

## A Series of Reports & Roundtable Discussions – Summary & Reflections, December 2022

---

This paper summarizes the key insights and conclusions from the *Pathways to Net Zero* series of reports and roundtable discussions that were published and held in 2022. The central proposition of *Pathways to Net Zero* is that we need a whole systems transition to net zero which will require a paradigm shift in terms of how we think about decarbonising transport. Findings are grouped under the following key themes:

1. Our whole economy needs to change.....	2
2. Reducing energy demand.....	5
3. Pricing properly for carbon.....	8
4. Ensuring a fair and just transition.....	6
5. Empowering local leaders.....	7

### Publications

- [Pathways to Net Zero: Building a framework for systemic change, March 2022](#)
- [Pathways to Net Zero: Report on a Roundtable Discussions Series, June 2022](#)
- [Pathways to Net Zero: A Greener Vision, September 2022](#)
- [Pathways to Net Zero: Report on Roundtable Discussion – Hasta La Vista, Carbon! November 2022](#)
- [Pathways to Net Zero: Report on Roundtable Discussion – The Future We Want November 2022](#)

### Events

- [Pathways to Net Zero – Roundtable Discussion Series 1, March 2022](#)
- [Pathways to Net Zero – Roundtable Discussion Series 2, October 2022](#)

My sincerest thanks to the **Foundation for Integrated Transport** for providing grant funding to support the *Pathways to Net Zero* programme, to **Trueform** for kindly sponsoring the roundtable discussions, and to the **Greener Transport Council** for their wise counsel and support. Finally, I want to give a huge thank you to everyone who attended the roundtable series for generously contributing their time and providing a wealth of invaluable insights.

A handwritten signature in black ink, appearing to read 'Claire Hough'.

**Founder & CEO, Greener Vision**  
12<sup>th</sup> December 2022



## 1 Our whole economy needs to change

---

**We need a whole-systems approach to decarbonisation that reflects the shift to digital connectivity, and the integration of transport with land-use planning, energy, green finance and the trip generating sectors of the economy. We need reform of appraisal and a net zero test for public policy.**

### 1.1 A whole-systems approach

The integration of sustainable transport with planning and digital technology is a fundamental building block for achieving net zero. A ‘triple access system’ combines transport with good land use planning and a very mature telecommunications system<sup>1</sup>. The challenge in delivering this is how to overcome the silos of government nationally and locally.

We need more vision-based planning: “decide and provide” or “vision and validate”, not “predict and provide”. Movement should be about providing access not maximising speed. We are still building business parks and dormitories, locking in car dependency. We need greater intensification of the suburbs, creating places with businesses, retail, and jobs.

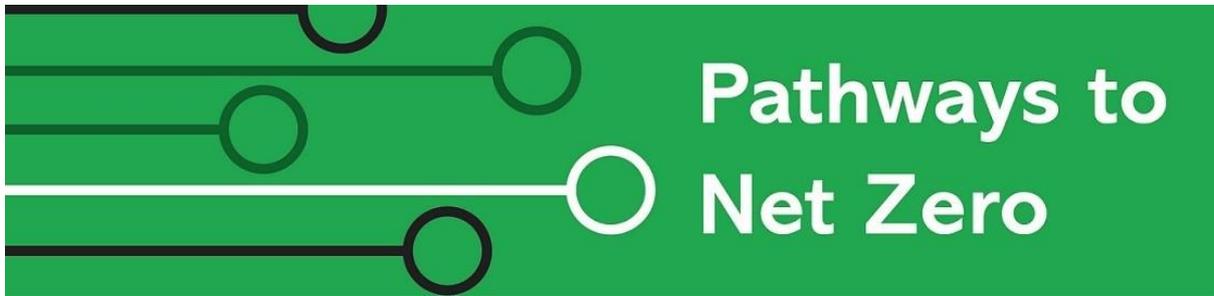
Decarbonisation will require a decisive shift away from a car-based culture. Density is key to supporting public transport, and shorter distances are needed to make walking and cycling feasible. We need ensure that the provision of sustainable transport is factored in at the start of the planning process. We should adopt the “15 minute” city philosophy, modal share targets for public transport and move from ‘a parking minimum’ to ‘a parking maximum’.

The pandemic accelerated the shift to digital connectivity, but we are not yet seeing a reduction in carbon emissions. “Free delivery” doesn’t exist. Setting the marginal next day delivery cost at zero has perverse outcomes. Smaller consignments are being bought online meaning higher carbon intensity of freight. Pricing correctly would make this more efficient. We need a level playing field for taxation of the high street retailers and online retailers.

We should maximise opportunities to better integrate energy and transport. For example, electric vehicles (EVs) can act as an electricity load balancing device, feeding energy back into the grid at peak times and absorbing the supply when it’s there. We should embrace the value of demand side response: bringing forward benefits of EVs to both energy system and consumers by allowing consumers to use electricity at a lower cost, allowing for energy to be more evenly distributed on the grid and reducing the need for carbon intensive generation.

### 1.2 Maximising the role of business

Since transport is a derived demand, fundamental changes in travel behaviour depend on business model decisions taken in other sectors<sup>2</sup>. This means that there is huge scope to work with other sectors and employers to reduce demand by digitalization such as by NHS remote appointments, more homeworking, or to encourage greater walking and cycling.



There is considerable scope to reduce emissions by working with employers. Commuting is responsible for 5% of all carbon emissions in the UK. It is the single biggest source of carbon emissions producing 18 billion kilos (850 kilos of carbon per commuter). The work of Liftshare demonstrates that where alternatives to car travel exist it is possible to change travel habits by providing better information of those options<sup>3</sup>.

