcement should be reduced when all new cars are fitted with Intelligent Speed Assistance that automatically sets the vehicle speed to the posted limit.

Pavement parking

Pavement parking is where one or more wheels of a stationary motor vehicle are on the pavement (also known as the footway). It is a serious and widespread problem across Wales that puts people in danger when they are forced to walk in the carriageway. It is a particular issue for disabled people and those with prams and/or small children and can be a barrier to active travel. Pavement parking also damages

⁹⁵ https://gov.wales/sites/default/files/consultations/2019-08/improving-public-transport-summary-of-response.pdf; http://www.assembly.wales/laid%20documents/cr-ld12634/cr-ld12634-e.pdf

the footway, which unlike road surfaces is not designed to take the weight of cars or other motor vehicles. Repairing cracked and broken footways is expensive for local authorities and a hazard for pedestrians, potentially leading to injuries and claims for compensation.

To reduce pavement parking, we need to change driver behaviour through raising awareness that pavements are for pedestrians and not for vehicles, backed-up by effective enforcement or physical constraints such as bollards.

Civil enforcement of road traffic contraventions

In 2013 we gave local authorities more powers over traffic management and enforcement in order to help tackle congestion, provide priority through traffic for local bus services and to help improve the punctuality and reliability of local bus services, thus making them more attractive for passengers. All 22 local authorities have applied for and been granted civil enforcement powers for parking, although very few have applied for the additional powers over bus lanes and moving traffic contraventions.

2.1.10 Regional corporate joint committees

As noted, local authorities play a vital role in transport policy and delivery in their areas, but it is also important to plan for transport at a regional level.

Until 2014, Local Authority Joint Committees took responsibility for regional transport planning and whilst they delivered some positive impacts, they were hampered by a lack of resource and funding and have now been abolished. The 2018 Transport White Paper noted above included proposals to create Joint Transport Authorities and following the Williams Commission review of local government in Wales, the Local Government and Elections Bill includes powers to transfer those powers to Corporate Joint Committees for Transport.

We are currently working on establishing these Corporate Joint Committees which will oversee regional transport planning. They will be responsible for strategic regional transport planning, will be able to share transport expertise and will have a key role in working with Welsh Government and Transport for Wales in planning and delivering reforms such as to the bus industry including planning routes, funding, and procuring new services. Welsh Government would retain responsibility for policy and legislative development, strategic planning, funding and performance management.

2.1.11 Brexit

UK exited from the European Union (EU) at the end of 2020. EU law has been copied over to UK statute by virtue of the Withdrawal Act, but from 1 January 2021 the UK and Welsh Governments have been able to amend that legislation, if it is consistent with existing statutory and international obligations. It means powers returning from the EU level to the UK, which has significant implications for transport policy in Wales.

Spending on significant transport infrastructure in Wales is currently governed by EU procurement rules, including State Aid. Procurement is devolved to Wales, but in future the UK Competition and Markets Authority will enforce State Aid rules, which may have implications for infrastructure spending in Wales.

The legal basis for public transport subsidies derives from EU rules on Public Service Obligations (PSOs). Whilst PSOs wholly within Wales are devolved, any cross-border or international routes are a reserved matter, which may impact on aviation, public transport subsidies or cross-border routes. The EU is likely to implement full border controls from 1 January, with significant impacts on the flow through ports and knock-on implications for the road network. In the longer term, the UK Government is seeking to deliver inshore border infrastructure – this will have significant implications for ports and the trunk road network. We will also need clarity on responsibility for animal and plant health checks. The UK Government has also been consulting on free ports, which affect several devolved areas.

There is a risk of rising fuel prices if the pound weakens, affecting operators' viability, and challenges in sourcing parts from EU providers for repairs. A trade agreement could dampen the impact by smoothing trade flows, softening the economic impact, speeding up safety approvals for products and limiting overheads for importers/exporters. However, just-in-time supply chains will either be less predictable or take longer to complete, potentially increasing the time taken to maintain vehicles, particularly where bespoke/uncommon parts are needed. This may have implications for public transport.

The UK left the EU Agency for Railways on 1 January 2021, although existing rules remain the domestic default. The UK Government has already flagged plans to change platform height rules to allow for level-access platforms at HS2 stations and will have the power to change rail standards in the UK. As the owner of the Core Valley Lines, the Welsh Government has a substantive devolved interest in any changes to rail standards in the UK.

The UK Government has identified Intelligent Transport Systems, for which standards are set at EU level, as an area where a four nations framework/concordat is needed to ensure interoperability and limit divergence. As well as having direct implications for existing trunk road infrastructure, this will be a key component in developing smart motorway infrastructure. Responsibility for vehicle standards will be returning to the UK, although in this case it is reserved. Nonetheless, choices made on vehicle standards could impact on our ability to meet decarbonisation targets, on the specification for any smart infrastructure which needs to interact with those vehicles and on road safety.

Current air quality rules derive from the EU, and are supported by other policies, including vehicle standards and emissions-related levies for manufacturers.

Whilst a number of environmental powers will return from the EU directly to the Welsh Government, we will need to understand the impact of the UK-held powers

on our ability to meet the decarbonisation targets and timelines we might wish to set for Wales.

With powers returning around road tunnel safety there is a substantive new role for the Welsh Government in tunnel safety standards. More widely, it is not clear how the UK Government intends to approach road safety outside the EU – any change of direction could have significant implications for road safety in Wales.

The current European Regional Development Fund (ERDF) programme has allocated £272m to transport, so there are significant financial risks associated with any move to a UK-level programme.

The initial work on successor funding has focussed on a regional model, whilst recognising that there will continue to be a need for national-level strategic thinking on major infrastructure projects and national connectivity. We will need a clear vision for prioritising investment to make the case for ongoing regional economic development funding for transport, either in partnership with regional stakeholders or directly to UK Government.

The Trans-European Transport Network (TEN-T) is an EU initiative to promote cohesion, interconnection, and interoperability of national transport, including roads, railways, airports, ports and inland waterways. ⁹⁶ Several railway lines, roads and ports in Wales are within the network. The TEN-T regulations place various obligations on member states to comply with set standards which could impact on Welsh policy – for example, electrification of the rail line to Milford Haven by 2030. There is currently uncertainty over whether the TEN-T policy will continue to be adopted post-Brexit.

⁹⁶ http://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/site/index_en.htm

3 Transport and sustainable development

A new Wales Transport Strategy is an opportunity to take a fresh look at priorities for transport, to leverage better returns in the pursuit of a more equal, fair and just society. But to do that we need to understand the contribution of transport to our social, economic, environmental and cultural well-being, in line with the Well-being of Future Generations (Wales) Act 2015. This section of the report sets out some of the evidence linking transport and sustainability, including the environment, equality, places and the economy and culture, and the Welsh language.⁹⁷

3.1.1 Transport and the environment

3.1.2 Decarbonisation

In February 2021 regulations were laid in the Senedd which will formally commit Wales, for the first time, to legally binding targets to deliver the goal of net-zero emissions by 2050.

A recommended emissions reductions pathway set by Welsh Government's statutory advisers, the Committee on Climate Change (CCC), would mean our goals in Wales would be consistent with meeting the Paris 1.5°C goal.

Prosperity for all: a Low Carbon Wales sets out how the Welsh Government will reduce greenhouse gas emissions across all sectors of the Welsh economy, including from transport during the first carbon budget (2016-20). The budget based on a previous ambition to reduce greenhouse gas emissions to 80% of 1990 levels by 2050, sets a target that by 2020 emissions from transport will be 11% lower than in 2016 – 14% lower than the 1990 baseline. It also sets a transport sector allocation for Carbon Budget 1 of 31.9 MtCO₂e.

Transport accounted for 17% of Welsh greenhouse gas emissions in 2018 – a total of 6644.8ktCO₂e. This is 1.1% less than the emissions for the previous year and 5.5% lower than the 1990 baseline year (against a target of 14% lower than the baseline by 2020). One reason for this is that although vehicles are increasingly efficient, we are also travelling more. In 2019 the total volume of motorised traffic in Wales was 32.1 billion vehicle kilometers (bvk), the highest figure on record, so overall transport emissions have remained largely static.⁹⁹

Emissions from aviation have seen a sharp increase in recent years, and totalled 119ktCO₂e in 2018. Aviation emissions are now 38% higher than the base year and in 2018, had increased by 25% on the previous year. Emissions from road transport have varied over time, and in 2018 was 5,712ktCO₂e. Road transport emissions have increased by 2.6% since the base year, however in 2018 had decreased by

99 Road Traffic 2019, Welsh Government, 2020 https://gov.wales/road-traffic-2019-html

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⁹⁷ See also Chapter 5 (transport) of The Future Generations Report 2020.

https://futuregenerations2020.wales/english?category=transport

⁹⁸ https://gov.wales/prosperity-all-low-carbon-wales

1% from the previous year. Emissions from rail transport have increased since the base year, in the order of 29%. In 2018, rail transport emissions totalled 86ktCO₂e. Rail transport emissions decreased by 9% between 2017 and 2018. Emissions from navigation and shipping have seen a variable trend, however have decreased overall. In 2018, emissions from navigation and shipping totalled 655ktCO₂e. This value is 39% below base year emissions and demonstrates a 7% decrease from 2017.¹⁰⁰

Achieving the necessary radical reduction in transport CO₂ emissions will depend on adopting zero emission vehicles (although this only reduces emissions from transport at the point of use – overall emissions reduction depends on the decarbonisation of electricity generation).

Section 4.3 (below) identifies what we have been doing to electrify cars, the bus fleet and rail traction. However, more radical action is needed in order to significantly reduce transport emissions.

A Low Carbon Wales sets out nine policies to reduce emissions from transport covering active travel, public transport, planning policy, electric vehicles and bold aims for a zero emission bus, taxi and private hire vehicle fleet by 2028.

These are also reflected in the UK Government report Decarbonising Transport: Setting the Challenge, which identifies six priorities for achieving net zero emissions from transport – accelerating modal shift to public and active transport, decarbonising freight and logistics and road vehicles, place-based solutions, developing the UK as a hub for green transport technology and reducing carbon globally.¹⁰¹

There are also opportunities to decarbonise the carbon impacts from building, improving and maintaining the strategic road network. For example, we have taken steps to reduce CO₂ emissions from the construction, improvement and maintenance of the transport network in Wales, noting that they impact on both the industry and transport sector budgets. During the design development of our transport projects, opportunities to reduce the CO₂ impacts from their delivery are identified at an early stage and can include the specification of low carbon concrete mixes and the use of recycled materials. Wherever possible we provide active travel routes or links to public transport facilities as part of road projects. There is also potential to reduce CO₂ emissions through investing more in the proactive maintenance of the transport network, avoiding the need for more significant actions including temporary weight limits on structures and long-term road/lane closures. Other initiatives include introducing lower energy LED-lighting and using locally-sourced aggregate for road resurfacing.

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¹⁰⁰ Analysis of National Atmospheric Emissions Greenhouse Gas Inventory 2020 https://naei.beis.gov.uk/data/uk
101https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/878642/decarbonising-transport-setting-the-challenge.pdf

3.1.3 Air quality and transport

Transport emissions (including CO₂ and particulate matter) also have a significant impact on air quality and thus health outcomes. Long term exposure to air pollution remains one of the biggest public health challenges, shortening lifespans and damaging the quality of life for many (see below).

Primary air pollutants from transport include nitrogen dioxide (NO₂) and particulate matter (PM10 and PM2.5). Road transport, rail, aviation, and domestic shipping are responsible for 50% of NO₂ and 16% of PM2.5 emissions in the UK. Road transport is responsible for approximately 80% of NO₂ concentrations at roadside (with diesel vehicles the largest source) affecting local air quality.¹⁰²

The Clean Air Plan for Wales: Healthy Air, Healthy Wales aims to reduce the burden of poor air quality on human health, biodiversity and the natural environment in Wales and contribute to improved air quality in the UK and Europe. Under the 'Place' theme there are policies covering the move to active travel, greater use of public transport, low emissions vehicles and closer links between land-use planning and transport.¹⁰³

Air quality in Wales has improved greatly since the 1970s but some areas still breach, or potentially breach, legislative limits. Our Supplemental Plan to the UK plan for tackling roadside nitrogen dioxide concentrations 2017 sets out the actions we are taking to deliver urgent compliance with nitrogen dioxide limit values. The highest concentrations of nitrogen dioxide emissions are found in urban areas and near busy roads, reflecting the contribution of traffic and urban activities to poor air quality. There are seven locations on the Strategic Road Network (SRN) where NO₂ levels exceed the legal limit of 40μg/m3 including the M4, A470 and A494. In 2018 and 2019 we addressed this at five locations by reducing the speed limit to 50mph. At two locations where exceedances were identified in 2020, we are investigating measures that have the greatest ability to reduce NO₂ levels and achieve compliance in the shortest time possible.

Charging Clean Air Zones are areas where vehicles that do not meet air quality standards are charged to enter. The UK Government has used national modelling to show that that charging Clean Air Zones can achieve limit values in towns and cities in the shortest possible time.

To address high levels of NO₂ on roads for which they are the relevant highway authority, Caerphilly County Borough Council, and Cardiff Council, were directed to undertake feasibility studies and identify remedial measures. They were also required to consider whether charging Clean Air Zones was the best way to achieve urgent legal compliance. Both authorities were able to identify alternative measures could achieve compliance in the soonest possible time.

¹⁰² Defra figure for UK average in 2017

¹⁰³ https://gov.wales/clean-air-plan-wales-healthy-air-healthy-wales?_ga=2.232862046.1711816183.1596708257-184063354.1584523019

¹⁰⁴ Well-being of Wales 2018-19, Statistics for Wales, 2019 https://gov.wales/well-being-wales-2019

Our Clean Air Plan states we expect to see Clean Air Zones established in towns and cities throughout Wales to reduce the impact of transport emissions on health. Some of these may include a charging element. The UK government has used national modelling to show that that charging Clean Air Zones can achieve NO₂ limit values in towns and cities in the shortest possible time. In 2018 we consulted on a draft Clean Air Zone Framework for Wales, and have committed to publishing the Framework in spring 2021.¹⁰⁵

At present we are investigating the provision of a Clean Air Zone on the M4 at Newport and the A470 Pontypridd to further reduce NO₂ and achieve compliance in the shortest time possible.

