

CAST Policy Roundtables Background Paper: Transport and Mobility

To tackle the climate crisis, the United Kingdom has committed to reduce its emissions to net zero by 2050. The Welsh Government has separately set legal targets for net zero by 2050, via a 63% cut in emissions by 2030 and 89% by 2040 compared to 1990 levels.

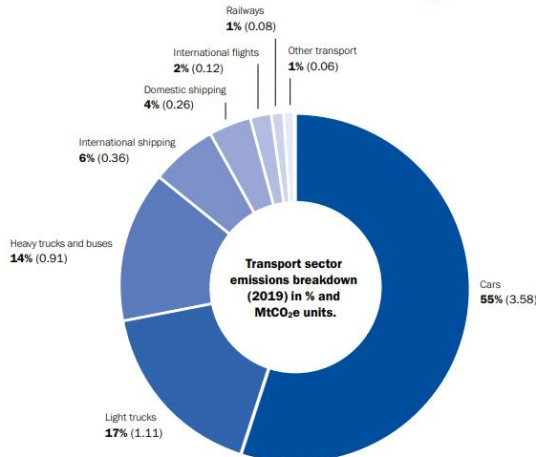
The Committee on Climate Change – the formal body that advises both the UK and Welsh governments – has stated that Wales has made good progress in reducing emissions, but nevertheless is not on track to meet its targets. Plaid Cymru’s Delyth Jewell has previously said that “in the two years since the Welsh Government declared a climate emergency, empty words have been followed by little action”.

A recent report from the Committee on Climate Change warns that current policy across the UK is inadequate to cut emissions quickly enough. It is likely that there will need to be significant changes within industry, to infrastructure, as well as further changes across society and to people’s lifestyles. For Wales, this must happen while also meeting the country’s well-being goals, linked to the Well-being of Future Generations Act.

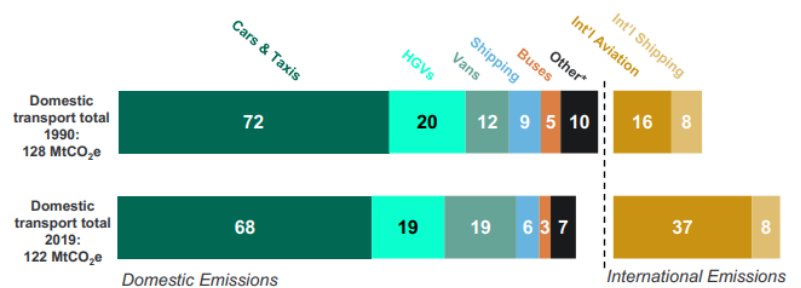
The Welsh Government’s ‘Net Zero Wales’ (NZW) document details policies and strategic targets for reducing carbon emissions, and specifies the plans for how changes in the transport sector will contribute to this. Cars account for 9% of *all* carbon emissions in Wales, with light trucks, heavy trucks, and buses accounting for a further 5%.

Transport and Mobility: targets and ambitions

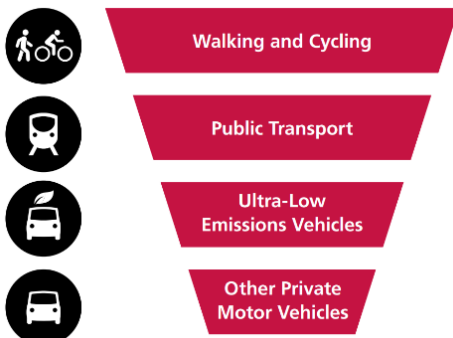
Figure 9: Graph – Transport sector emissions in 2019 (MtCO₂e)⁵²



The figures above from NZW (2022) [left] and DfT (2021) [below] illustrate the breakdown of the transport sector in the Wales and the UK, detailing the vehicle types responsible for Welsh transport emissions in 2019 and the increases across the UK transport between 1990 and 2019. Cars and taxis used for private travel are the most significant contributors overall. It is also noteworthy that there has been a substantial growth in international emissions (mainly aviation) over this period.



*Comprises, in 2019: Rail, 1.8 MtCO₂e; Domestic Aviation, 1.5 MtCO₂e; Military vehicles, 2.3 MtCO₂e; Motorcycles, mopeds and other road transport, 1.2 MtCO₂e.