Commuting can account for up to 30% of an employers' total emissions. A big incentive for employers to take part in Liftshare and such schemes is that Scope 3 accounting includes travel emissions of employees. Scope 3 accounting is not yet mandatory but increasingly large employers recognize the need to take action. More sustainable disclosure requirements on businesses, across the whole supply chain, would accelerate this trend.

Private sector finance solutions have an important role in spreading the upfront cost or through linking financial products to future energy savings and in sending demand signals to scale up supply of energy efficient measures. PACE in the US has supported \$10 billion investment into energy efficiency measures by ensuring that the repayment obligation transfers to the property. Salary sacrifice schemes are an affordable way for company employees to access an EV.

The role of business and the private sector will be critical for funding the net zero transition. However, lack of policy certainty deters investment. The average time duration for a policy measure of energy efficiency in the UK is less than 18 months. There is a misalignment of investment cycles for business and policy timeframes. Renewables have been successful because they have had policy certainty, and investors have not been faced with a cliff edge.

There is a need for consistency over time and across jurisdictions (central, devolved, local) for business and investor confidence. There is money to invest but investors are not quite prepared to take the risk. We need to consider how we can use public money more smartly to de-risk that private sector investment. Could government grants be used as guarantees rather than loans to crowd in that investment?

### **1.3 Putting net zero at the heart of policy**

Lack of joined-up policy making can undermine cross-government ambitions. Government needs to tackle incoherent policy making if it is to meet its net zero target<sup>4</sup>. A 'net zero test for public policy' would help ensure alignment, that government sticks to the least-cost path towards net zero and receives public support for this, and that net zero is considered early enough in the policy making process before final commitments are made.

We must prioritise carbon reduction and move beyond narrow frameworks of cost-benefit analysis. Decarbonisation will be driven by a low carbon road, rail, air integrated system. This will require central planning and system regulation<sup>5</sup>. Total packages of policies must be appraised, not single schemes. We are still disproportionately focused on time savings. In WebTAG, speed is the key criteria, but people don't "save time" they just travel further.



There is a need for better evidence and greater transparency. We need to challenge the assumption that road schemes *per se* deliver growth: we need proof. We must hold DfT to account on appraisal, particularly with public capital funds in short supply and in a world where we have radically higher fuel prices and a cost-of-living crisis. We need to consider the implications of these trends for demand futures.

The pandemic demonstrated the unpreparedness of the global economy to systemic shocks. One legacy must be an increased focus on risk and resilience in appraisal and investment decisions. We must put an end to economic short-termism and give greater emphasis to co-benefits such as improving health and well-being, enhancing bio-diversity, creating jobs, reducing poverty, increasing resilience and the ability to adapt to impacts of climate change.

Pure time discounting involves valuing welfare of people in the future lower than welfare of people today. However, climate change will radically alter the circumstances of future generations, making them much poorer “that would surely radically alter the discount factor between those parts of the future and now” (Stern)<sup>6</sup>

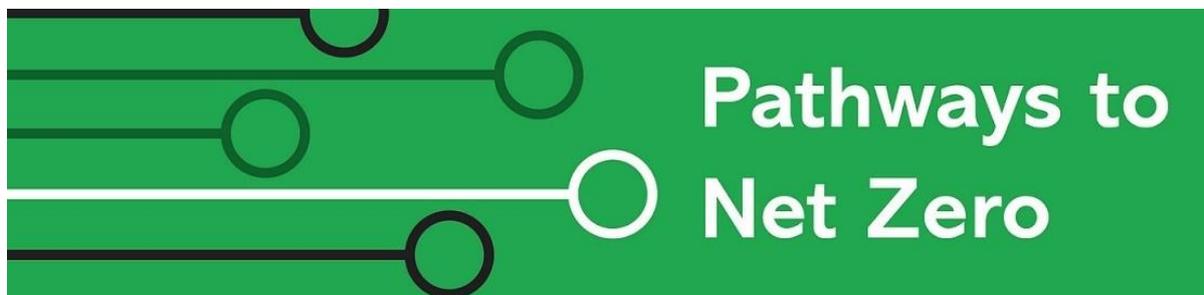
#### 1.4 Measuring prosperity

There is a growing body of opinion that strictly linear GDP growth can no longer be the priority. Prioritizing growth according to its contribution to the Sustainable Development Goals would be a better place to start. These 17 interconnected goals aspire to sustainably increase global prosperity, equality and well-being.<sup>7</sup>

The idea of increasing wealth and increasing happiness has been closely linked to material consumption. This has implications not only for carbon but also resources. However, if we are aspiring to better greener futures for all we need to refocus on what prosperity involves. Prosperity should be defined as our ability to flourish within the ecological limits of a finite planet. Our technologies, our economy and our social aspirations are currently all badly aligned with any meaningful expression of prosperity (Jackson)<sup>8</sup>.

We need to focus on what a sustainable *aspirational* lifestyle could look like and how we can sell this to the public. Young people are less focused on using material consumption as a measure of success. Life is becoming more digital and potentially that has fewer resource implications. Amongst transport professionals there is a strong consensus about what sustainability means i.e. more active travel and public transport and less car use.

We need to change our approach to how we access services or consider ownership. “Do we need to own everything we travel by?” For example, if we swap out all existing petrol and diesel cars with EVs we will still face many of the same problems (although cleaner air) and will still require huge investment in energy infrastructure and upgrades with heavy burden on the public purse. Equally a lot of the manufacturing processes will be heavily carbonised.



## 2 Reducing energy demand

---

**Energy efficiency and energy demand reduction will be critical. We must reduce embedded carbon and avoid rebound effects. Technical solutions alone will be insufficient. Traffic reduction is also needed. The switch to EVs is not a panacea. It's time for an honest conversation about road taxation.**

### 2.1 Energy efficiency and energy demand reduction

The International Energy Agency describes demand reduction as “the first fuel”. Energy demand reduction supports the key goals of energy policy: security, affordability and sustainability<sup>9</sup>. The IPCC calculate that reducing energy demand across all sectors could deliver a 40-70 per cent reduction in greenhouse gas emissions by 2050<sup>10</sup>.