3.1.4 Noise

Environmental noise is unwanted or harmful outdoor sound created by human activities, notably motorised transport and industrial activities. The Environmental Noise Directive defines a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. It has legal force in Wales through the Environmental Noise Regulations. These oblige Welsh Ministers to produce and keep updated noise maps for agglomerations (areas of population over 100,000), major roads and major railways. ¹⁰⁶

There are no airports in Wales busy enough to require noise mapping. Noise maps were produced in 2012 and updated in 2017.¹⁰⁷ The noise maps can be used in designing and building mitigation works (e.g. barriers), in land-use planning, in air quality, infrastructure and transport planning, in local assessments of well-being and in Natural Resources Wales SoNARR statements.

We published our first Noise and Soundscape Action Plan in 2013 and have consulted on an updated action plan. The plan links noise to the quality of life and long-term health outcomes from hearing loss to cardio-vascular disease. The plan aims not just to reduce decibels, but to create healthier soundscapes and for public bodies in Wales to consider air and noise pollution as linked issues. The plan identifies actions for major roads, railways and the three agglomerations in Wales including keeping noise to acceptable levels when residential properties are built, and road layouts changed. The policies on road traffic noise include actions on priority areas, noise mitigation works on motorways, supporting quieter vehicle technology, active travel and the police. We are currently investigating and implementing measures at around 200 or more priority areas on the major road network. In relation to the railways the policies refer to priority areas and electrification.

¹⁰⁵ https://gov.wales/clean-air-plan-wales

¹⁰⁶ Environmental Noise (Wales) Regulations 2006 as amended by the Environmental Noise (Wales) (Amendment) Regulations 2009 (collectively referred to as the Environmental Noise Regulations)

¹⁰⁷ http://lle.gov.wales/catalogue?t=1&lang=en

¹⁰⁸ Noise and Soundscape Action Plan 2018-2023 https://gov.wales/sites/default/files/consultations/2018-07/180711-noise-and-soundscape-action-plan-2018-2023_0.pdf

The action plan defines environmental noise as an airborne pollutant within the Clean Air programme, so the aim is to align noise/soundscape and air quality measures. Both have much in common and are often linked. The noisiest and dirtiest vehicles are often the same, as are the quietest and cleanest. Traffic travelling at high speeds and congested traffic both result in high levels of air and noise pollution, and some adverse health effects are linked to both.

3.1.5 Ecosystems and biodiversity

Transport policies and decisions impact on ecosystems and the natural environment. Section 6 of the Environment (Wales) Act introduced a stronger biodiversity and resilience of ecosystems duty for public authorities in Wales. It requires us to maintain and enhance biodiversity and promote the resilience of ecosystems in our business planning and day-to-day activities. The Wales Natural Resources Strategy sets out our current policies.¹⁰⁹

The State of Natural Resources Report (SoNaRR) 2016 notes that none of Wales' ecosystems are showing all the attributes of resilience. Overall, biological diversity is declining, which can be seen by the loss of habitats and species. The extent of some habitats has also declined significantly. Unless action is taken, the benefits that we derive from our natural resources are at risk.¹¹⁰

The combined threats of climate change, increasing incidents of major pests and diseases outbreaks in the UK (such as ash dieback disease) and the spread of invasive non-native species all impact on the resilience of Wales' ecosystems. These present additional challenges for how we manage, protect and enhance the condition of natural resources across the transport network.

There is a considerable biodiversity value in the soft estate associated with transport infrastructure. The transport soft estate is associated primarily with roads but also includes rail infrastructure, ports and harbours, footpaths and other areas. This includes important habitats for a wide range of species, some of which are legally protected or under threat. The soft estate can provide important wildlife corridors and connect into wider ecological networks and also has wider ecosystem benefits such as noise reduction.

There are a large number of internationally, nationally and locally protected sites within 100m of the trunk road network. The Trunk Road Biodiversity Action Plan 2004-14 (TreBAP) addresses biodiversity on the soft estate associated with trunk roads and motorways. This consists of 1,700 hectares of land across the whole of Wales from purple moorgrass and rush pasture to reedbed, coastal flood plain grazing marsh. Whilst much of it consists of narrow strips of grassland and scrub, it also includes larger areas. It can be of value as remains of original habitats, as wildlife corridors or because of the benefits of management (e.g. low pesticide use).

¹⁰⁹ https://gov.wales/natural-resources-policy

¹¹⁰ www.naturalresources.wales/sonarr

¹¹¹ https://gov.wales/sites/default/files/publications/2017-08/trunk-road-estate-biodiversity-action-plan-trebap.pdf

The plan includes eleven habitats action plans, seventeen species action plans (including barn owls, butterflies and otters) and two generic action plans.

Transport activities can have a negative impact on biodiversity through loss of habitats, poor management, incidental mortality on the roads, barriers to species movement, enabling the spread of alien species, noise disturbance and artificial lighting.

Transport also has an impact on the marine environment through passenger and freight shipping services, through the operation of ports and harbours, and through the production of aggregates for infrastructure projects. The Welsh National Marine Plan (2019) sets out our policies for ports and shipping, with an objective to safeguard established shipping routes and support sustainable development in the shipping and ports sector.¹¹²

3.1.6 Climate change and transport infrastructure

The risk of climate hazards to infrastructure across Wales is projected to increase both in frequency and severity – including transport infrastructure. Wales will experience rising sea levels and an increase in the frequency and intensity of extreme weather events. Disruption can disproportionately impact communities with fewer and less resilient transport options.

Several recent weather events have led to significant disruption and high economic costs, including the storms in February 2018, estimated to have cost the UK at least £1 billion per day as many workers were unable to access employment. Severe flooding across Wales during storms Ciara and Dennis in February 2020 also severely affected public transport.

Flooding can damage vehicles and structures and make roads impassable which in turn impacts on the economy at a local or national level. Local authorities and Welsh Government have a critical role under the Flood and Water Management Act 2010 in managing the impact of flooding on roads. In January 2019 we made the advisory guidance on drainage a statutory requirement. All new developments – including roads and transport infrastructure – need to comply with national statutory standards. Sustainable Urban Drainage Systems (SuDS) are designed to mimic natural drainage by managing surface water runoff as close to source as possible.¹¹⁵

Flooding also increased the risk of scour damage to transport infrastructure. Scour is the main reason why bridges fail world-wide. Earthwork assets such as cuttings and embankments are also at risk of scour failure.

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¹¹² https://gov.wales/welsh-national-marine-plan-document

¹¹³ State of the UK Climate 2018, Kendon et al, 2018 https://rmets.onlinelibrary.wiley.com/doi/epdf/10.1002/joc.6213

¹¹⁴ Freezing Weather costs UK economy £1bn a day 2018 https://www.theguardian.com/uk-news/2018/mar/03/freezing-weather-storm-emma-cost-uk-economy-1-billion-pounds-a-day

¹¹⁵ https://gov.wales/national-standards-sustainable-drainage-systems-suds

3.1.7 Waste and materials

Towards Zero Waste sets out our long term aims for resource efficiency and waste management. It sets a goal for 2025 of significantly reducing waste and managing any waste that is produced in a way that makes the best of our resources by maximizing recycling, minimising the amount of waste produced and getting as close to zero waste as possible. By 2050 the aim is to achieve roughly 65% of the waste that we produce now. Early in 2020 we consulted on a strategy to become a world leader in recycling commercial, industrial and construction waste. It

Transport produces commercial and industrial waste associated with passenger operations, such as food waste, as well as waste associated with the repair and maintenance of transport infrastructure, and with the use and decommissioning of vehicles and rolling stock.

Part of the move towards a circular economy is to make the best use of existing resources. Climate change awareness and the UK Government's austerity policy have contributed to a focus on increasing the efficiency of existing infrastructure, rather than new build projects. The use of technology including variable speed limits and measures to maximize the resilience and use of existing road space is increasingly being prioritised over offline highway construction as these interventions perform better against WelTAG objectives.

Transport projects often use recycled materials from various sources, which means that not only can savings be made in the materials used, but also that the amount of waste is reduced. This can include the re-use of recycled demolition material and materials excavated from the construction site and road surfacing layers that include old vehicle tyres and non-recyclable waste plastics.

3.1.8 Transport and health

Transport is relevant to health because it plays a role in many of the wider issues that affect health, including employment, education, access to green space, pollution, housing – as well as individual lifestyles.

3.1.9 The health impacts of air quality and noise

As noted, the biggest effect that transport has on health arises through the emission of greenhouse gases, air quality and noise pollution. This section notes some of the health impacts, whilst 3.1.2 and 3.1.3 (above) set out some of the actions we are taking to address air quality and noise.

¹¹⁶ https://gov.wales/towards-zero-waste-our-waste-strategy

¹¹⁷ https://gov.wales/sites/default/files/consultations/2020-03/consultation-circular-economy-strategy_1.pdf

Public Health Wales estimates that the equivalent of 1,600 deaths are attributed to PM2.5 exposure each year, and a further 1,100 deaths to NO₂ exposure.¹¹⁸ In Wales the societal cost of air pollution from health service costs and lost work-days is estimated to be £1billion each year.¹¹⁹ The Defra-led Interdepartmental Group on Costs and Benefits noise subject group has estimated the social cost of road traffic noise in England alone at between £7 and £10 billion per year.¹²⁰

Noise, meaning unwanted or harmful sound, can, in the short term, disrupt sleep and increase levels of stress, irritation and fatigue, as well as interfering with important activities such as learning, working and relaxing. In other words, it reduces the quality of our lives. Exposure to loud sounds can cause hearing damage, while exposure to noise in the long term can increase our risk of hypertension-related illnesses and cardiovascular disease. And yet our lives are enhanced by conversation, laughter and cheering, music and the sounds of nature. A healthy acoustic environment is more than simply the absence of unwanted sound.

Welsh Government's noise maps suggest that the homes of more than 200,000 people across Wales are exposed to road traffic noise levels exceeding the World Health Organisation's night noise guidelines.¹²¹

3.1.10 Obesity and physical inactivity

Being a healthy weight is one of the most effective ways of reducing the risk of long-term health conditions, but in our current environment it is hard for many of us to achieve this. However if we do nothing, by 2030 we estimate that around 64% of adults will be obese or overweight. In Wales, 26% of four- and five-year olds and 61% of adults are overweight or obese. Being overweight increases the risk of developing major health conditions such as coronary heart disease, type 2 diabetes and some cancers. It is also a risk to people's mental health leading to low self-esteem, depression and anxiety.

Small changes in behaviour can have a big impact on individual health and wellbeing. For adults, achieving the recommended amount of 150 minutes of moderate to vigorous physical activity a week helps prevent and manage over 20 chronic

¹¹⁸ Consultation: The Clean Air Plan for Wales - Healthy Air, Healthy Wales, Welsh Government, 2019

¹¹⁹ http://www.wales.nhs.uk/sitesplus/documents/888/PHW%20Air%20pollution%20report%20(final%20English).pdf

¹²⁰ Noise and Soundscape Action Plan 2018-2023, Welsh Government, 2018

¹²¹ Consultation: The Clean Air Plan for Wales - Healthy Air, Healthy Wales, Welsh Government, 2019

¹²² A Healthy Weight, A Healthy Wales, Welsh Government, 2019 https://gov.wales/sites/default/files/publications/2019-10/healthy-weight-healthy-wales_0.pdf

¹²³ Child Measurement Programme for Wales, Public Health Wales, 2017-18 https://phw.nhs.wales/services-and-teams/child-measurement-programme/cmp-2017-18/child-measurement-programme-for-wales-report-2017-18/; National Survey for Wales, 2019-20

conditions such as coronary heart disease, stroke, type 2 diabetes and cancer, and can also have a significant positive impact on people's well-being. 124

One way of tackling this is by being more active. A Healthy Weight, A Healthy Wales sets out our priorities for obesity, focusing on healthy environments, healthy settings, leadership and enabling change, and healthy people. The plan includes a strong commitment to active travel, including continued investment in cycling and walking, integrated transport, accessible transport hubs and more investment in public transport. It also includes the use of Health Impact Assessments and other tools for planners to support local action and help communities develop local ideas and solutions. The plan recognises the need to change attitudes and behaviours, by making healthy options in food, activity and transport more attractive, affordable, prominent and accessible to help drive a new normal.¹²⁵

Experts recommend around 150 minutes of moderate to vigorous activity a week. Walking and cycling can make a significant contribution to this – but at present only 53% adults meet physical activity guidelines and only 27% of adults in Wales walk for more than ten minutes as a means of transport every day. 126 As noted, in 2013-14 over half of adults aged 16 to 64 in Wales had access to a bicycle, while more than 90% had learned to ride one, but only 9% use their bike for journeys each month and this figure has remained broadly static. 127

More importantly, COVID-19 means that at present buses and trains can carry far fewer passengers, and this may continue for some time. There is a significant risk that more people will use their cars unless there are safe, easy, accessible active travel options.

3.1.11 Transport and equality

Transport is as much a social issue as an environmental one. It shapes our everyday lives and determines whether we are able to work, learn, enjoy ourselves. Transport – or lack of it – has a huge impact on physical and mental health. So when there are problems with transport, they are very evident and directly felt. Transport is an issue that comes up over and over again when we consult with community groups on wider issues, including planning.

There is emerging work on the wider social benefits of transport in Wales. Bangor University has used the Social Return on Investment model to look at the benefits of subsidized bus services, noting that:

¹²⁴ World Health Organization 2018

¹²⁵ https://gov.wales/healthy-weight-strategy-healthy-weight-healthy-wales

¹²⁶ National Survey for Wales, Welsh Government, 2019-2020 https://gov.wales/national-survey-wales-results-viewer

¹²⁷ National Survey for Wales, Welsh Government, 2013-2014 https://gov.wales/national-survey-wales-results-viewer; National Survey for Wales, Welsh Government, 2019-2020

With a rapidly ageing population and with more than one in five homes without a car in Gwynedd, subsidised bus services deliver positive social value by enabling people to travel to work, school, shops, social activities, healthcare appointments, volunteer opportunities, and to family members who need caring for.¹²⁸

There are many reasons why people in Wales cannot access the transport they need to live their lives to the full – they may be economic, social or geographical linked to the lack of transport in rural areas. Others are to do with people not feeling confident about taking transport.

This section explores some of the equality issues in transport that we need to take into account in implementing the strategy.

This section is complemented by Annex One which provides further information about people's transport experiences. During the process of drafting the Wales Transport Strategy we also spoke to a wide range of different groups including older people, younger people, people seeking sanctuary, representatives of Gypsy and Traveller groups, representatives of Black, Asian and Minority Ethnic groups.

3.1.12 Duties and human rights

We promote equality because we want to create a fairer Wales; we also have legal duties. Those duties particularly relate to people with protected characteristics and in future they will also relate to socio-economic disadvantage. The Public Sector Equality Duty means we need to:

- eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act
- advance equality of opportunity between people who share a protected characteristic and those who do not, and
- foster good relations between people who share a protected characteristic and those who do not.