The Welsh Government aims to reduce emissions from passenger transport by 22% by 2025, and 98% by 2050. The areas of focus for Welsh government policy to improve transport and mobility at the present time are: modal shift and demand reduction, technological options such as low emissions vehicles and electric vehicles, and finally fuel efficiency. This contrasts somewhat from their previous categories in the low carbon delivery plan of 2019, which included active travel as a key aim, as well as not focussing on explicitly on fuel efficiency. Welsh Government does nevertheless emphasise a transport hierarchy [figure to the left] which includes active travel as most preferable.

Modal shift and demand reduction

One of the ways the Welsh Government hopes to reduce emissions in the transport sector is by “*working to achieve a modal shift from car dependency to sustainable forms of transport.*”. **There is an ambition for 39% of journeys to be made by sustainable travel modes by 2030** (i.e., public transport, walking, cycling). One way it is hoped this can be achieved is by increasing the quality of infrastructure around active travel, such as by ensuring pleasant and safe cycling and walking routes. The Welsh Government’s Net Zero Wales – Carbon Budget 2 states that provisions should consider both rural and urban contexts, with some proposals for longer distance commuter highways, encouragement for workplace active travel plans, and 20mph speed limits for cars. The government also hopes to increase the amount of travel via public transport, such as bus and rail. Options to achieve this include investing in infrastructure to modernise railway networks and railway stations, increasing frequency of services, and enabling better connectivity with rail, bus, road, and active travel.

Whilst overall emissions from transport in Wales have decreased over the years, **car use itself has been steadily rising, indeed increased by 45% between 1993 and 2019**, raising concerns about the feasibility of diverting the course away from private car use.

For this reason, other organisations have proposed a greater degree of ambition. For example, the Centre for Alternative Technology, based in west Wales, argues there is a need for cross-cutting transformations across society to reduce emissions from transportation:



“To reach zero carbon in the future, fossil fuel energy used for driving and flying needs to be eliminated. This is not a simple technical matter of switching to different fuels or energy sources but requires changes in attitudes, planning and infrastructure, economic incentives and political and institutional changes” (Zero Carbon Britain: Making it Happen, 2017).

Active travel

A key method of achieving demand reduction and modal shift at the scale required proposed by the Welsh Government is by prioritising active travel at the top of the transport hierarchy. As part of this, there is a pledge to spend £60million on the development of a safe network for walking and cycling. There is an intention to increase the accessibility and affordability of cycling to socially and economically disadvantaged communities which may not currently have access to these services. Further considerations are given to ways of encouraging citizens to utilise this infrastructure, such as all-ages cycle training, and further expansion of bike-share schemes.



Research from CCC has shown that **many car journeys could be shifted to walking and cycling (including e-bikes) by 2030, rising to 9-14% by 2050**. In 2019, nearly a quarter of journeys in the UK were between under two miles (Department for Transport, 2021). A recent study based in Cardiff concluded that walking or cycling could realistically displace around 41% of car journeys, with half of car trips being less than three miles (Neves & Brand, 2018), which would also have significant impact on pollution levels in

urban areas. Data from another city in the UK, Bath, found that 60-70% of journeys began and ended within the city limits, yet residents often downplayed the significance of these short journeys (Thorman, 2020). This illustrates that a substantial amount of driving over short distances is likely to be in areas where public transport and/or active travel are potential alternatives.

Electric vehicles

The UK Government hopes to “*increase the proportion of vehicles which are electric and ultra-low emission*” and “*plan for and invest in electric vehicle (EV) charging infrastructure.*” This policy from the UK involves the use of incentives that promote the affordability of EVs. In addition, the Welsh Government plans to roll out EV charging infrastructure. The goal is that **47% of new car sales in Wales must be ultra-low emission vehicles by 2025.**

There is a strong emphasis across policy for carbon emissions reduction to be tied to a transition towards more EVs. However, some have argued that this alone will not be enough to adequately reduce emissions. There are significant costs associated with the ‘embedded carbon’ within the manufacturing process of EVs, as well as concerns over the disposal of batteries in the future. Some argue that switching to electric cars further entrenches private vehicles as the dominant form of transport and so impedes more transformative and low-carbon visions of transport and mobility. Additionally, because EVs require electricity, there is a need to secure renewable generation of energy for this to achieve desired effects.