Energy demand reduction and energy efficiency are critical for achieving net zero. We should build homes that are affordable to live in with the highest energy efficiency standards, and with good sustainable transport options, removing the need for reliance on the car. Solar panels, rainwater recycling, more sustainable buildings and better energy efficiency should be mandatory. We must also make our existing homes, towns and cities fit for purpose. We need to retrofit existing communities.

Saving energy should be at the heart of net zero policy. After initial resistance government is belatedly set to launch a public information campaign on saving energy<sup>11</sup>. Modelling shows basic energy saving measures could cut average annual energy bills by £420.

### 2.2 Reduce embedded carbon and “sweat the assets”

The Transport Decarbonisation Plan focuses purely on the decarbonisation of the operation of transport. There is a big gap around addressing the embedded carbon in transport infrastructure. The risk is that we will build an unnecessarily large and redundant system that delivers zero emissions miles but ignores the biggest GHG impact in the next decade. There is a tension between the desire for universally convenient travel and necessary and efficient net zero travel. For example, how many EV charge points do we really need?

We need to “sweat the assets”. We should minimise what we build and increase car and charge point sharing. We need to move to a more circular economy, making better use of all the resources we have. This includes consideration of the impacts of hybrid working. Whilst we need to reduce overall movement, to do this we need to reduce demand. It can't be to fail to provide the capacity by relying on congestion which just produces more carbon.

A briefing by Decarbon8 & UKRI Engineering and Physical Sciences Research Council highlights that the carbon implications of infrastructure have not been adequately considered in strategic cases advanced to date. All new transport infrastructure generates carbon emissions in its construction, maintenance and operation<sup>12</sup>.



### 2.3 Technical solutions will be insufficient

The primary focus of government policy is to reduce use of fossil fuels by more efficient end use technologies and changes in the fuel source to electrification and biofuels. However, there are major problems with an approach that focuses purely on supply side measures to the exclusion of demand side measures. Progress to improve efficiency of new cars has been largely offset by their increased use, and the tendency to larger vehicles.

The timeframe has significantly narrowed our options: 60% of fuel supply and half of surface transport decarbonisation required by 2050 needs to have happened in this decade if we are to remain on track for the net zero target<sup>13</sup>. While the pace of change of technologies is rapid it is not yet real to most people today. Only 2% are driving with plug-in cars. EVs are not a panacea. It is estimated that achieving our 2030 net zero target for transport will require a reduction in car kms of approximately a quarter<sup>14</sup>.

The Committee on Climate Change estimates that 62% of future emissions reductions will rely on individual choices and behaviours<sup>15</sup>, such as adopting cleaner technologies, changing energy supplier or switching to more sustainable consumer choices. The provision of transport, domestic heating and food choices must all swiftly change. Government has yet to begin a proper conversation with the public about how our lives will need to change.

There may be useful lessons from the behavioural shift experienced during Covid-19. Research by CREDS demonstrates that it was commuter and business travel, that ended up being the most flexible and able to switch to online. We should capitalise on the ongoing churn of job and home changes and consider incentives to enhance more home-working. By contrast over half the population could not work from home<sup>16</sup>. National Highways should address car occupancy levels and promote public transport to make more efficient use of the existing network. They should measure throughput by people rather than vehicles.

The reduction in car kms required will require a massive cultural change. Being bold on behaviour change is possible but it needs a clear rationale and strong leadership from central government. Covid lockdowns, the ban on smoking in public places, drink driving, are examples of fundamental shifts in public behaviour. They all involved legislation in the first instance before attitudes changed. Some form of constraint will be needed to deliver traffic reduction and pricing would seem to be the best way to do this.

### 2.4 Changing how we pay for road use

Road pricing has always been the most effective way to tackle traffic congestion and reduce pollution but now there is a fiscal imperative. The Transport Select Committee found that if it fails to act the Treasury will be left with a £35 billion black hole as receipts from Fuel Duty and Vehicle Excise Duty (VED) disappear<sup>17</sup>. If one includes VAT on fuel the black hole rises to £40 billion (£28bn from fuel duty; £6.5bn from VED; and £6bn from VAT on fuel).



The switch to EVs provides an opportunity to change how we pay for road use. Greener Transport Solutions developed proposals for a national road pricing scheme<sup>18</sup>. The proposal is that Government should signal that from 2030 fuel duty and VED will be abolished and replaced by a mandatory road user charge based on distance and congestion which will apply to all road vehicles, to coincide with the ban on sales of new petrol and diesel cars and vans. To be politically deliverable the scheme should be implemented in stages.

Ahead of the charge becoming mandatory road users would be incentivized to opt in. EV's grants should be offered on the condition that buyers commit the vehicle to the new charge. The charge should be independently determined and monitored, should not in aggregate cost more than current system and may save users money if they travel at less congested times. Moving away from VED shifts the burden of taxation away from fixed annual costs towards variable costs, and increases the propensity to walk, cycle or use public transport.