Protected characteristics include age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation.¹³⁰

Welsh regulations (Equality Act 2010 (Statutory Duties) (Wales) Regulations 2011) set out what we and others need to do to show we are paying due regard to the general duty of the Public Sector Equality Duty. These include preparing and publishing equality objectives, engaging with people who represent the interests of people who share one or more protected characteristic, assessing the impact of any

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¹²⁸ Hartfiel, N. and Edwards, R.T.2020. Social value of subsidised bus services to passengers in Gwynedd. Bangor University report for Gwynedd Council.

¹²⁹ UN Conventions on the Rights of People with Disabilities and the Rights of Children and Young Persons; 1995 Disability Discrimination Act; 2010 Equality Act; 2015 Well-being of Future Generations (Wales) Act; 2014 Social Services and Well-being (Wales) Act; Strategic Equality Plan; Prosperity for All; 2019 Framework for Action on Independent Living.

¹³⁰ https://www.equalityhumanrights.com/en/equality-act/protected-characteristics

¹³¹ https://www.legislation.gov.uk/wsi/2011/1064/contents/made

new or change to policy, publishing and collecting relevant equality information and having due regard to the general duty when procuring goods and services. These duties are levers that, when implemented well, help public bodies to incorporate equality considerations into strategies and policies so that they meet the aims of the general duty.

From March 2021 we will also need to take into account socio-economic disadvantage when Welsh Government enacts part one of the Equality Act 2010.¹³² The aim of this is to safeguard equality and human rights, particularly in the context of European Union Transition. The duty will require us to consider how our decisions might help to reduce the inequalities associated with socio-economic disadvantage.¹³³

There are also links between transport and human rights. As well as general obligations around consulting and involving people and equal treatment, article 9 of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) on accessibility, places obligations on transport, whilst article 20 on personal mobility requires effective measures to ensure personal mobility with the greatest possible independence of disabled persons including facilitating personal mobility in the manner and at the time of their choice and affordable cost. Article 19 is also relevant given that transport is a key enabler of independent living. ¹³⁴

The social model of disability is enshrined in the UNCRPD. Wales was one of the first countries in the world to adopt the social model of disability which makes an important distinction between impairment and disability. It recognises that people with impairments are disabled by barriers that commonly exist in society; these include attitudinal barriers, financial barriers, physical and organisational barriers.

Our equality duties are also reflected in the Well-being of Future Generations (Wales) Act 2015, including the goal of a more equal Wales and in the five ways of working which include the importance of involving people.¹³⁵

Transport is relevant to our wider ambitions on equality. Transport is a key issue in our framework and action plan on Independent Living¹³⁶ and on our policy on loneliness (see below). It is also highlighted in our Strategic Equality Plan which includes specific recommendations for the new Wales Transport Strategy including action 1.4 on criteria for local transport grant funding for schemes that reduce inequalities for those living in poverty, action 3.1 on recognising barriers

¹³² https://www.legislation.gov.uk/ukpga/2010/15/contents

 $^{133\} https://gov.wales/more-equal-wales-socio-economic-duty-html;\ https://gov.wales/socio-economic-duty-scrutiny-framework$

¹³⁴ The UN Convention on the Rights of Persons with Disabilities seeks to promote, protect and ensure full and equal enjoyment of all human rights and fundamental freedoms by all disabled persons and promote respect for inherent dignity. It defines disabled persons as those who have long term physical, mental, intellectual or sensory impairments which in interaction with barriers may hinder full and effective participation in society on an equal basis.

¹³⁵ https://gov.wales/sites/default/files/publications/2020-04/strategic-equality-plan-equality-aims-objectives-actions-2020-2024.pdf

¹³⁶ https://gov.wales/action-disability-right-independent-living-framework-and-action-plan

experienced by disabled people in travelling by public transport and action 3.3 on improving accessibility of and safety when using transport for those with protected characteristics. 137

In their review of transport policies and strategies in Wales, the Equality and Human Rights Commission found that most did not consider the aims of the Equality Act, that there were few specific objectives around equality and little meaningful engagement with people with protected characteristics. The quality of equality information supplied and used to inform strategies was variable and often not used, and strategies did not always involve equality impact assessment. They also identified examples of good practice, including the mid Wales and north Wales Local Transport Plans Equality Impact Assessments and the Cardiff Local Transport Plan which identified barriers to public transport. 138

3.1.13 Disabled people

Based on survey data from 2015 to 2017 it is estimated that 21% of the population in Wales has some form of disability, which is broadly in line with other parts of the UK.139 Disabled people are less likely to have the use of a car (six out of ten as opposed to eight out of ten people who are not disabled).

Disabled people are also much more likely to use public transport. The 2010 Welsh Bus Passenger survey found that 25% of bus users are disabled or have long term illness - of which around 12% had restricted mobility and 1% are wheelchair users. 140 Whilst concessionary passes issued to passengers who are disabled accounts for about 10% of passes issued, the proportion of journeys undertaken by disabled people and disabled people with a companion accounts for 25% of the total number of free bus journeys made in Wales.¹⁴¹ And disabled people are also more likely to be dealing with issues around poverty. Between 2016-17 and 2018-19, people living in households where someone is disabled were more likely to be in relative income poverty (27%) compared to those living in a household where noone is disabled (20%).¹⁴²

Since the Disability Discrimination Act (now the Equality Act 2010) was introduced in the UK in 1995, public transport in Wales has become more inclusive. Buses are now required to offer priority seating, lower floors and spaces for wheelchairs. Licensing authorities are permitted but not required to publish lists of wheelchairaccessible taxis and private hire vehicles so passengers can be better informed, and from January 2020 all trains on the railways have been required to meet EU

¹³⁷ https://gov.wales/equality-plan-and-objectives-2020-2024

¹³⁸ http://www.tracc.gov.uk/index.php?id=125&L=0; https://www.cardiff.gov.uk/ENG/resident/Parking-roads-andtravel/transport-policies-plans/local-transport-plan/Pages/default.aspx

¹³⁹ See Data Report. StatsWales, Disability Status by Region. Original source ONS, Annual Population Survey.

¹⁴⁰ https://data.gov.uk/dataset/ebd223ef-db10-4dd4-b615-a2878e575936/welsh-bus-passenger-survey

¹⁴¹ Analysis by Transport for Wales, 2020

¹⁴² https://statswales.gov.wales/Catalogue/Community-Safety-and-Social-Inclusion/Poverty/peopleinrelativeincomepovertyby-whetherthereisdisabilitywithinthefamily

and UK Government accessibility standards (such standards are not devolved to Welsh Ministers). Wales has also adopted measures to support concessionary and discounted travel for protected groups (see above).

Our 2017 Accessible and Inclusive Public Transport Objectives aim to provide access to safe, affordable, inclusive, accessible and sustainable integrated age-friendly transport systems, notwithstanding the non-devolved responsibilities. Accessibility is one of the baseline contract requirements for Transport for Wales, and a new Transport for Wales Accessibility Panel has been set up to advise them.¹⁴³

Despite considerable progress there is more to be done. The 2018 report Is Wales Fairer concluded that,

...despite Welsh Government measures to improve the accessibility of public transport in Wales, the accessibility of the rail network for disabled people in Wales remains poor and disabled people continue to have poor experiences when trying to use taxis and private hire vehicles. This, and the continued reduction in bus services in rural areas of Wales, risk contributing towards social isolation among disabled people, older people, and those living in rural areas.

The report notes that half of railway stations in Wales are not fully accessible to disabled people with 34% having no access for wheelchair users.¹⁴⁴

In future it may also be possible to look at whether all taxis and PHVs should be required to carry guide dogs, unless the driver has a medical exemption.

The UK Government has non-devolved responsibility for rail infrastructure (except the Core Valley Lines) and retains the funding for the England and Wales Access for All programme, and we have been working with the rail industry to identify priorities for station accessibility upgrades.

3.1.14 Older people

Over the next 20 years the proportion of people over 60 in Wales is set to increase from around 27% of the population in 2018 to around 32% in 2038. The population aged over 75 in Wales is also projected to increase from 10% of the population in 2019 to around 12% in 2030.¹⁴⁵ As a result the proportion of adults with a long-term limiting mental or physical health condition or disability is increasing and many of the issues identified faced by disabled people are also faced by older people.

Transport is a key part of the Strategy for Older People in Wales: 2013-2023 which sets out an ambition for older people to be able to access affordable and

¹⁴³ https://gov.wales/accessible-and-inclusive-public-transport-objectives

¹⁴⁴ https://www.equalityhumanrights.com/en/publication-download/wales-fairer-2018

¹⁴⁵ Future Trends Report 2017, Welsh Government, 2019 update https://gov.wales/sites/default/files/statistics-and-research/2018-12/170505-future-trends-report-2017-en.pdf

appropriate transport which assists them in playing a full part in family, social and community life.146

In their review of transport policies in Wales, the Equality and Human Rights Commission (EHRC) asked older people and disabled people for feedback on their transport. Their key points were:

- engagement they did not feel that they were involved in planning, or their views taken into account
- **journey planning** now that transport planning is moving online, many people who don't have access to the internet or mobile technology struggle to plan journeys. The requirement to book assistance also impacts on people's independence
- staff behaviour and training many public transport staff are not aware of their responsibilities and there is too much variability in the provision of reliable passenger assistance, or attitudes to wheelchair users or people with guide dogs
- rail infrastructure again, there is too much variation in the extent to which stations are accessible to people with disability
- **bus infrastructure** the quality of bus shelters is variable, cars park in bus stops making it difficult to alight, and information is difficult to access
- taxis and private hire vehicles there is often a lack of suitable vehicles: some refuse to take people, and people are worried about their safety
- **leadership** there is a need for more widespread understanding of equality issues at all levels - from senior leaders to those on the front line
- **community transport** there was a lot of support for community transport initiatives and also for innovative transport initiatives. 147

3.1.15 Young people

Travel has a huge impact on the lives of young people in Wales. Many are completely dependent on public transport, which can be particularly challenging in rural areas where there are no train services and bus services are infrequent.

The Welsh Government's recent review of funded programmes explored what more we need to do to ensure programmes and services have the maximum effect on the lives of children living in poverty. The review found costly and inaccessible or unreliable public transport services make it difficult for young people and their families to access school or further education and work, social activities and other services/support. Improving access and affordability of public transport for young

¹⁴⁶ https://gov.wales/strategy-older-people-2013-2023

¹⁴⁷ https://www.equalityhumanrights.com/en/publication-download/accessible-public-transport-older-and-disabled-peoplewales

people, especially young people living in poverty, has been identified as a priority. 148

There is a particular issue with active travel for young people. Sport Wales note that we are a long way from meeting our targets on activity for young people. Walking or cycling to school could make a significant difference to this but currently only a third of Welsh children aged 11 to 16 walk or cycle to school – although those from less affluent families are more likely to walk or cycle. More than half of 5- to 11-year olds travelled by car to school.¹⁴⁹

3.1.16 Women

There are differences between men and women in relation to transport services in Wales. More women commute to work than men, and 40.2% of women in employment work part-time compared with 11.8% of men.¹⁵⁰

In 2016 Chwarae Teg found that public transport and ticketing treats people who work irregular hours or part time less fairly compared to people working full time, whilst the Gender Equality Road Map identified issues around safety and accessibility of public transport. People with babies in push chairs also face many of the same issues faced by wheelchair users in terms of physical access to buses and trains, and safety concerns.

Working women often have different commuting patterns to working men – for example working mothers in the valleys often commute around the local area, rather than in and out of Cardiff. Chwarae Teg included transport in the recent Gender Equality review. The Roadmap for Gender Equality also notes that public transport was a particular issue amongst women from rural areas. They that public transport was continually being down-graded and lost, with fewer and less frequent services. Often these were not fit for women who work part time or irregular hours. The group also heard about safety concerns expressed by women, and the success of the Transport for London Campaign Report it to Stop it. 154

3.1.17 Black, Asian and Minority Ethnic groups

The Equality and Human Rights Commission report Is Wales Fairer also highlighted race inequality in Wales and in particular the persistence of hate crime. Race was a motivating factorin around three quarters of hate crime offences in England and

¹⁴⁸ https://gov.wales/child-poverty-strategy-wales-report

¹⁴⁹ National Survey for Wales, Welsh Government, 2018-2019 https://gov.wales/national-survey-wales-results-viewer

¹⁵⁰ https://gov.wales/annual-population-survey-july-2019-june-2020

¹⁵¹ Chwarae Teg (2016) Working Women's Journeys: An Overview of the Relationship between Commuting and Gender https://www.cteg.org.uk/wp-content/uploads/2016/09/working-womens-journeys-full-report-en.pdf

¹⁵² Chwarae Teg (2019) *Gender Quality: a Road map for Wales* https://chwaraeteg.com/wp-content/uploads/2019/09/Gender-Equality-a-roadmap-for-Wales.pdf

¹⁵³ https://chwaraeteg.com/projects/gender-equality-review/#phase-two

¹⁵⁴ https://chwaraeteg.com/wp-content/uploads/2019/09/Deeds-Not-Word-full-report.pdf

Wales. The Crime Survey for England and Wales includes data collected by British Transport police. Across all incidents, adults in non-white ethic groups are more likely to be victims of racially motivated hate crime than white adults; it is also estimated that Muslim adults were most likely to be victims of religiously motivated hate crime. The study also identifies disability, gender identity and sexually motivated hate crime. In relation to crime associated with transport, there was a 38% increase in racially aggravated public order offences on the railways between 2017/18 and 2018/9 in Wales. 156

In the context of the disproportionate impact of COVID-19 on ethnic minority groups, Wales' First Minister convened a group to identify immediate measures and longer-term work to address inequality which went wider than just COVID-19. The key themes of the report prepared by Professor Ogbunna were around the experience of living with race inequality, the lack of ethnicity data (especially across health and social care), risk of COVID-19, experiences of racism, communication, cultural suitability of health and social care, security of employment and income, housing overcrowding and environment, engagement with young people, the additional financial costs of migration status, violence against women, children and others, and the impact of an embedded culture of racism. There is a critical link to transport in relation to air quality. The report notes the correlation between ethnic minority communities and poor-quality housing, and that air quality tends to be poorer in deprived communities.¹⁵⁷

3.1.18 People seeking sanctuary

We published our Nation of Sanctuary Refugee and Asylum Seeker Plan in January 2019. Although the UK Government is responsible for asylum policy including asylum application decision making, the provision of support and accommodation for asylum seekers and the operation of refugee resettlement schemes, the plan focuses on the devolved areas that the Welsh Government can influence, including improving access to health services, information and advice, safeguarding and education services. There are around 3,000 people seeking sanctuary in Wales, many of whom are being settled around Wales. Swansea became the UK's second official City of Sanctuary in May 2010 as part of a national movement committed to building a culture of hospitality and welcome. 159

¹⁵⁵ Hate Crime, England and Wales, 2019 to 2020 - Home Office, 2020 https://www.gov.uk/government/publications/hate-crime-england-and-wales-2019-to-2020/hate-crime-england-and-wales-2019-to-2020

¹⁵⁶ British Transport Police Stats Bulletin 2019/2020

https://www.btp.police.uk/pdf/British%20Transport%20Police%20Statistical%20Bulletin%202019-2020%20FINAL.pdf 157 https://gov.wales/sites/default/files/publications/2020-06/first-ministers-bame-COVID-19-advisory-group-report-of-the-socioeconomic-subgroup.pdf

¹⁵⁸ https://gov.wales/sites/default/files/publications/2019-03/nation-of-sanctuary-refugee-and-asylum-seeker-plan_0.pdf 159 https://swansea.cityofsanctuary.org

3.1.19 Social isolation and loneliness

There is a strong correlation between transport, and social isolation and loneliness. Globally, we are more connected than ever before, but despite this, many people still feel socially isolated.