A 2035 outright ban on the sale of fossil-fuel vehicles was brought forward by the UK government from 2040. However, the Committee on Climate Change has warned that this date needs to be brought further forward still, to no later than 2032. While this regulation will make it impossible to buy new non-electric cars, there will remain many cars in circulation and use, with a significant delay in EVs becoming the most common private vehicle.



The Policies

We would also like to present a summary of proposals offered in the Net Zero Wales document, by way of illustrating some of the options available, or what might be missing in a journey towards achieving these targets.

- Enable people to work at or near to home
 - Remote working plan
 - Piloting ‘Local Work hubs’
- Increase trip mode share of active travel from a current estimated proportion of 27% to 33% by 2030 and at least 35% by 2040
 - New developments to have active travel infrastructure
 - Longer distance commuter highways
 - Encourage workplace travel plans – showers etc
 - 20mph limits in built up areas
 - Support e-bikes
- Increase trip mode share of public transport from a current estimated proportion of 5% to 7% by 2030 and 13% by 2040
 - Address restrictions of de-regulation
 - Core valley lines
 - Bus-to-bus hubs in urban and rural areas for second journey
- Reduce emissions from freight and logistics
 - Assess impact of next-day delivery
 - Multi-modal hubs for cargo
 - Last mile e-delivery
- Land use planning
 - live and access services via sustainable transport
 - Moratorium on the development of most new roads.
- A pause and review of existing road proposals and a new methodology for assessing the appropriateness of future road schemes
- Accelerate the uptake of zero emission cars and vans
 - UK wide ban on sales from 2030
 - Decarbonise public sector fleet
 - Electric car clubs
 - Review loan schemes
- Plan for and invest in EV Charging infrastructure
 - Strategic points every 20 miles
 - 7 to 11 charging points per EV
- Zero emission bus fleets
- All taxis and private hire vehicles to be zero emission by 2028
- Decarbonise the rail network
- Zero emission HGVs
- Reduce emissions from aviation
 - Set to increase by 73% by 2050
 - ‘Jet zero’ technology
 - Not devolved to Wales
- Reduce emissions from shipping

Previous Roundtable research findings

We discussed these issues with a group of stakeholders mostly working in small businesses and community projects, in the summer of 2022. We summarise our findings below. There were a wide range of practices and policies discussed as key elements of an approach to improving the transport system in Wales – according to the participants in that initial roundtable. They range from the infrastructural to those concerning education and mindset.

- An emphasis was placed on **cheaper services**, as well as **practical integration** of transport networks across a variety of modes and services.
- Further aspects of the discussions stressed the need for policy to consider **mobility as a right**. As part of this, participants argued that access to green and **sustainable transport options should be integrated into wider policy pathways**, and not separated off as a separate issue – offering an expanded definition of ‘integration’.
- Observations were offered on the restricted role that local authorities can play in bringing about change in communities, where bureaucratic processes and a **lack of devolved power** can limit flexibility and responsive action to a variety of shifting local needs.
- National policy was seen to focus disproportionately on large scale infrastructure projects which are in turn driven by the aim to create jobs and economic growth, at the cost of **smaller scale and cheaper alternatives** that could be better suited to Welsh geographic demography.
- In particular, autonomy and **ownership of local decision making** could be improved by the application of participatory grant making schemes and **volunteering and community networks**, active travel plans in schools, as well as partially subsidizing social enterprise projects that promote shared goals.

Things to consider

We would like you to think about a few questions during the session(s) you will be attending. If you have the time to think about this in advance of the roundtable, please do so – and we will also discuss as a group.

- Do the targets and ideas outlined above strike **the right level of ambition**? Are there cases where you think they need to be more – or less – ambitious?
- What are the **most appropriate policies and pathways** for realising emissions reduction in transportation?
- **Demand reduction is acknowledged as crucial to meeting targets** - how can this be achieved?
- How can emissions from transport be addressed while meeting **Wales’s well-being goals**?
- What approaches can be taken to enable **attitude and lifestyle changes** among the wider public?
- How would you respond to the **findings in our previous roundtables**?
- **What is missing** from the outline described above? Are there underexplored areas within them, or ideas that you think need also to be considered? **Would you like to challenge** any of the claims that have been made?