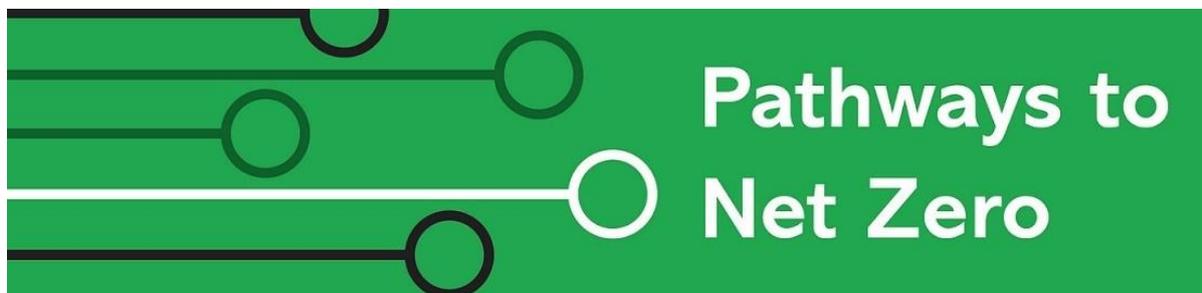
### ***We need a more balanced discussion about the car***

Road pricing is a subject that has become highly polarized. We need a more balanced discussion about the car. We must avoid extremes or polarization. We need to be clear that the problem is not the car but too much car use.

We need to understand why people depend on their car and may have no good alternatives. Choice architecture often makes it too easy just to drive rather than travel by public transport i.e. car parked outside one's house instead of in a less convenient location "the way we start a journey by car has a disproportionately path dependent effect on rest of journey".

The benefits to the public of any future change in how we pay for road use should be framed in terms of improved public health, air quality, climate and more equitable access to transport. It is difficult to sell road pricing to public purely as a way of raising revenue. Ken Livingston tied congestion charging to improving buses in London. Nottingham City Transport tied the Workplace Parking Levy to improving the tram.

Recent research by Campaign for Better Transport suggests that there may be a shift in public attitudes. A majority of respondents agree there is a need to reform the current system of vehicle taxation. Half support the idea of pay-as-you-drive, while only one in six oppose it.<sup>19</sup>



### 3 Pricing properly for carbon

---

**If we are to wean ourselves off fossil fuels, we must price for carbon properly. Pricing also generates revenues to mitigate negative social impacts. We must incentivize consumers to lower their carbon footprint. Personal carbon allowances and other behaviour change approaches should be explored.**

#### 3.1 Making polluters pay

Making the polluter pay is the most radical and effective policy that could be adopted both for prosperity and for the environment<sup>20</sup>. We should follow the “net environmental gain principle” to ensure we protect our natural capital. The costs of pollution should be integrated into every decision made by businesses and consumers. We need a strong, predictable and rising carbon price and should stop subsidising fossil fuels.

BEIS have recently reissued official prices for carbon to be used in appraisal, on what the real cost to society is of burning carbon<sup>21</sup>. If we want to reduce carbon emissions from transport, we should approach the problem directly. Every mode of transport should be priced according to its carbon impact. Currently this is not the case. It is often cheaper to fly or to drive than to use sustainable public transport.

The result of repeated failures of road taxation to cover externalities is that we over consume roads. The fuel duty escalator was first introduced in 1993 as an environmental tax, to stem the increase in pollution from road transport. However, levying any additional charges on road users has become politically toxic. Greener Journeys showed that freezing fuel duty 2011-2019 caused a 5% increase in road traffic and an extra 5 million tonnes of CO<sub>2</sub><sup>22</sup>.

The failure to price carbon properly runs through every sector of the economy and supports unsustainable levels of consumption. If carbon were properly priced, then people would seek ways to use less of it and to find substitutes or consume less carbon-derived energy. The fear is that the burden would fall disproportionately on low-income households, of particular concern at a time of escalating fuel and energy prices and a cost of living crisis. But carbon pricing generates revenues to mitigate any negative social impacts.

#### 3.2 Mitigating negative social impacts

The overall impact of a carbon tax can be progressive depending on the nature of revenue-recycling and the treatment of transfer income<sup>23</sup>. Whilst a carbon tax would lead to higher prices of goods and services such as fuel and electricity, the tax’s revenue can be returned to households in ways that promote progressivity.

Carbon taxation can be closer to proportional in countries with low levels of inequality which perhaps explains why we first saw the introduction of carbon taxes in the Nordic countries. Finland, Sweden, Denmark, and Norway all implemented carbon taxes between 1990-1992,



and income inequality was relatively, and historically, low. Countries such as the UK where inequality is relatively high may find it politically more difficult to implement carbon pricing without measures to offset regressive effects<sup>24</sup>.

At an aggregate level, higher income UK households consume three times more carbon than lower income households, but lower income households spend a higher share of their income on high carbon goods<sup>25</sup>. The Treasury's final *Net Zero Review* highlights that there is significant variation within income groups, depending on how much energy they use, the type of house they live in, and whether they drive a car and that these factors will have significant influence over a household's overall exposure to the transition.

### 3.3 Personal carbon allowances

Greener Transport Solutions has proposed a 'Climate Change Allowance'<sup>26</sup>. This would be a fixed allowance paid to every individual in the UK funded by putting a carbon price on everything we consume. Work is needed to understand the full distributional impacts, but as a percentage of people's income this would be a progressive measure. Individuals on higher incomes would pay more in carbon tax through all the goods and services they buy but receive the same fixed allowance as those on lower incomes.

An alternative approach was proposed at a recent Greener Vision event<sup>27</sup>. "Personal Carbon Reduction Planning" (PCRP) builds on personal travel planning which was demonstrated to reduce car use by up to 10%. PCRP would be a step towards carbon pricing by raising awareness and understanding of the issues, providing data on sources of household carbon emissions, and providing evidence on a realistic minimum footprint to determine appropriate carbon allowances for different type of household.

PCRP is a behaviour change approach, a harder solution would be to introduce a carbon levy or carbon allowances. PCRP could be implemented now and could prepare the way for personal carbon allowances. There is the need for a short-medium- and long-term plan.