Loneliness and isolation can affect anyone at any age. Around a fifth of over 65s report feeling lonely but it can affect people at other stages of life, particularly people who share protected characteristics. People in rural communities with poor transport can feel isolated, but in urban areas people can also struggle where public transport accessibility is difficult. Younger people are more likely to be lonely than older people: a fifth of 16-24 year-olds are lonely, compared with 10% of those aged 75 or over. People who feel safe after dark, who feel a strong sense of community and/or are satisfied with their local area, are less lonely. 161

Lack of public transport, particularly on-demand/responsive transport, and voluntary transport schemes, has been found to prevent older people from accessing wider services to increase social interaction.¹⁶²

The consultation exercises behind Connected Communities, our strategy for tackling loneliness and social isolation, identified access to transport as one of the many factors that can contribute:

For many people, particularly older people and those in isolated communities, getting about is not just about the journey itself – it is about the people they meet and the conversations they have along the way, and at their destination, which can prevent feelings of loneliness and social isolation. 163

The final strategy includes an ambition to create a transport system that supports social connections, with actions around improving access for older people and people with disabilities, giving local authorities greater powers around local bus services, looking at demand responsive transport, and rail concessions, community rail partnerships and neighbourhoods that prioritise everyone's needs over those of car-users.¹⁶⁴

3.1.20 Socio-economic disadvantage

From March 2021 we will need to consider how decisions could help reduce inequalities associated with socio economic disadvantage.

¹⁶⁰ StatsWales *Percentage of people who are lonely by age and gender* https://statswales.gov.wales/Catalogue/National-Survey-for-Wales/Well-being-and-Finances/percentageofpeoplewhoarelonely-by-age-gender-year

¹⁶¹ National Survey for Wales, 2016-17 Statistical bulletin Loneliness, Welsh Government, 2018

¹⁶² Review of the impact of loneliness and social isolation on health and well-being and whether people who experience loneliness/social isolation have higher use of public services, Welsh Government, 2019

¹⁶³ https://gov.wales/connected-communities-tackling-loneliness-and-social-isolation

¹⁶⁴ https://gov.wales/loneliness-and-social-isolation-connected-communities

Between 2016-17 and 2018-19, nearly a quarter of the Welsh population (23%) were living in relative income poverty after paying their housing costs.

Children are the population group most likely to be in relative income poverty. The most recent figures show that this was the case for 28% of children in Wales compared to 19% of pensioners. 165 The Institute for Fiscal Studies (IFS) project the official rate of relative poverty after housing costs in the UK will increase in future years, with relative child poverty in the UK projected to rise significantly to 36% in 2021-22.166

Transport has a vital role to play in growing the economy by helping people trapped in poverty. Transport costs can represent a significant barrier to accessing essential services or maintaining social connections with friends and family. Transport also plays a crucial part in supporting people's ability to access employment, education, health care and other local services such as libraries. Poorer people may maintain older, less efficient cars for longer than others.

People who don't own a car are more likely to face other challenges – they are more likely to live alone, and more likely to live in deprived areas. The future trends for Wales see a significant growth in the number of single person households, with private vehicles remaining the dominant mode of transport. Without a significant change, modal shift to public transport, this combination is incompatible with a commitment to ensure sustainability for future generations.

There is some UK wide evidence that children in the most deprived areas are more likely to be injured as pedestrians, and there are also inequalities in cycling and car occupant risks for male adolescents.¹⁶⁷ There has also been some work on deprivation and road traffic accidents in Wales. 168

3.1.21 Transport, places and the economy

This section explores the relevance of transport to the economy including national, regional and local development. Welsh economic performance continues to be low in terms of economic output and household income but is not too dissimilar from parts of the UK with similar characteristics. Prior to the pandemic, there were modest improvements in Wales' relative productivity, perhaps reversing a trend of deterioration prior to the 2008 recession. However, COVID-19 has caused an

¹⁶⁵ Well-being of Wales 2020, Statistics for Wales, https://gov.wales/wellbeing-wales-2020-html

¹⁶⁶ Future Trends Report 2017, Welsh Government, 2019 update https://gov.wales/sites/default/files/statistics-andresearch/2018-12/170505-future-trends-report-2017-en.pdf

¹⁶⁷ O'Toole, S and Christie, N. 2018. Deprivation and road traffic injury comparisons for 4-10 and 11-15 year-olds. https://www.sciencedirect.com/science/article/abs/pii/S2214140518300756

¹⁶⁸ Lyons, A et al, Preventing child injuries in Wales: needs assessment. http://www.childreninwales.org.uk/wpcontent/uploads/2017/08/June-2017_CHILD_INJURY_NEEDS_ASSESSMENT_FINAL1.pdf

unprecedented collapse in economic activity in the second quarter of 2020, and over the year as a whole the economy suffered a severe contraction.¹⁶⁹

COVID-19 has had a major impact on our economy with the closure of shops and businesses, and the restrictions on travel. As noted there are also economic risks around the potential impacts of the UK's exit from the European Union.¹⁷⁰ An economic downturn may lead to a reduction in the movement of people and goods due to increased unemployment, a decline in trade and less development.

Prosperity for all – the Economic Action Plan notes that transport can play a critical role in the economy by enabling people to access work, education and leisure, and supporting the Welsh supply chain.¹⁷¹ However, transport also has direct relevance to economic development through its inclusion in national and local planning policy.

3.1.22 Transport and economic development/planning policy

Where we build houses, employment centres, schools and hospitals impact on the journeys we make, when we make them and how we make them. And equally, the availability of transport has a significant impact on the viability of local, regional and national places. Transport was one of the most commonly raised issues during recent community consultations for the future planning policy.

Planning Policy Wales 10 (PPW10) includes policy on transport. It contains an ambition to reduce the need to travel, particularly by the private car, and supports a modal shift to walking, cycling and public transport. PPW 10 also includes the sustainable transport hierarchy, which prioritises walking, cycling and public transport. The policy seeks to reduce the need to travel and the length of journeys, whilst making it easier for people to walk, cycle and use public transport through, for example, the choice of location, scale density, mix of uses and design of new development. It aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle the causes of climate change by encouraging a more effective transport system, with greater use of the more sustainable and healthy forms of travel, and minimising the need to travel.

Transport improvements can also be delivered through planning obligations to mitigate the impact of development under Section 106 of the Town and Country Planning Act 1990.

More recently, Future Wales – the National Plan 2040 has taken into account transport developments such as the Active Travel (Wales) Act 2013 and the new metro schemes in south east, south west and north Wales which will provide

¹⁶⁹ https://gov.wales/key-economic-statistics-december-2020

¹⁷⁰ Office for Budget Responsibility, Fiscal Risks Report, 2019 https://obr.uk/docs/dlm_uploads/Fiscalrisksreport2019.pdf

¹⁷¹ https://gov.wales/prosperity-all-economic-action-plan

¹⁷² https://gov.wales/planning-policy-wales

significant opportunities for communities and new development to be supported by good quality public transport.¹⁷³

3.1.23 Geography

It is impossible to plan for transport without understanding the distinctive topography of Wales, with its extensive coastline and mountainous interior, which has shaped the settlement pattern concentrated on the north coast and along the south coast. And while east/west connections in Wales are relatively easy – especially along the north and south coasts – the mountain ranges make north/south travel difficult. The main rail lines also skirt the mountainous interior. Inland routes tend to follow the valleys, and in rural areas of mid and north Wales, roads are often the only transport options.

There is no public transport route within Wales from Bangor in the north to Cardiff in the south, with the exception of inter-connecting TrawsCymru bus routes - rail passengers travelling between Bangor and Cardiff are routed via the Marches line along the English border.

As a result, transport in rural areas is poor. In Wales 13% of people live less than 800m walking distance from a rail station with at least one train per hour. This varies by region, from a fifth of the population in south east Wales to just 1% in mid Wales. More people have access to buses - around 70% of the population lives less than a 400m walk from a bus stop with at least one bus per hour. However again there are significant variations between rural and less rural areas – this varies from 81% of people in south east Wales to just over a quarter in mid Wales.¹⁷⁴

3.1.24 Regional transport issues

Different parts of Wales face different transport issues and require different transport solutions. For example, whilst rail, metros and airports might be relevant to cities – for many rural areas, roads and car travel are the main transport modes – especially for longer journeys.

For planning purposes Wales is currently divided into four regions: north Wales, mid Wales, south east Wales and south west Wales. This section identifies some regional transport issues drawing on Future Wales – the National Plan 2040 and the regional perspectives in the 2015 Joint Local Transport Plans.

North Wales

The north region comprises Conwy, Denbighshire, Flintshire, Gwynedd, the Isle of Anglesey, and Wrexham and includes Snowdonia National Park. It is home to almost 700,000 people with significant concentrations of Welsh speakers.¹⁷⁵

¹⁷³ https://gov.wales/future-wales-national-plan-2040

¹⁷⁴ Analysis undertaken by Transport for Wales, 2019

¹⁷⁵ StatsWales *Population projections by local authority and year*, 2018-based https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Projections/Local-Authority/2018-based/populationprojections-by-localauthority-year

There are important connections with mid Wales, Ireland, Shropshire, Cheshire West and Chester, and the north west of England. Key transport infrastructure includes the port of Holyhead, the A55 corridor and the North Wales main line. Wrexham and Deeside have been identified as the main focus for investment and growth in the region, whilst the north Wales coastal settlements are also a focus for regional growth.¹⁷⁶

The key issues in north Wales are around the ability of the strategic trunk road and rail corridors to provide good connectivity for people and freight within north Wales, to the ports including Holyhead and to the rest of the UK. There is a lack of resilience of road and rail to planned and unplanned events, and a need to improve access to and between the three enterprise zones. There is a lack of viable and affordable alternatives to using private cars to access employment and other services. The area needs better road links to and from the trunk road network in rural areas to retain the viability of local businesses and support Welsh language and culture.¹⁷⁷

In terms of future transport developments, we are supporting the North Wales Metro, a series of linked transport investments that will strengthen cross border connections between Wales and the north of England, Chester, Liverpool and Manchester.

Mid Wales

Mid Wales region comprises Ceredigion, Powys and the majority of the Brecon Beacons National Park. It is home to 205,000 people, with 34% of the land mass and 6% of the population. It is Wales' most rural region. Future Wales identifies a series of regional growth areas including Aberystwyth, Bro Hafren, the Heart of Wales, Brecon and the Border and the Teifi Valley.

In terms of transport, trips are typically longer than those made in more built-up and urban areas, and reliant on road-based travel given the absence of frequent bus and rail services. Broadband connectivity will be key to enabling mid Wales to broaden its economic base. Key transport priorities for Welsh Government are around ensuring transport investments improve accessibility across mid Wales and strengthen cross-border transport links. Travel by road and car are central to regional movement in this area, so alongside investment in public transport and

¹⁷⁶ https://gov.wales/sites/default/files/publications/2020-09/working-draft-national-development-framework-document-september-2020.pdf

¹⁷⁷ North Wales Joint Local Transport Plan 2015

https://northwaleseab.co.uk/sites/nweab/files/documents/Executive%20Summary%20%20North%20Wales%20Joint%20LTP.pdf

¹⁷⁸ StatsWales Population projections by local authority and year, 2018-based

https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Projections/Local-Authority/2018-based/populationprojections-by-local authority-year

active travel, the local plan notes the need to invest in the region's road network and support the uptake of ultra-low emission vehicles.¹⁷⁹

Other issues for the region include difficulties in gaining access to employment and services for those without a car and because of the need to travel long distances. Constraints on the strategic road network mean longer journey times and reduced journey time reliability for the movement of people and goods within the region and to key destinations outside of mid Wales. There is an increased risk to the resilience of the network through impacts of climate change, including flood risk, but there are also opportunities to increase mode share by active travel, to improve the health and well-being of the local community and to continue to improve road safety. 180

South east Wales

The south east region comprises Blaenau Gwent, Bridgend, Caerphilly, Cardiff, Merthyr Tydfil, Monmouthshire, Newport, Rhondda Cynon Taf, Torfaen and the Vale of Glamorgan.

Although the smallest of the three regions by area, with over 1.5 million residents it is the most populated and equivalent to a large city region on a European and UK scale. 181 It includes the coastal cities of Cardiff and Newport and the former industrial heartlands of the south Wales valleys. Key transport infrastructure includes the ports at Barry, Cardiff and Newport, the Great Western Mainline and associated Core Valleys Lines and Cardiff International Airport. Cardiff, Newport and the Valleys are the main focus for growth and investment, and the region represents over half of Welsh economic output.