### 3.4 Will high energy prices create an opportunity?

The current sharp rise in the world hydrocarbon price is doing exactly what we would want in carbon emissions terms. It sends the right price signal, but at great social cost. The key thing we must also think about now is what to do when the world price eventually falls back.

Should we be thinking now about how we might step in and do something with the margins? Once people have got used to higher prices would there be the opportunity to introduce a policy to use that money?

Carbon pricing and taxes are a powerful way to incentivize lower carbon choices, and also to raise the significant investment needed to support the transition to net zero and enhance our energy security.



## 4 Ensuring a fair and just transition

---

**The energy and cost-of-living crises will impact on carbon consumption but not in a progressive way. Targeted support should be provided for low income households. An equitable approach to net zero will require a greater focus on accessibility and more support for walking, cycling and local public transport.**

### 4.1 Implications of cost-of-living and energy crises for net zero

Given that the cost of living has become such a critical issue, it is arguably more difficult than ever for the UK government to use pricing as a policy lever if it increases the burden on households, especially with rising energy prices. Analysis by ECUI shows that since gas crisis began until the end of the current Energy Price Guarantee (EPG) in April 2024, gas is set to add £4,400 to average household's energy bills<sup>28</sup>.

However, there are interventions which will help cost of living and net zero agenda. Home insulation would deliver an immediate benefit. At least 15 million homes need some form of energy efficiency improvement.<sup>29</sup> An increase in the cost of energy has made it much more worthwhile to insulate. Scrapping previous climate policies and slowing decarbonisation was estimated by Carbon Brief to have increased energy bills by £2.5 billion since 2013<sup>30</sup>.

The cost-of-living crisis will impact on consumption and that will reduce carbon although not in a progressive way. However, it might buy some time. Moreover, rising energy prices, inflation and living costs and a fall in real terms incomes will force people to find that they can make a level of behaviour change far more drastic and far swifter than they realised.

### 4.2 Unfairness of our current transport system

The relative costs of motoring costs and public transport create an unfair transport system. Over past 20 years the cost of motoring has fallen in real terms by 15% whilst the cost of rail fares has risen by 20% and of bus and coach fares by 40%.<sup>31</sup> A quarter of households and half of workless households have no access to a car. A 10% reduction in access to public transport is linked to a 3.6% increase in social deprivation<sup>32</sup>.

At the same time, the planning system has put many people in a position where they have no choice but to drive. Research into transport-related social exclusion shows that many people are driving without licences, often old cars with no MOT and are unable to afford repairs. The switch to EVs risks making this worse, at least in the short term. Social Market Foundation analysis demonstrates that increasing fuel duty would entail a more significant cost to lower-income households than higher income households.<sup>33</sup>

We need to challenge more robustly the cuts that are happening to public transport. Cuts to services or frequencies are holding back the recovery from Covid. Long term funding of bus services is a critical problem. Bus cuts mean that young people and students are being



excluded from college or work. RTPI research has shown that in some parts of the country it is quicker to walk to hospital than to take public transport.

Lower price caps for public transport experiments should be supported, as they would help with cost of living crisis. We need to understand how much these schemes are really costing. They seem to be bringing people back to bus which is something we need in the longer run. “Can we get the evidence out there quickly?”

Some form of car restraint would also be needed to deliver the modal switch required for net zero. Should we give everyone a mobility budget for them to choose how to travel, with all modes of transport priced according to their carbon impact? A “two-part tariff” with a negative standing charge, could be presented as a subsidy for travel.

### **4.3 A more equitable approach to net zero transport**

The predominant focus of the government’s transport decarbonisation strategy is the roll out of EVs. However, EVs are bought by people on higher incomes, those on lower incomes are less likely to have on-site parking. The move to EVs poses additional challenges such as the carbon cost of manufacturing and the additional generating capacity which will require a complete rebuild of our distribution network.

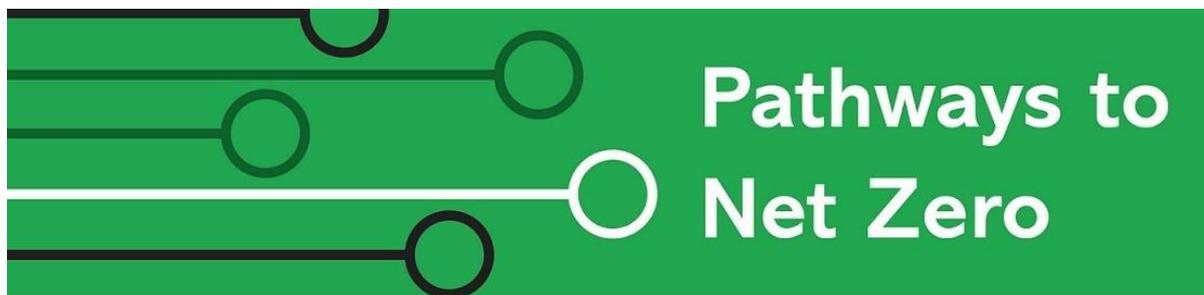
A more carbon efficient and socially just approach could involve greater focus on improving sustainable transport networks. Building more infrastructure for walking, cycling, micro mobility, and local sustainable transport would be a better way to decarbonise transport and deliver on social justice issues at the same time.

Public transport has the potential to deliver huge improvements in social justice, equity, work and life opportunities for all sectors of society. Germany, Denmark, the Netherlands and Sweden are examples of countries with a public transport system that delivers social justice very effectively. Instead of cutting fuel duty, some countries responded rising fuel prices by giving out mobility credits directly to lower-income people.

### **4.4 The role of accessibility planning**

The track record of decarbonisation by planning access for people and places has been highly successful but widely under-reported. Accessibility is the glue that allows collaborative planning and delivery to take place. It is only when we recognise that transport must be planned as part of the wider economy and society that we get the public consent to do the difficult things we need to achieve (e.g. car restraint).

Social inclusion must be central if we want to change social norms towards decarbonisation. We need to develop a circular economy for sustainable transport<sup>34</sup>. Businesses focused on profit maximisation for shareholders will not be well placed to tackle many challenges in social spaces like transport, compared with mission driven businesses.



## 5 Empowering local leaders

---

**Greater devolution would drive faster delivery of UK wide net zero targets. Government should enable local areas to plan and invest on an integrated long-term basis and support collaborative working across wide regional areas. Strong public support for action will be critical to deliver on net zero targets.**

### 5.1 Strengthening devolution

Greater devolution would accelerate the delivery of UK wide net zero targets, as evidenced by the net zero strategies of the devolved administrations. Decarbonisation requires the overcoming of government silos, and coordination of different aspects of policy is much easier at a regional or local level. Long term funding certainty is critical.

The other three nations of the UK are diverging away from England on transport and planning policy. Wales is asking what kind of roads investment we need. Should we build parallel cycle routes to trunk roads to allow for e-bike growth? The Northern Ireland government froze public transport fares. Scotland has a target to reduce traffic levels.

We need to reform funding and governance so that local leaders can plan for housing, jobs and transport on an integrated long-term basis with net zero at the heart of decision making. There is a serious lack of resource, skills, and knowledge base at local level, including not enough transport planners. Planning and transport should be better integrated. There are currently too many individual pots of funding. Bidding is inefficient, labour intensive and militates against the joined-up decision making needed.

We need more strategic planning over wider areas, but the government current direction of policy appears to be moving back to individual local authorities. A study by the Energy Systems Catapult to find out how many local authorities are doing local area energy plans found that only 15 local authority districts have a plan in place<sup>35</sup>. Many new builds are not being built in an energy efficient way.

#### *Transition pathways*

A series of short-term measures won't achieve net zero. It is anticipated that the new Local Transport Plan guidance will provide a framework for developing transition pathways. The European Union has a requirement for cities over 100,000 to produce a sustainable mobility plan. The European Investment Bank (EIB) has just sponsored a new topic guide on decarbonisation and carbon mitigation including 20/30-year transition pathways.

If the predominant focus is on short-term targets, it is possible to make things worse in the long term. The quick dash from coal to gas in the US is a good example of a policy that got part of the way in the short term but won't get the rest of the way and locks in fossil fuels.



## 5.2 Building a political mandate for change

The electoral cycle presents inbuilt challenges. There is a need to develop the mandate for change and tough decisions for long term. This requires greater leadership and consistent messaging from central government. The cut to fuel duty was unhelpful to local leaders trying to implement car restraint measures. Consistency is needed on Clean Air Zones.

The case for sustainable transport needs to be presented as a common cause. Even where there is broad support for environmental policies there can be strong divergences in opinion, both at the level of local politics and civil society, about which solutions are needed. Local sustainable transport groups can be too focused on their specific transport mode. Conflicts emerge between for example “village green” greens who want to prioritize active travel and the scientific environmental planning type greens who see mass transit as essential.

NIMBYism was cited as one of the biggest barriers to delivering modal switch. A positive vision is vital to overcome it. We a vision of the world we want which includes more than economic indicators. Economics frames the main policy arguments but what about life satisfaction and quality of life? We need appraisal values for quality of life. The language of sacrifice won't win public support. We must change the story from “travel less” to “lead a better life without needing to move around so much”.

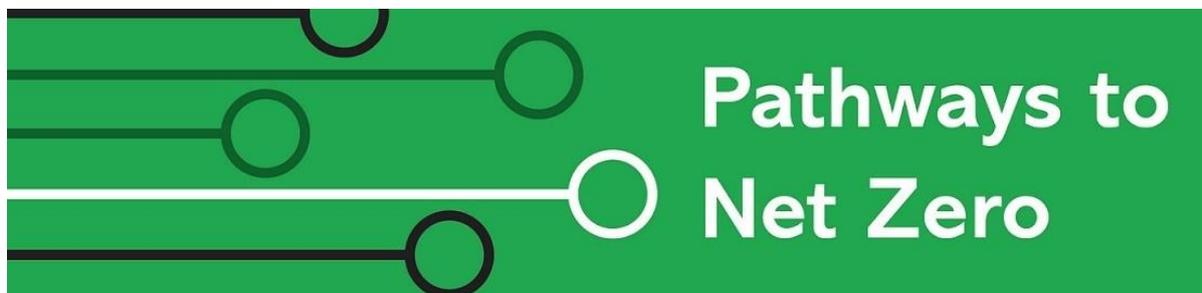
### *The role of local communities*

There is an important role for deliberative democracy in educating the public and building a mandate for change. People invariably propose more radical solutions than politicians are prepared to do, especially once confronted with evidence of the effects of climate change and the urgent need to act.

Citizens Assemblies can provide a political and public mandate (“people like me”). There are excellent examples of where they have built support for congestion charging, revenue to support bus networks etc. However, they are not a silver bullet and need to sit within a wider ecology of measures. System change is needed and too much emphasis on individual changes could backfire politically and meet resistance. Energy transitions take decades.

Importantly people need to feel they have agency. They currently feel they have a low level of political efficacy, and don't think that they have the power to change things. They don't have high trust in our institutions, but they recognise that change needs to come centrally. They need to feel that their efforts in engagement will lead to fruition and see something happening on the ground. If not, that cycle will go in reverse.

The messenger matters and there are many ways to involve local communities in the process of change. Sometimes people don't want to hear from their local authority, and local charities and/or civil society groups may be better placed to deliver certain messages. Community rail initiatives work with the private sector but are community led, and can be beneficial, bringing connectedness, innovations, and solutions better suited to local needs.