The South East Metro programme will improve rail, bus, cycling and walking infrastructure across the region, as a focus for investment, regeneration and associated development. Other transport issues include the need for high quality secure cycle parking, growing public transport patronage and reducing traffic volumes on the M4.¹⁸²

In 2015, the South East Wales Valleys Local Transport Plan set out transport aspirations to 2030 identifying key issues relating to access to out-of-centre employment sites, the need for more attractive bus services, exclusion of people without access to a car from employment, the relocation of health services, a large

¹⁷⁹ https://gov.wales/sites/default/files/publications/2020-09/working-draft-national-development-framework-document-september-2020.pdf

 $^{180\} http://www.tracc.gov.uk/fileadmin/user_upload/LTP-FINAL-2015/Final_Joint_LTP_for_Mid_Wales_30-01-15.pdf$

¹⁸¹ StatsWales *Population projections by local authority and year*, 2018-based https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Projections/Local-Authority/2018-based/populationprojections-by-localauthority-year

¹⁸² https://gov.wales/sites/default/files/publications/2020-09/working-draft-national-development-framework-document-september-2020.pdf

number of short commuter trips, congestion including congestion associated with school trips and issues such as the lack of provision for freight vehicles.¹⁸³

Cardiff City Council has also produced a transport vision to 2030 focusing on the challenges of a growing population and increasing car use, with proposals for expanding on the metro plans, new bus rapid transit services and park and ride sites to make bus travel cheaper and reprioritizing streets to give more space to people walking and cycling.¹⁸⁴

Following the decision not to re-route the M4 around Newport, the South East Wales Transport Commission (SEWTC), chaired by Lord Burns, has been exploring alternative solutions to address the congestion along the M4. Their final report, published in November 2020, concluded that congestion on the M4 was a symptom of a broader problem: the lack of good transport alternatives to the motorway. They recommended an infrastructure package based on a new south east Wales rail backbone with more stations, new rapid bus and commuter cycle corridors, as well as integrated ticketing, coordinated timetables and initiatives around behaviour change and governance improvements.¹⁸⁵

South West

The south west region comprises Carmarthenshire, Neath Port Talbot, Pembrokeshire, Swansea and Pembrokeshire Coast National Park with a population of over 705,000 people. It includes both rural and urban areas.

The ports of Fishguard, Milford Haven, Swansea and Port Talbot are important national infrastructure. The Strategic Road Network in the region includes the Trans European Network linking Europe to the republic of Ireland, whilst the M4 motorway and associated roads are vital gateways for freight and passenger movements Milford Haven is the third largest port in the United Kingdom and makes a significant contribution to the regional and Welsh economy. Port Talbot Docks is a deep water harbour, importing iron ore and coal. There are three airports in the region at Swansea, Pembrey and Withybush, although none offer scheduled services.

Swansea Bay and Llanelli are the foci for national growth, whilst the regional growth areas are Carmarthen and the Haven Towns (Haverfordwest, Milford Haven, Pembroke and Pembroke Dock).

The South West Metro will provide better connectivity within the south west and improve connections across south Wales into England, whilst facilitating access to the Metro by active travel will contribute to a modal shift from car to public transport at a regional level.

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¹⁸³ South East Wales Valleys Local Transport Plan, January 2015 https://www.merthyr.gov.uk/media/1490/south-east-wales-valleys-local-transport-plan.pdf

¹⁸⁴ https://www.cardiff.gov.uk/ENG/resident/Parking-roads-and-travel/transport-policies-plans/transport-white-paper/Pages/default.aspx

¹⁸⁵ South East Wales Transport Commission: Final Recommendations. https://gov.wales/south-east-wales-transport-commission-final-recommendations

The 2015 Joint Transport Plan for the South West noted relatively poor access to employment, training, healthcare and education, a lack of integration between transport modes, unattractive and infrequent public transport options, lack of interchange between modes and lack of innovation in transport development.¹⁸⁶

3.1.25 National and international connectivity

Road and rail transport networks in Wales also cannot be seen in isolation from those in England, particularly in the border areas.

Wales borders on three English regions – north west England (which includes the Greater Manchester conurbation and Liverpool City Region), the west midlands, and south west England (which includes Bristol) – and there are important rail links to England through Bristol, Chester and Crewe. Welsh aviation strategy also needs to be considered in the light of airports in England – not just Heathrow and Gatwick, but Birmingham, Bristol and Manchester.

As well as significant road and rail traffic between England and Wales, there are important international movements between Ireland, and the UK and the rest of Europe – much of which travels through Wales and the ports of Holyhead and Milford Haven. Prior to the pandemic, around a million international visitors came to Wales each year spending around £500m in the Welsh economy. The largest proportion came from Ireland, followed by the USA, France, and Germany.

3.1.26 Transport sectors and industries

Employment in transport sectors also play a key role in the economy of Wales. The transport sectors in Wales include all of the activities associated with transporting people and goods. The commercial sectors include freight and logistics as well as the organisations that deliver bus and rail services in Wales.

The ports and shipping sector covers the construction, operation and maintenance of ports, harbours and terminals and marinas to support the commercial and ancillary activities associated with shipping cargo and transporting passengers by sea, as well as work associated with offshore energy industries. We share with the UK government an ambition to see port, harbour and marina development as an engine for economic development, supporting sustainable transport with more efficient links. Welsh ports have the potential to expand and diversify their operation, playing a greater role in inter-modal freight networks. Investment can boost the economy both through greater use of the facilities, and indirectly through the opportunities that maritime transport infrastructure provides for other sectors

¹⁸⁶ https://www.carmarthenshire.gov.wales/media/4797/joint-transport-plan-300115.pdf

¹⁸⁷ https://gov.wales/wales-tourism-performance-2019

¹⁸⁸ https://gov.wales/sites/default/files/publications/2020-01/welcome-to-wales-priorities-for-the-visitor-economy-2020-to-2025-summary.pdf

https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/adhocs/11876visitstowalesbyoverseasreside nts2009to2019

such as the visitor economy. The Marine Plan also identifies ports with the potential for further development and notes the importance of ports master plans.¹⁸⁹

Wales also has an important aerospace industry making, maintaining, repairing and overhauling aircraft, as well as the research, development and innovation elements of aviation and end-of-life solutions. The aerospace sector in Wales includes six of the world's top ten aerospace and defence companies and Wales is home to the wing plant of Airbus.

Whilst we do not have current data on the Welsh active travel sector, a 2018 analysis indicated that the cycling industry sector contributed directly £0.7bn to the UK economy and cycle tourism a further £0.5bn, which gives an indication of the likely significance of the sector in Wales.¹⁹⁰

3.1.27 The visitor economy

Prior to COVID-19, data from 2017 showed that tourism in Wales employed 9% of the population in 11,500 businesses across the country. ¹⁹¹ In 2018, tourism was one of Wales' fastest growing sectors, with nearly 1m international visitors and around 10m UK overnight stays in Wales. Visitors to Wales spent around £6.3bn. ¹⁹² Visit Wales works closely with Transport for Wales and with other transport providers in order to help ensure that visitors to Wales are able to make best use of local transport and also to help tour operators and travel organisations develop and market itineraries. ¹⁹³

The majority of visitors to Wales travel by car, and one of the aims of Welcome to Wales: Priorities for the Visitor Economy 2020-2025 is to encourage visitors to make greater use of public transport.¹⁹⁴ The plan also gives priority to the Wales Way – a family of three national routes that lead visitors through west Wales, along the north coast and through the mountainous interior. The routes highlight unmissable attractions and uniquely Welsh experiences, including natural wonders, landmarks, towns, museums and galleries.¹⁹⁵

COVID-19 has had a huge and long-lasting impact on the visitor economy – with a significant reduction in air travel, and restrictions on domestic travel. COVID-19 hit as the industry was just coming into the peak period for 2020, and it is likely that the impact on the industry will continue for some time. There also remain challenges as many visitor attractions in Wales are not easily accessible by public transport or through walking and cycling.

¹⁸⁹ https://www.gov.uk/government/publications/national-policy-statement-for-ports

¹⁹⁰https://www.transportforqualityoflife.com/u/files/The%20Value%20of%20the%20Cycling%20Sector%20to%20the%20Britis h%20Economy.pdf

¹⁹¹ https://gov.wales/priority-sector-statistics-2018

¹⁹² Evidence base report. https://businesswales.gov.wales/tourism/welcome-wales-priorities-visitor-economy-2020-2025

¹⁹³ https://www.visitwales.com/transport-travel

¹⁹⁴ https://gov.wales/welcome-wales-priorities-visitor-economy-2020-2025

¹⁹⁵ https://businesswales.gov.wales/tourism/wales-way

Areas of Outstanding Natural Beauty and National Parks play a vital role in the visitor economy and also in preserving important places and landscapes. Our statement on Priorities for areas of Outstanding Natural Beauty and National Parks provides clarity of purpose and restates our commitments to retain these designations in the context of the UK's exit from the EU. Demand responsive transport plays a critical part in enabling people to enjoy outdoor recreation and the natural environment.¹⁹⁶

3.1.28 The costs of congestion

Transport costs have a role in the viability of different economic sectors in Wales; as well as the direct costs of fuel and transportation, there can also be associated costs in relation to delays and congestion.

If we do nothing, over the next 20 years the proportion of traffic in congested conditions in Wales is projected to increase by around a third.¹⁹⁷ Despite growth in rail use, private vehicles are set to remain the dominant mode of transport in Wales in the short to medium term – especially in light of continuing advice under COVID-19 to avoid using public transport. New vehicle registrations have been falling since 2016 although the total number of licensed vehicles continues to rise. Registration of new vans and motorcycles increased in 2018.¹⁹⁸

Congestion and pollution can impact more heavily on poorer groups, who are more likely to live near busy routes. Various policy reforms are underway to address this including encouraging local authorities to use civil enforcement powers to tackle pavement parking (see above) and measures to give priority to public transport.

3.1.29 Transport and the Welsh language, culture and heritage

Wales has a distinct culture and language – which in the broadest sense are the things that make life worth living. Culture and heritage embrace everything from the arts, to built and natural heritage as well as the Welsh language. Transport has a role through enabling access to cultural events and activities, supporting the Wales tourism industry and supporting the Welsh language. Wales has a rich transport heritage which includes both modern working heritage railways and also a legacy of historic transport infrastructure.

3.1.30 The historic environment

The historic environment is all around us in the form of the physical remains of the past. Those layers of history can be read in our landscapes and townscapes, and in the countless historic buildings and ancient monuments that are all around us. Whilst the great castles and monuments of Wales are well known, there is also a rich legacy of cultural heritage from prehistoric times to the twentieth century.

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¹⁹⁶ https://gov.wales/written-statement-valued-and-resilient-welsh-governments-priorities-areas-outstanding-natural

¹⁹⁷ Road Traffic Forecasts 2018, Department for Transport, 2018

¹⁹⁸ Road Traffic: 2018, Welsh Government, 2019

Our Priorities for the Historic Environment of Wales describe the need to conserve and protect our historic environment including marine heritage, in new development making best use of the existing inventories such as the historic environment records (HERS) and the Royal Commission on Ancient and Historic Monuments of Wales (RCAHMW). We need the skills to care for it, as well as opportunities for public enjoyment and interpretation. Finally, the priorities cover the role of the historic environment in economic well-being including its contribution to the visitor economy and the viability of towns.¹⁹⁹

Wales has around 500 conservation areas, 30,000 listed buildings, 4,200 scheduled ancient monuments as well as historic landscapes, registered parks and gardens and battlefields.²⁰⁰ The Achwilio web site records c.200,000 assets and c.100,000 events.²⁰¹ Wales has three World Heritage Sites – Pontcysyllte, Blaenavon and the Castles of Edward the First in north Wales, whilst the slate industry landscapes of north Wales are currently on the UK Tentative list.

The Historic Environment (Wales) Act 2016 sets out specific provisions for Wales, complementing the Ancient Monuments and Archaeological Areas Act 1979 and the Town and Country Planning Act (Listed buildings) 1990. Technical Advice Note 24: the Historic Environment explains the categories of historic environment assets and how they need to be taken into account in the development plan process and in dealing with planning applications.²⁰²

Transport operations potentially impact on the historic environment through construction of new transport infrastructure and through the potential for upgrades and improvements to affect transport heritage – including work to improve accessibility, station upgrades or road improvements. Early consultation is the key to ensuring that transport interventions do not damage heritage sites.

3.1.31 Transport heritage

Many of today's footpaths, roads and other transport infrastructure follow routes that were first established centuries – if not millennia – ago. However much of the historic infrastructure relates to the growth of industries from the seventeenth century onwards, but particularly from the industrial revolution when Wales became a centre of first the copper and iron industries, and later a major exporter of coal and steel – as well as other materials such as slate.

As well as the navigable canals and steam railways the transport heritage of Wales includes historic transport infrastructure such as docks, ports and harbours, bridges, rail infrastructure, tollhouses and other road infrastructure, and historic vehicles.

¹⁹⁹ https://gov.wales/historic-environment-priorities

²⁰⁰ https://cadw.gov.wales/sites/default/files/2019-05/20170531

Managing%20Conservation%20Areas%20in%20Wales%2028424%20EN.pdf; https://cadw.gov.wales/sites/default/files/2019-

^{05/}Understanding%20Listing%20in%20Wales.pdf; https://cadw.gov.wales/sites/default/files/2019-

^{07/}Understanding % 20 Scheduling % 20 in % 20 Wales % 20 Cadw % 20 Eng % 20 WEB % 20 % 281 % 29.pdf

²⁰¹ https://archwilio.org.uk/arch/archwilio_pages/english/what_is.html

²⁰² https://gov.wales/sites/default/files/publications/2018-09/tan24-historic-environment.pdf

The modern rail network in Wales also includes a wealth of historic structures – from the remains of Brunel's original Great Western Railway to the world famous Barmouth Bridge.

Many of those structures are protected; as well as the Pontcysyllte Aqueduct World Heritage Site there are many other listed, scheduled or locally important transport assets in Wales including bridges, railway stations, port structures and roadside structures such as tollhouses. Responsibility for maintaining and managing this infrastructure normally rests with the owner. Such assets also need to be taken into account when maintaining or managing or upgrading existing infrastructure.

This heritage is of value in many ways – as a source of evidence about the past, and as a resource for visitors. Even where transport infrastructure is no longer navigable, many routes have been re-used as footpaths or cycleways. Disused transport infrastructure is also often an important reservoir of biodiversity.

3.1.32 The Welsh language

Wales is becoming more diverse as a population although the sense of Welsh identity is broadly stable. Around 85% of those born in Wales self-identify as Welsh.