### 5.3 Engaging with the public on net zero

Strong vocal public support for action will be critical to deliver the scale of change needed. Even though there was legislation, not smoking in public places and the mandatory wearing of seat belts didn't become normal until they became a social issue.

There is currently a failure by the public to acknowledge that the climate emergency requires urgent action. People need to understand that change is happening already. We are not facing a static future. If we do not reduce carbon emissions, disruption will follow.

Decarbonisation is a complex case to make to the public. There is an upfront cost in transport and other sectors, including energy efficiency and retrofitting, but EVs have lower fuel costs and energy efficient homes cost less to heat. It is important to come up with solutions, but we also need to develop stories, high level narratives, that enable people to understand how they can live in the new world we can build.

Linking the narrative on net zero to the public health emergency of air pollution resonates with the public and demonstrates that local pressure can be very effective. For example, Putney High Street was a disaster from an air pollution perspective but thanks to pressure from mums and others, electric buses now drive up and down!

There is a risk of polarisation on the climate debate. We need to make sure we don't pour oil on the fire on issues that can become divisive, such as LTNs. We need to bring people together. "Co-creation is part of that. It takes longer but is well worth it."

#### *Do we need to be visionary or transactional?*

Individual behaviour change is not going to deliver decarbonisation. We need big ticket interventions from government. The importance of behaviour change is to create space for government to act. People's priorities are jobs, warm homes and to be able to get around.

Public support for net zero is still high despite the cost-of-living crisis, but people are worried about how they will afford it and there is a lack of understanding about the cost of the net zero transition and future impact on energy bills. We need to engage with the public in an informed way and communicate that rocketing fuel prices are hitting our pockets; we don't want car more dependent developments; and that we are living unsustainable lifestyles.

We need to be both aspirational and transactional. IPPR deliberative research has found that people want jobs and access to things they care about; public transport that is affordable; safe streets for their children to get to school. We need to engage with people on the issues facing them and might not even have climate as a lead topic, or a topic at all.

Cost and convenience are still the key deciders of how to choose how to travel. "Once you've bought a car it becomes the default way to get around". We need a mixture of micro interventions improving local choices such as better walking facilities, implementing LTNs, and big-ticket items such as how pay for road use and how we pay for flying.



## 5.4 Key elements of a successful vision

Central to a future vision is that we must tackle current inequalities in our society, avoid them being even further locked in. The public needs more of a role in shaping that vision and understanding what the benefits would be, and more of a role in holding areas to account.

We need to approach ourselves and each other not just as consumers but also as citizens. We should not assume that everyone is happy with the status quo. We don't necessarily need to persuade people to make better choices.

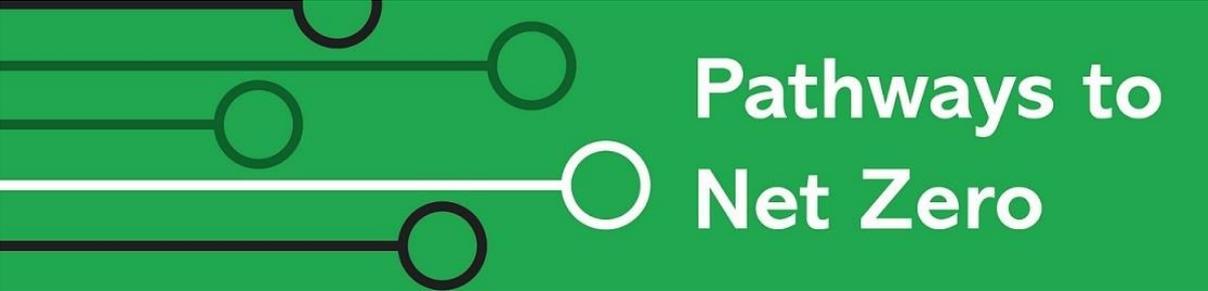
How can we move away from quite an isolated way of living? How can we reimagine our daily lives? We all experienced a glimpse of something better during the Covid-19 lockdown when the air was cleaner, the skies were clearer, and we could hear the birds singing.

Life without needing to own a car, for example, is a dream worth aspiring to. It would mean cleaner air, better health, more connected communities and greater opportunities for all. The freedom of not having to own a car means being able to do useful things with your travel time, only paying for the transport you use, compared with the sunk costs of owning a car.

To develop a successful vision for the future we need to be grounded in reality but at the same time paint an inspiring picture of what could be possible:

1. It is important to be real about where we are now
2. But we can dream of something better
3. We need to include some ideas of how we get there, of how we bridge the gap between where we are now and where we want to be. How we achieve that dream.

It is important to get the tone of the net zero discussion right. A narrative of doom and gloom is depressing and disempowering. There is no shortage of dire warnings. What we need is a clear articulation of the future we want. There are many benefits to life beyond fossil fuels. The greener choice is more often the better choice.