The 2011 Census reported that 19% of people aged three and over in Wales could speak Welsh, which was lower than in the 2001 Census. There are challenges in ensuring young people retain the language post-compulsory education. More recent data suggest there has been an increase in those who speak Welsh but not fluently, and Welsh speakers of the future are far more likely to have learnt Welsh at school than at home.²⁰³

The Welsh Language (Wales) Measure 2011 gives the Welsh language official status in Wales, and also gives legal effect to the Welsh Language Standards. These are imposed on public bodies and address service delivery, policy making, operations, promotions and record keeping. The standards explain how public bodies should use and treat the Welsh language in different scenarios. The Code of Practice on complying with the Welsh language standards includes guidance on assessing the effect of policy on the Welsh language, noting the importance of assessing the impact of policy on both opportunities to use Welsh and treating the Welsh language no less favourably than English.²⁰⁴

Cymraeg 2050 is our plan to grow the number of Welsh speakers in Wales, with a focus on favourable conditions that enable the Welsh language to thrive.²⁰⁵

Transport plays a critical role in Welsh language education. Most local authorities provide free transport for over 16s. However, there are inconsistencies across local

²⁰³ Future Trends Report 2017, Welsh Government, 2019 update https://gov.wales/sites/default/files/statistics-and-research/2018-12/170505-future-trends-report-2017-en.pdf

²⁰⁴ Code of Practice for the Welsh Language Standards (No. 1)

http://www.comisiynyddygymraeg.cymru/English/ReportsGuides/Publications/Pages/PublicationDetails.aspx?Publicatio
nld=30cb5e6c-65c9-4e10-beb7-fad0a913e7c6

²⁰⁵ Future Trends Report 2017, Welsh Government, 2019 update https://gov.wales/sites/default/files/statistics-and-research/2018-12/170505-future-trends-report-2017-en.pdf

authorities which mean that in some areas, students may not be able to access Welsh-medium education because of restrictions on travel concessions.

There are also issues around the use of Welsh language on public transport services in Wales, such as buses with audio/visual announcements at each bus stop, particularly in urban areas where stops are frequent. Whilst there are no current Welsh language standards regulations for the bus sector, the Welsh Language Commissioner would like to reinforce the requirements on public service transport providers in the future.

Finally, many rural areas have high density of Welsh-speakers but fewer jobs and social opportunities can mean that there is an outmigration of people. Again transport can contribute to the viability of these areas, and thus the Welsh language.

4 Innovation and future trends in transport

Wales has a long history of transport innovation including the early canal network, Telford's A5, Brunel's vision for a transport corridor extending from London to Ireland, the great ports of Wales and the great bridges over the River Severn and to Anglesey. Today transport providers need to innovate to deal with very different challenges including a changing industrial economic base, the issue of climate change, new digital opportunities, Brexit, post COVID-19 working patterns and the growth of online retailing.

This section looks at innovations in transport in Wales, building on the wide-ranging UK-wide Future of Mobility Report.²⁰⁶

4.1.1 User experiences and behaviour change

The way we think about transport is key to innovation, and a major emerging focus is the need to understand how people use transport.

For example, there is a move away from a focus on individual modes towards a more integrated approach. Although transport providers deliver individual transport modes, most users are thinking more about the journey. Transport providers have been taking multi-modal approaches by developing ticketing that works across more than one type of transport. Beyond that is the concept of pan-modal transport that starts from the ideas of the user perspective.

There is also a growing interest in understanding how people make transport choices. Understanding this is vital if we are going to reduce the carbon impact of transport by encouraging more people to walk, cycle or use public transport rather than making private car journeys. For example, despite knowing that cars are bad for the environment most of us continue to use our cars, even where we have other options. Research in behavioural and social sciences provides insight into how and why people make decisions; where there are choices, people will often take the path of least resistance, which means it is crucial to make sustainable transport options easier and more natural.²⁰⁷ Our choices are based on social norms and influenced by the messages and attitudes of people around us.²⁰⁸ If it is normal to use cars and cars carry prestige, then it is harder to persuade people not to use cars.

Communications research explores why attempts to promote shifts towards more sustainable living have been largely unsuccessful to date, suggesting that many

²⁰⁶ UK Government, *The Future of Mobility*. https://www.gov.uk/government/publications/future-of-mobility 207 Thaler, R. & Sunstein, C. (2009) Nudge: Improving Decisions about Health, Wealth and Happiness. Yale University

²⁰⁸ lbid; Reynolds, K.J. (2019) 'Social norms and how they impact behaviour', *Nature Human Behaviour* 3, 14–15, https://doi.org/10.1038/s41562-018-0498-x

have turned away from the scale, complexity, remoteness and intangibility of the problem, as well as finding the changes needed to be at odds with their lifestyles and identities – suggesting that localised, interactive engagement may be key.²⁰⁹

Most people don't make a conscious choice about a transport mode – instead how we travel often depends on factors like affordability, accessibility and availability. Young people may be priced out of driving or rail, others may not own cars, whilst many people live in areas where there are few public transport options. COVID-19 also means that many people are no longer comfortable on, or confident about, using public transport. The pandemic also means that many people may change their travel behaviours permanently.

In order to overcome these barriers, it has been suggested that solutions need to be relevant at a local, day-to-day level. And where communities come together to promote change, it often flows more naturally than when people are told by government to change. There is also evidence that people think and act differently if they see themselves as citizens rather than users. Social practice theory argues that people cannot be persuaded to adopt different practices but can be recruited within their social contexts – underscoring the need for interactive engagement that links sustainable transport with local needs, lifestyles and identities.²¹⁰

In Wales the Active Travel Board has been working with Public Health Wales to encourage active travel to school in Wales. The starting point has been to understand people's concerns, such as safety, the sense that it is too hard or too far, or the unwillingness of children to walk or cycle. They have found that parents are key influencers in terms of active travel. They are also looking at evidence for the success of behaviour change initiatives such as school streets closures. What this means for transport policy is that we need to understand the factors that shape the decisions that people make, including the barriers that stop people from using sustainable transport choices. It is also important to make it easier for people to adopt more sustainable choices and to explore local approaches to transport including community engagement initiatives around rail and bus (see Third Sector above).

²⁰⁹ This is with reference to a range of academic sources: ACoRP, Communicating Community Rail, 2019, https://communityrail.org.uk/wp-content/uploads/2018/02/CommunicatingCommunityRail-researchreport-2017.pdf
210 See Strengers, Y. and Maller, C. (eds.) Social practices, intervention and sustainability: beyond behaviour change; Shove, E. (2010) 'Beyond the ABC: climate change policy and theories of social change'. Environment and Planning, 42, pp.1,273-1,285.

4.1.2 Data and digital connectivity

Looking towards 2040, better data and connectivity will provide the basis for new transport modes and support a better, more integrated transport system.²¹¹

Data is changing many aspects of our lives; the volume, variety and pace of data use will expand towards 2040, in parallel with the greater use of digital platforms and techniques that gather and analyse data. Although much of this growth is driven by big commercial organisations, data as a form of infrastructure and public good also has the potential to produce wider social benefits.²¹² Many of the emerging technologies in transport also depend upon good access to data.

Digital infrastructure has a huge potential as an alternative to transport, by enabling people to work locally or at home and thus reducing commuting. It can also assist with access to things like education, culture and health services.²¹³

4.1.3 Data

In relation to transport, one of the biggest trends is around the move away from paper tickets, and the growth in apps that enable transport users to plan, find and book transport services, using either service specific apps such as Cardiff Bus, transport apps such as City Mapper or the transport functions in Google Maps or other online providers. Much of this is underpinned by open data initiatives; the UK Future of Mobility Report notes that Transport for London, for example, currently makes data available which is used by over 600 data apps in the UK, and around 42% of Londoners use transport apps.

As well as helping users, those apps and the data that underpin them also have a huge potential to drive better integration between, for example, rail and bus services. However not everyone has access to smart phones, and there are issues with mobile phone signal in some areas. Data is also essential to organisations who plan, integrate and provide services.

Data also has potential to improve the maintenance and management of transport infrastructure. It can be used to monitor the condition and use of infrastructure – and to identify and plan for repairs – or indeed to prevent major issues from occurring. It is possible to crate digital copies of infrastructure (digital twin) that can then be used to stimulate, test and respond to issues. These virtual systems can be used to plan, predict and manage assets.

Real time data can help co-ordination between public transport services through improved reliable connectivity, especially if the bus is late and needs to connect with another service. It also provides to the minute timetable updates to passengers to better plan journeys or around delays.

211 UK Future of Mobility Report p88

212 UK Future of Mobility Report p 93

213 https://gov.wales/sites/default/files/publications/2019-07/ict-strategy-for-the-public-sector-in-wales.pdf

Data also facilitates automation; the combination of machine learning, real time data and artificial intelligence is enabling the automation of issues from traffic and network management through to self-driving cars and even new modes of transport.

In freight and logistics there are potential opportunities for the sharing of facilities such as warehouses and delivery mechanisms between different freight operators – however these depend on a willingness to share data and to work together.

Data also presents challenges. Transport-related data can create opportunities for transport-related crime unless cybersecurity is built into the design of all new transport applications. There may be public concerns around security and the risk of illegal data transfers from the Internet of Things and cloud computing. And whilst connected vehicles and transport management systems offer passengers and companies better information, they also create vulnerabilities and issues in areas of poor mobile signal. With growing automation, it is vital to keep operating systems up to date.

Access to data relies on infrastructure including telecommunications and broadband. These issues are not devolved to Wales although Welsh Government has been involved in provision. 'Digital Wales' sets out Wales's ambitions to be digital first, including ambitions for everyone in Wales to have digital access, for skills, better coverage, technology research and development and cultural creativity.²¹⁴ It is supported by a strategy for the public sector, designed to support a distinctively Welsh ICT strategy, architecture and design process that builds trust in public ICT services in Wales.

4.1.4 Digital connectivity and transport

Transport routes and infrastructure also create opportunities for digital connectivity. For example, in Wales we are investing in end-to-end fibre optic cables along the M4 and the trunk road network which is helping us to deal with real time air and traffic monitoring, and supports signage on the roads.

Transport for Wales is also putting fibre optic cables alongside the Cardiff Valleys lines in order to both help with the maintenance of infrastructure and the operations of services such as signalling but it will also have the capacity to help with local connectivity for homes and businesses. Network Rail are also planning to upgrade fibre capacity along rail lines for the same reasons.

4.1.5 Low emissions vehicles

Another major transport innovation is the use of technology to reduce emissions and improve air quality – initially in terms of more efficient diesel engines – and more recently in terms of electrification. This move is reinforced by policy initiatives such as the Low Carbon Delivery Plan which sets targets for a zero emission bus, taxi and private hire vehicle fleet by 2028 and for the increasing uptake of electric vehicles and reducing emissions from road and rail transport through vehicle and fuel efficiency measures.²¹⁵

Electric vehicles already offer significant environmental advantages in terms of CO₂ and NO₂ emissions compared to petrol and diesel alternatives. Wider policies to decarbonise the energy sector and industry will further support these advantages. It is worth noting that other non-exhaust emissions from tyre and brake wear do continue.

4.1.6 Cleaner diesel engines - bus fleet

Historically, most buses have used diesel engines but over the last thirty years many have moved towards cleaner diesel engines. European Emissions standards have become progressively tighter since the 1990s, culminating in the introduction of Euro 6 emissions standards in December 2013. In 2015 there were around 2,150 buses in operation in Wales, of which around 35% operated to standards 5 and 6, with more larger operators complying than smaller ones. In terms of vehicle age, around a third of the vehicles of larger operators were new, whereas many smaller operators bus fleets were much older. Larger operators account for the majority of bus services and have the most modern fleets with many investing significantly in new technology. Intermediate and smaller operators focused largely on contract and private hire often have older vehicles. Many of them operate educational transport systems.²¹⁶

4.1.7 Electrification – private cars

Electrically powered vehicles emit fewer emissions at the point of use and are therefore seen as an important alternative to diesel and petrol vehicles. The UK Government announced in November 2020 that the sale of new petrol and diesel cars and vans would end in 2030 and the sale of hybrid cars and vans would end in 2035. A consultation on the phase-out of new diesel heavy goods vehicles (HGVs) is also planned.

UK-wide sales of battery electric and plug-in hybrid vehicles increased to 2.4% of all new vehicles sales in the year to October 2020, in part driven by falling prices, and improvements in battery technology, and in part through regulation and lower taxes. Charging infrastructure is also becoming more widely available. As it becomes easier to charge vehicles, sales are expected to increase.²¹⁷

²¹⁵ https://gov.wales/sites/default/files/publications/2019-06/low-carbon-delivery-plan_1.pdf

²¹⁶ https://gov.wales/sites/default/files/publications/2017-08/transforming-bus-investment-in-wales-the-welsh-bus-fleet.pdf 217 UK Future of Mobility Report, p 88

At the end of 2019 Ultra-Low Emission Vehicles (ULEVs) accounted for 0.3% of licensed vehicles in Wales, which represents one of the lowest of the UK regions.²¹⁸ By October 2020 there were 675 public charging points for electric vehicles in Wales, of which 93 are rapid chargers.²¹⁹

There are also initiatives by local authorities and community transport providers to increase electric vehicle use in Wales. Open Newtown has been exploring the potential for shared electric vehicles whilst TrydanNi is an initiative to grow the number of electric vehicle charging points.²²⁰

The move towards zero emissions road vehicles will require both soft and hard measures including regulatory changes, a strong consumer base, favourable market conditions, a reliable supply of vehicles, refuelling and recharging infrastructure and an energy system that is ready to deliver this. We have commissioned work from Transport for Wales to inform an Electric Vehicle Charging Strategy in early 2021 which will complement Llwybr Newydd. The aim is to give people more confidence to switch to electric vehicles through more charging points that facilitate long-distance travel.

In relation to charging infrastructure, the major challenges in Wales are the availability of charging points, particularly in rural areas. Other barriers include the need for charging infrastructure on new developments which may have been designed with lower parking allocations.

4.1.8 Electrification – public transport

Following work by Gwynedd Council to strengthen the quality and attractiveness of key bus services in the area we have funded six electric buses and charging points for a new TrawsCymru T22 between Caernarfon – Porthmadog – Blaenau Ffestiniog and a T19 TrawsCymru Connect bus service between Blaenau Ffestiniog and Llandudno.

Although around 38% of the UK rail network is electrified, in Wales only the Great Western Mainline to Cardiff has been electrified.²²¹ TfW has outlined proposals to partly electrify infrastructure on the Core Valley lines and operate electric/battery tram-train vehicles, and Network Rail has made the case for the electrification of other routes, including main lines in Wales and the Marches line.²²² There is also

²¹⁸ Vehicle Licensing Statistics: Annual 2018, Department for Transport, 2019 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882196/vehicle-licensing-statistics-2019.pdf

²¹⁹ Electric vehicle charging device statistics: October 2020, Department for Transport, 2020 https://www.gov.uk/government/statistics/electric-vehicle-charging-device-statistics-october-2020

²²⁰ https://businessnewswales.com/getting-electric-vehicles-motoring-in-north-powys-with-open-newtown/; https://chargeplacewales.org/

²²¹ Office of Rail and Road, *Rail Infrastructure and Assets 2019-20* https://dataportal.orr.gov.uk/media/1842/rail-infrastructure-assets-2019-20.pdf

²²² UK Future of Mobility Report p102; https://www.networkrail.co.uk/wp-content/uploads/2020/09/Traction-Decarbonisation-Network-Strategy-Interim-Programme-Business-Case.pdf

work to explore alternative forms of rail traction, including hybrid and hydrogen technology.

4.1.9 **E-bikes**

There are a range of smaller electric vehicles including e-bikes. E-bikes require pedalling to activate the motor, which cuts out at a speed of 25kph. These are treated like non-electric cycles in the legislative and regulatory framework. Other types of electric bikes that have a throttle are treated as motorcycles. It has been argued that if e-bikes were widely available, and Wales had a similar cycling network to the Netherlands that – even allowing for the very different terrain of Wales up to a third of work journeys could be by bike – making a huge difference to carbon emissions.²²³

Whilst the use of e-bikes is not yet widespread in Wales, their popularity is rapidly increasing. At present, around half of e-bike journeys replace journeys that would normally be made by car. E-bikes are used for longer journeys than normal bikes and can make cycling a viable option even for those who are less physically fit, or people whose journeys are longer or steeper than they would routinely feel comfortable cycling. Electric bikes tend to be more expensive than other bikes, although they are becoming cheaper as the cost of battery technology falls and sales grow, leading to economies of scale.

As with all cycling, safe and separate cycling infrastructure is one of fundamental requirements for growing e-bike use. Other policy measures that can facilitate the greater uptake of e-bikes include grant or loan schemes that increase affordability and public charging facilities.

4.1.10 Micromobility

There has been recent growth in micromobility – personal light electric vehicles (PLEVs). These are most commonly e-scooters – electrically powered battery-assisted foot scooters. These take up less road space, are less polluting and require less infrastructure than cars or buses. These have the benefits of active travel – agility, relative low cost, low space requirements and no emissions (at point of use) – but do not offer the same health benefits. They are growing in popularity in other countries, but currently cannot be used legally on public highways and paths in the UK unless part of regulated trials. There are also concerns around their use in relation to safety for the users and pedestrians.²²⁴

In May 2020 the UK Government announced its intention to bring forward e-scooter trials to June 2020 to help encourage more people off public transport and onto greener alternatives.²²⁵ Originally the trials of e-scooters were scheduled to take place in four Future Transport Zones in England, but on 9th May the offer of trials

²²³ Transport for Quality of Life, A Wales transport Policy Fit for the Climate Emergency, July 2020 https://takeclimateaction.uk/sites/files/climate/documents/2020-

^{08/}A%20Wales%20Transport%20Policy%20fit%20for%20the%20Climate%20Emergency.pdf

²²⁴ https://www.polisnetwork.eu/wp-content/uploads/2019/11/Polis-Paper-Macromanaging-MicroMobility.pdf

²²⁵ https://www.gov.uk/government/news/2-billion-package-to-create-new-era-for-cycling-and-walking

was extended across Great Britain (not Northern Ireland). Participation could be considered in Wales if the Welsh Government was content and that there was interest from one or more local authorities in Wales.

The UK Government started a trial programme in June 2020, limited to rental scooters. If subsequently their use becomes legal, they will offer additional options to attract people from private car to other modes. Their widespread use in other countries, in particular as part of public hire schemes, shows that there is likely latent demand for micromobility.

4.1.11 Electrification - freight and cargo

Although total freight mileage is less than passenger transport, freight can have a large impact on congestion, air quality, CO₂ emissions and road traffic incidents. So one of the biggest policy challenges is around reducing vehicle emissions. The huge growth in light commercial vehicles (LCVs) has meant that they have overtaken heavy goods vehicles (HGV) is the major source of NO₂ and CO₂ from freight.

The logistics sector has been looking at a range of measures to reduce emissions, including improvements in aerodynamics, tyres, the use of lightweight materials, dynamic route planning and eco training for drivers.²²⁶ The Centre for Sustainable Road Freight suggests that emissions from road freight could reduce by 61-171% depending on adoption of alternative fuels.

Local authorities in Wales have been working with the sector to reduce emissions and tackle air quality. For example, Newport City Council adopted the ECO stars system – a voluntary fleet recognition scheme that encourages and supports operators of HGVs, vans, buses and coaches to run their fleets more efficiently and to improve local air quality.²²⁷

The sector is also exploring electrification. Whilst it is possible to electrify HGVs, for vehicles over 15 tonnes, the distances travelled, and loads carried mean that there are major challenges around battery technology and life. There is far greater potential to electrify LCVs – and smaller vehicles. And current forecasts predict that this will grow – although that growth will depend on efficient charging mechanisms.

For other areas of freight, the potential for electrification is mixed. Further electrification of rail freight is limited by the fact that few factories, warehouses or industrial premises have electrified rail connections, so electric freight trains would either need to switch to diesel haulage or run on diesel for the whole journey. Electrifying merchant shipping is also difficult over long distances – although both could benefit from new fuels.

There is also huge potential for electric cargo bikes – particularly for the last mile of delivery of consumer goods. Whilst the greatest potential may be in cities, in Wales there are pioneering examples of the use of cargo bikes in rural areas.

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²²⁶ UK Future of Mobility report p101.

²²⁷ http://www.newport.gov.uk/en/Transport-Streets/Pollution-and-noise-control/ECO-Stars.aspx

For the freight and logistics sector, there are relatively few incentives to reduce emissions and the infrastructure and investment costs are relatively high – especially for the many smaller firms in the sector. Therefore, the biggest changes have been driven by policy initiatives such as Clean Air Zones in cities such as London, alongside EU standards on engines.

4.1.12 Hydrogen fuels

Hydrogen fuels can help UK meet its wider net zero targets for carbon. In relation to transport, hydrogen vehicles use electricity produced through a chemical reaction between hydrogen and oxygen. Either the electricity powers the car or charges a battery which powers the vehicle. The hydrogen fuel is stored in a high-pressure tank. These are also sometimes known as fuel cell electric vehicles. Hydrogen has been used in fuel cell buses for many years and is beginning to be used in other vehicles.

Most hydrogen fuel is produced from fossil fuels such as methane or coal gas, but it can also be produced through the electrolysis of water (which itself uses energy). Blue hydrogen is generated using non-renewable energy sources whereas green hydrogen both meets low carbon thresholds and is generated using renewable sources.

Hydrogen fuels can make a significant contribution to decarbonisation but there are issues around supply and demand, production, storage, distribution and end use. The UK Government has committed to publishing a UK Hydrogen Strategy and we are working on a hydrogen pathway for Wales.

There are opportunities for Wales as a potential centre for hydrogen production (including hydrogen from biomethane) but also challenges, especially around the cost of switching to hydrogen for both consumers and businesses. A current study is looking at how to position Wales in relation to the potential for using hydrogen in heating buildings and in industry, and around replacing the use of natural gas with hydrogen and biomethane in energy generation. Given the role of the port of Milford Haven in energy imports there is also potential for increasing the role of hydrogen here and also in north Wales.

There are a small number of hydrogen buses in use in the UK. The challenge for hydrogen buses is refuelling arrangements which are easier in urban areas with large popular bus services on fixed routes, in comparison to smaller buses in rural areas. Refuelling needs to be done at depots where hydrogen can be stored safely.

Hydrogen trains are being tested in the UK and TfW are involved in trials of battery electric/diesel hybrid trains. Rural routes in south west and north Wales that are not suited to electrification could have potential for hydrogen. However, in the short term we are locked into arrangements for new diesel trains which may limit options. In future there are may be opportunities to adapt rolling stock for hydrogen technology, although as operators do not currently pay fuel duty there are few financial savings in hydrogen-powered rolling stock. Hydrogen-powered rolling stock

has a shorter range than current diesel units, and so there would also be challenges in Wales in terms of longer rural journeys.

Although there is the potential for transport applications to drive up demand for hydrogen, including using hydrogen in vans and trucks, buses and in rail, this will depend on costs. It may be that the role of hydrogen in future net-zero emissions will depend on whether things can be done more simply, cheaply and effectively by the direct use of clean electricity and batteries.

4.1.13 Automation

A range of self-driving autonomous vehicles are being developed across the world, including cars, trains and metros and potentially other vehicles. Self-driving road vehicles are potentially safer and can reduce congestion because they use machine learning and real time information, so can allow less space between road vehicles, enabling greater capacity and less congestion without increasing the physical size of the network. Driver costs can account for almost a third of total costs, so autonomous vehicles could make public transport more viable in certain areas, where they are currently not commercially viable.

However, autonomous vehicles could have negative impacts. There could be an increase in road congestion, because of the additional journeys that self-driving cars make when they return to their collection points after dropping people off. This could be amplified if costs of using autonomous vehicles are lower than current travel costs, leading to more journeys. A significant increase in the use of autonomous taxis and buses could also have major economic impacts through job losses.

The condition of the road network is critical to the success of connected and autonomous vehicles. There are huge public concerns around safety, and it is likely that enhanced standards of carriageway delineation, lane markings, traffic signs and signals are likely to be required to ensure that driverless cars can navigate the road environment safely. The growth in autonomous vehicles will also depend on better data. Current autonomous vehicles can work over the 3G and 4G networks, but fifth generation (5G) networks will enable faster data transfer and greatly assist new vehicles.

There are also a range of autonomous technologies in use to deliver freight by drones through to self-driving HGVs. The logistics sector has also been using automation in warehouses, ports and for air cargo handling.

4.1.14 Mobility as a service (MaaS)

Another emerging transport trend is Mobility as a Service (MaaS). MaaS is a shift away from personally owned modes of transport and towards mobility solutions that are consumed as a service. Mobility applications such as Uber provide journey planning through a unified gateway that creates and manages the trip, which users can pay for with a single account. Users can pay per trip or a monthly fee for a limited distance. In future, MaaS could be an alternative to car ownership, and thus contribute to reduced road congestion, better air quality and more efficient networks. It has the added potential to provide local transport authorities with better data on transport management. For users it also reduces some of the uncertainty around changing between different transport modes, however one of the prerequisites for MaaS will be the better sharing of data.

A 2017 UK Transport Select Committee inquiry set out to understand the evidence for MaaS and to explore ways of overcoming barriers to implementation including concerns about digital and social exclusion. The report notes the potential of MaaS to streamline transport and deliver benefits to individuals and society, while warning of the risks that MaaS could pose if not properly governed and regulated. Overall, the report is positive about the potential benefits that MaaS has to transform the transport landscape into a more efficient and integrated experience but notes that these successes can only be delivered with proactive leadership, careful regulation, and practical and financial support from the UK Government.²²⁸

4.1.15 The sharing economy

Shared bike schemes in urban areas are one of the growth areas in active travel. In Cardiff the Next Bike scheme is now delivering 1,250 cycles at 160 locations across the city. The city council note that each bike does around 4 trips a day – the highest usage outside London. Our Active Travel Fund has supported public bike-share schemes including the first electric public bike-share scheme in Wales.

There are also a growing number of community car schemes in Wales including electric vehicle car share schemes such as the community car schemes Gwynedd which offer shared cars for job interviews, hospital appointments or shopping, or for when buses trains or taxis are not available or cost too much.

4.1.16 Demand responsive transport

Demand responsive transport (DRT) pick people up and drop them off in response to needs, and not on a fixed (or semi-fixed) timetable. DRT has benefits for users, especially in rural areas where demand is far lower for conventional services, but there are challenges around providing cost-effective services.

As an emergency response to the impact of COVID-19, Transport for Wales have rolled out a new demand responsive pilot in urban areas called fflecsi. The scheme runs essential journeys that include destinations such as hospitals and supermarkets. People book via an app or by phone, and the service provider then guarantees that the passenger will have a seat and enough space to respect social distancing guidelines. Recognising the needs of key workers, the service is free for care workers, 60 and over and Disabled Concessionary Card holders and at standard rates for others. Current services are operating in Pembrokeshire, Newport, Cardiff North, Rhondda, Prestatyn and Denbigh. Services are delivered by local authorities, commercial companies or by community transport organisations such as Pembrokeshire Voluntary Transport.²²⁹

To date there has been consistent growth in the service, with great feedback from drivers and passengers. In Newport where scheduled bus services are back in operation, fflecsi continues to outperform buses without affecting scheduled services. However, this is unlikely to be a long-term solution. Vehicles booked dynamically (by app or telephone booking via a call centre) are unlikely to be full, and do not integrate with other modes of transport.

In the longer term, we have been working with Transport for Wales on piloting Integrated Responsive Transport (IRT) systems involving 'semi-scheduled' services that integrate rail and scheduled bus routes in rural and urban areas.²³⁰ These replace subsidised bus services with services that operate where and when needed. Currently rural bus services are provided by community transport operators, local authorities, local companies and national operators; the aim is to coordinate these different providers to provide a cost-effective flexible national service for all of Wales.

4.1.17 Innovation in road technology

There are also a range of innovations in road technology including new forms of materials and better maintenance practice. There is greater use of more energy efficient LED lighting, and dimming and switching off initiatives on the SRN. That being said, there is a balance to be struck between providing well-lit infrastructure that is needed for safety purposes and the reduction of energy. New technology such as LED can assist but as more routes are developed this will be a growing issue.

²²⁹ https://www.fflecsi.wales/all-locations/

²³⁰ https://gov.wales/sites/default/files/publications/2019-09/integrated-responsive-transport-programme-presentation-by-transport-for-wales.pdf

Annex 1: Experiencing transport

During the drafting of this report, we spoke to a wide range of people about their experiences of transport. This section sets out some of the things they told us. This complements section 3.3 on Transport and Equality (above) which explains our responsibilities and legal duties in relation to equality, as well as our policies and some of the research in this field.

How did we consult people?

Between March and September 2020, as we were drafting Llwybr Newydd, we organised over 50 online meetings. At those meetings we presented our emerging ideas about what the strategy should cover and asked people to tell us about their experiences of transport, and feedback on our thoughts about what should be in the strategy. Over time we updated and adapted the presentation to take on board the things people were telling us. Each meeting proved a valuable source of information and food for thought which contributed directly into the draft strategy produced.

We also drew on other sources of information about people's experiences of transport. Before we began work on Llwybr Newydd (and before the COVID-19 pandemic) we held three face-to-face workshops to gauge peoples' perceptions of transport. We were also able to draw on consultation feedback gathered as part of previous transport consultations including consultations on the new National Plan, the 2018 White Paper on public transport, on 2018 Discounted Young Persons Bus fare and the Mandatory Concessionary fares, and as part of the South East Wales Transport Commission work. We also had feedback on the 2015 National Transport Finance Plan, the Wales 20 mph Task Force Group and the group making recommendations on pavement parking in October 2020, as well as consultations on individual road improvement schemes.

Who did we consult?

We met the five Welsh Commissioners – the Traffic Commissioner, the Welsh Language Commissioner, the Older People's Commissioner, the Children's Commissioner, the Future Generations Commissioner and the National Infrastructure Commission. We also spoke with the Equality & Human Rights Commission, the Disability Equality Forum, the Wales Race Forum, the Refugee and Asylum Seeker Task Force, the Strengthening and Advancing Equality and Human Rights steering group, the Ministerial Advisory Forum on Ageing, Gypsy & Road Traveller representatives, and the Transport for Wales Accessibility Panel. We also spoke to people with protected characteristics, as part of those meetings or in separate sessions. We also met with a wide range of other stakeholders in local authorities, in the transport sectors and in the third sector.

How have we used this information?

During the drafting process we continually revised the text of the plan to take into account feedback. In particular, we tried to reflect on transport as a social issue,

and the importance of understanding people's experiences of transport. Some of the specific changes that were influenced by feedback include:

- including accessibility in the overall vision
- putting an ambition around people and communities, that takes on board the social model of disability and equality at the front of the document
- weaving issues around accessibility throughout the document including adding it to the priorities, thinking about appropriate measures
- developing mini plans that all address equality and are much more specific about what we will do
- putting specific actions in place in the delivery section of the report
- taking note of people's experiences.

We also hope that this feedback will continue to inform future more specific pieces of work on transport as we take Llwybr Newydd forward.

Common travel experiences

Although each group raised different issues there were a range of common concerns. These included:

- quality of life many of the people we spoke to were completely dependent on public transport in order to work, to access education, to get to vital health services and of course for leisure. For them a good public transport system is absolutely essential to their quality of life. Members from the Disability Equality Forum stated that the lack of public transport services on Sundays in rural areas meant there are no travel options for disabled people
- confidence despite this, a lot of people we spoke to were simply not confident
 about taking public transport. There were specific concerns such as reliability,
 physical safety and accessibility but for many people, too many poor
 experiences meant that they had simply lost faith in the ability of public transport
 to serve their needs
- the impact of COVID-19 people felt that COVID-19 had made things worse –
 particularly people with disabilities who were more vulnerable to disease and so
 more at risk from other passengers. They felt less confident than ever about
 taking public transport
- journey planning one of the factors that contributed to people losing confidence was the ability to plan journeys. From disabled people who found it really difficult to book assistance, to young people who were just fed up with buses not coming on time or at all this was an issue that all groups experienced. Suggestions from Children in Wales representatives included a tracking app, to provide live updates of bus locations
- physical accessibility vs human accessibility people felt that although some forms of access were improving (e.g. the use of ramps, wheelchair spaces), there was still a very simplistic model of access that did not recognise all of the other accessibility issues – including things like hearing and sight loss

- attitudes and staff behaviour each of the groups we spoke to raised concerns about the attitudes of drivers and the lack of consistency around how rules and regulations were implemented, particularly voluntary codes of practice. It was mentioned in several forums that public transport personnel are given training to help assist disabled people
- passenger behaviour many of the people we spoke to said that what made them feel unsafe was often other passengers. This was worse as a result of COVID-19 and lack of consistency about mask wearing. Both young and old people, and disabled people, reported the same concerns about the behaviour of other passengers
- inclusive design people still felt that issues such as accessibility and safety
 were an add-on, rather than something that was integrated into the design of
 new facilities. As a result, the focus of a lot of policy was on mitigation and not
 on identifying a problem before it arose. Many forum members expressed their
 willingness to liaise with designers to incorporate accessibility features into the
 project
- conflicts between modal shift and accessibility particularly around active
 travel. Many groups told us that they welcomed the new emphasis on active
 travel, but that the rush to create new cycle paths and other facilities meant that
 there were often conflicts between that and the accessibility of buses and trains
- the gap between aspiration and reality above all, people felt that there was still a huge gap between our ambitions on equality in Wales and what was happening on the ground. Despite legislation, regulations and examples of good practice, people still felt that in reality, their day-to-day experience of public transport fell well short of those wider ambitions
- affordability this was a key issue for those groups who were not eligible for concessionary travel passes. It was an issue for rail, and for groups facing socio-economic deprivation, particularly in rural areas. From those we spoke to, long journey times and lack of predictability were often (but not always) a bigger barrier than price. Cost was an issue for young people attending further education, as well as the lack of clarity between child and adult age brackets, whereby children aged 14 or under were being charged an adult fare. We also heard about the costs that arise from having different bus companies with different tickets.

Finally, the Transport for Wales Accessibility Panel were frustrated that they represented a wide range of different abilities, but that often designers and others did not ask for their help or recognise their expertise and the importance of their first-hand experience – something that other groups also mentioned.

Specific transport issues

As well as shared issues, some groups talked about specific issues – although many of these concerns were shared with other groups. Direct quotes from attendees are set out below in italics.

Disabled people

Disabled people spoke to us about all of the issues identified above – from journey planning and accessibility, to services and staff attitudes.

You can have an accessible transport service but the staff are often the problem.

They also described more specific examples of challenges such as:

- lack of consistency in the way services and facilities are delivered (e.g. on train accessible toilets, signage, information announcements)
- varying regional and local interpretation of standards and guidelines, particularly across different bus providers
- people with visual impairments can't confidently find facilities
- people with autism or mental health issues can find navigating public transport unsettling when changes to route are needed.

It's 25 years since the Disability Discrimination Act and 21 years since the directions. Still access to information and tickets for people with visual impairments is not possible. We can't be spontaneous but have to book things in advance. And still at least 77 stations and possibly more are more are not accessible. Often you can get onto the train from your car but coming back you are on the wrong side.

There was a strong view that COVID-19 was making things more difficult. Some people felt more vulnerable to COVID-19 but said that they no longer wanted to use public transport. They did not feel that people were keeping a safe distance or rules were being enforced.

We heard from learning disabled people about their experiences, which resonated with written feedback provided by Mencap Cymru. Public transport is essential for learning disabled people to be active and equal citizens and in order to access services. However, cancelled or delayed public transport or changes to bus routes, can potentially place people at risk of social isolation and exclusion. They have particular concerns around the attitudes of drivers. Other concerns include the condition of many buses, the need for accessible travel information, limited wheelchair accessible taxis (or space on buses), the lack of support for bus drivers in combating anti-social behaviour and the need for specific school buses. Many people report bullying by school children especially in large groups and would feel more comfortable with bespoke buses.

In 2019, as part of our work on independent living, disabled people told us more about how transport affected their lives. Not being able to access transport impacted on their ability to take up employment, access leisure and public services to meet friends, and thus contributed directly to loneliness and social isolation. Disabled children and young people relied on parents and were not independent, and people reported discrimination and a lack of good information.

There were particular concerns about the difficult of two wheelchair users travelling together.

People must think that disabled people don't have friends, I can't sit together on a train with another disabled friend because there is only one disabled space per carriage.

Disabled and older people also told the Equality and Human Rights Commission Transport Project (see 3.3.3 above) that that transport did not support inclusion and independent living, and some felt it was easier not to travel at all. As well as also talking about many of the issues identified above they felt that transport planners had not taken their feedback on board, that it was often seen as a 'box ticking' exercise, and as a result, transport services continued to be inaccessible.

There were also concerns about active travel, and the hierarchy that put active travel at the top of planning decisions.

Active travel is becoming a term of exclusion.

Disabled people did not feel that investing in walking and cycling benefitted them.

Older people

We spoke to older people and representatives of older people's organisations including the Welsh Senedd of Older People, Age Cyrmu, the Cymru Older Peoples Alliance and representatives from universities and the NHS with a special interest in this area.

They told us about how people change their behaviour at different stages of life – including retirement and this includes travel behaviour. Older people may no longer be able to drive for example. They told us that older people are the highest users of public transport and that many of the issues faced by older people were shared with other groups, including young people. It was also important to be aware that many older people are caring for children and others.

If you consult older people, transport is always at the top of the list.

Air quality is a big issue for older people.

If it wasn't for community transport, they would be sitting in the house all of the time.

Digital inclusion was an issue – we were told that around half of people over 70 are not online.

Big issues are bus shelters, timetables and confidence.

Young people

We had two workshops with young people. The groups we spoke to were very vocal about bus services – but said less about rail. For many access to a car was essential, and those who did not have a driver or a car in the family faced particular problems. They felt the lack of bus services was a barrier to employment.

As a young person I have to use public transport to get everywhere, I went for a job interview and was told that if I was relying on the bus or train to get me to work then I couldn't have the job because I probably couldn't be on time.

Kids are relying on their parents to drive them. Not everyone has someone who drives.

Public transport in my area is rubbish at being on time – especially in the mornings.

I have been late for college many times.

The biggest concerns for young people were around the frequency and connectivity of bus and rail services and the reliability of bus services, particularly in rural areas. They were scathing about the quality of information and their inability to plan journeys. They made a strong plea for good real-time information about buses, that would tell them not just about services but whether the bus was actually going to come, and also whether or not it was full.

You stand at the bus stop, and it's just pot luck.

I understand that there can be traffic issues and buses can break down but if the bus isn't coming I just want to know about it. It's the sitting and waiting for a bus that is supposed to come and doesn't that causes problems, means I am late to college or my Saturday job, if I knew I could make another arrangement, it's so frustrating, how hard can it be to provide live information these days?

Now I have the app I can see you are not running efficiently.

You need a system that tells you if the bus is not going to come.

I have the app. I check it every day. I have 4 buses I can take and they all did not show up.

They noted that the information about services on Facebook and that at the bus stop were often different.

Our bus drivers won't wait for you if you are running for the bus.

Many benefited from and used MyTravelPass scheme which provides discounted travel for young people up to the age of 21, although not all were aware of the scheme and many were critical of the marketing and publicity. However young people would like to be able to use the passes on trains and were anxious for integrated ticketing.

They reported concerns around not feeling safe on public transport, and around cleanliness.

I used to be afraid of young people on buses, but now it is adult drinkers and things. Bus drivers used to do something about it but now they don't.

Most of us have had harassment. We have to rely on other people to do something, not the bus driver.

I have bad experience of drunk people – absolutely horrible and violent.

You can't drink on the street. It should be illegal to drink on public transport up to a particular time. Problem is not drinking itself but harassment.

You are more likely to see security during the day than at night.

I used to come back from work at 12 pm. They would shut the waiting room and there was nowhere to go so you had to wait on the platform. It was really scary.

Some felt there was a lack of trust from staff.

People have shouted at me but they told me to leave.

I have been refused on a bus even if others are misbehaving at the bus stop.

Both groups spontaneously said that they or their friends were charged adult fares as bus drivers did not believe them about their age.

I had a 16-18 pass but it is now 16-21. When they changed over lots of people were not allowed on the bus.

I was 6'4 at when I was 14. Despite having a concessionary card I was told to bring photo ID a lot.

The young people we spoke to were very worried about the affordability of public transport. They felt that it was unfair that they were charged as an adult from 14. They also noted a lack of consistency across Wales in terms of the support provided by local authorities. The lack of free transport associated with Further Education, sixteen plus education and apprenticeships colleges was a significant barrier to education for some people we spoke to. Between that and normal services there were also concerns about roads

I had a moped but the roads were too dangerous – the pot holes didn't get filled in.

Near where I live they dug up a good road and put a new road there instead of fixing the bad road.

Young people were more vocal about transport and climate changes than other groups. They were very vocal about the need for electrification but also critical of smaller, more energy efficient buses that they felt were leaving people behind.

Young wheelchair users often felt they were competing with others such as parents with pushchairs for space on trains and buses. Most services could not

accommodate two wheelchairs or mobility scooters making it difficult to travel with friends.

When asked what single improvement to transport they would ask for, answers include

- · make it cheaper
- better for the environment
- more innovative
- on time and consistently reliable
- easier for wheelchair users
- more buses
- just having public transport
- more frequent and consistent.

Black, Asian and Minority Ethnic groups

As noted in section 3.3, transport is a key platform for hate crime and racism. In discussions, we heard that people who felt they looked different (for example those wearing the niqab) felt very unsafe travelling after dark.

We also heard about good practice, such as projects encouraging ethnic minority groups to visit National Parks designed to grow activity levels and walking. We also heard about racism in relation to taxi drivers and how the lack of resources for marshalling taxi ranks meant that some taxi-users were not choosing ethnic minority drivers.

As well as many of the issues already identified one of the biggest concerns was around attitudes – particularly in relation to buses and taxis. Many people reported examples of buses and taxis not picking them up, and there were real concerns about feeling safe on public transport, especially at night.

Gypsies, Roma and Travellers

Representatives of Gipsy, Roma and Traveller groups living on public sites were particularly concerned about transport issues. Some sites are served by poor quality, unadopted roads which ambulances or taxis for example, won't use. Some lacked access to public transport or people struggled to walk to local bus stops due to poor quality pavement and lack of safe walking routes.

Gypsy and Traveller sites are always put in the worst places, far away from anything, often in areas with no bus service. I have to travel to get shopping and I have been thrown out of a taxi with my food shopping, on a main road with no footpath once the taxi driver knew I was going to the Traveller site – he wouldn't take me.

They felt that access to transport and safety were not given sufficient priority in the location of gipsy and traveller sites, which were sometimes close to bypasses or busy roads or near railway tracks. Air quality and safety were particular concerns, as well as the impact of increased lorry traffic. They felt that the ability to access

such sites through walking should be included in wider active travel strategies and greater priority in decisions about new sites.

People seeking sanctuary

We heard from people seeking sanctuary (including refugees and asylum seekers).

Transport is the number one barrier for asylum seekers.

With restrictions on working, many were anxious to volunteer or develop their skills but found that access to transport and the cost of transport were significant barriers.

My closest shop is 30 minutes away. I prefer to walk each day because this allows me to feed my kids rather than pay for tickets. My kids want to go to football or the pool, but the cost of transport means they can't.

The cost of travelling to Cardiff is like travelling abroad.

It costs £90 a month for my children to go to school. I can't compromise their education, but there are days when we have no food.

There were particular issues about paying for transport as without the ability to have a bank account, many cannot get access to cards and so rely on paying cash, but following the pandemic, many places do not accept cash. They were dependent upon public transport as they are also barred from having driving licenses and not eligible for concessionary bus passes. The allowance for transport was insufficient to attend education, although some had received help from organisations for which they were volunteering.

We heard about initiatives such as bus companies matching funding from supporters to provide bus passes.