# Pathways to Net Zero

## References

<sup>11</sup> [Guidance for transport planning and policymaking in the face of an uncertain future](#), Glenn Lyons & Cody Davidson, June 2016

<sup>2</sup> [Jones, P., Smeds, E. and Dean, M. \(2021\). Initial conceptual framework to map and establish cross-sector 'links' between major trip generating sectors of the economy. Deliverable D1.4, H2020 CIVITAS SUMP-PLUS project.](#)

<sup>3</sup> **Liftshare** have analysed over 0.5 million commutes. A typical study for a hospital revealed that:

- 7% of staff walked but 13% could
- 5% of staff cycled but 39% could
- 2% of staff lift shared but 95% could
- 1% of staff took bus but 55% could

<sup>4</sup> <https://www.instituteforgovernment.org.uk/publications/net-zero-test>

<sup>5</sup> [Dieter Helm, keynote speech to Transport Knowledge Hub Decarbonising Transport conference March 2020](#)

<sup>6</sup> <https://mitpress.mit.edu/books/why-are-we-waiting>

<sup>7</sup> <https://sdgs.un.org/goals>

<sup>8</sup> [Prosperity without Growth: Foundations for the Economy of Tomorrow, Second Edition, Tim Jackson, published by Routledge 2017](#)

<sup>9</sup> <https://www.iea.org/topics/energy-efficiency>

<sup>10</sup> <https://www.ipcc.ch/report/ar6/wg3/>

<sup>11</sup> <https://www.businessgreen.com/news/4060712/reports-government-poised-launch-gbp25m-public-energy-saving-campaign>

<sup>12</sup> <https://decarbon8.org.uk/embodiedemissions-policy/>

<sup>13</sup> <https://economy2030.resolutionfoundation.org/reports/the-uks-decisive-decade/>

<sup>14</sup> **Green Alliance** concludes that the government's anticipated roll-out of EVs will be insufficient to keep us on the 'balanced pathway' to its net zero target, and that a reduction in car-km of 20-27% by 2030 will be needed. This is consistent with **Transport for Quality of Life** analysis, #10 The last chance saloon. **The Mayor of London** has pledged 27% reduction in car kms by 2030. **The Scottish Government** has pledged a 20% reduction.

<sup>15</sup> <https://www.theccc.org.uk/uk-action-on-climate-change/reaching-net-zero-in-the-uk/>

<sup>16</sup> <https://www.creds.ac.uk/publications/less-is-more-changing-travel-in-a-post-pandemic-society/>

<sup>17</sup> <https://committees.parliament.uk/committee/153/transport-committee/news/160791/road-pricing-act-now-to-avoid-35-billion-fiscal-black-hole-urge-mps/>

<sup>18</sup> <https://greenertransportsolutions.com/publication/re-charging-britains-roads-policy/>

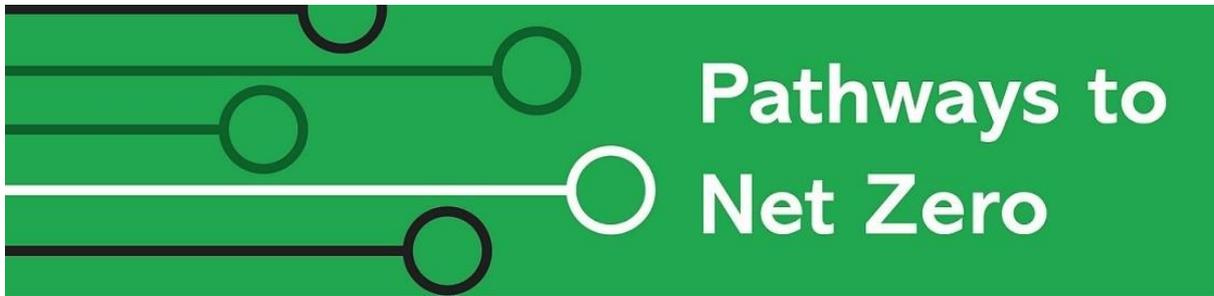
<sup>19</sup> [Pay-as-you-drive: the British public's views on vehicle taxation reform](#)

Based on focus group research and polling of over 3,000 people, **Campaign for Better Transport** found that:

- A majority of respondents agree there is a need to reform the current system of vehicle taxation
- Half support the idea of pay-as-you-drive, while only one in six oppose it
- Support for the reform increases as people engage with the arguments and options for implementation, showing that initial concerns can be overcome
- People understand the need for electric vehicles (EVs) to start paying tax like other vehicles (though at a lower rate), as the money lost in fuel duty needs to come from somewhere
- The ability to budget better as vehicle tax becomes more transparent also appealed to participants

<sup>20</sup> <http://www.dieterhelm.co.uk/books/> Green and Prosperous Land: A Blueprint for Rescuing the British Countryside, March 2019

<sup>21</sup> <https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation>



# Pathways to Net Zero

<sup>22</sup> <https://greenerjourneys.com/publication/the-unintended-consequences-of-freezing-fuel-duty/> Originally published 2018, analysis updated 2020

<sup>23</sup> [Impacts of a carbon tax across US household income groups: What are the equity-efficiency trade-offs? L.H. Goulder et al, May 2019](#)

<sup>24</sup> <https://www.hhs.se/en/about-us/news/site-publications/publications/2021/carbon-tax-regressivity-and-income-inequality/>

<sup>25</sup> <https://www.gov.uk/government/publications/net-zero-review-final-report>

<sup>26</sup> <https://greenertransportsolutions.com/publication/pathways-to-net-zero/>

<sup>27</sup> Personal Carbon Reduction Planning (PCRP) was proposed by **Tony Duckenfield Beyond Logic Consulting** <https://www.beyondlogicconsulting.com/>

<sup>28</sup> <https://eciu.net/media/press-releases/2022/new-analysis-gas-crisis-set-to-add-4-400-to-energy-bills>

<sup>29</sup> <https://www.theccc.org.uk/publication/ccc-and-nic-write-to-prime-minister-rt-hon-elizabeth-truss-mp/>

<sup>30</sup> <https://www.carbonbrief.org/analysis-cutting-the-green-crap-has-added-2-5bn-to-uk-energy-bills/>

<sup>31</sup> <https://www.gov.uk/government/publications/transport-decarbonisation-plan>

<sup>32</sup> <https://greenertransportsolutions.com/wp-content/uploads/2016/10/The-Value-of-the-Bus-to-Society-FINAL.pdf>

<sup>33</sup> <https://www.smf.co.uk/publications/miles-ahead-road-pricing/> Under a hypothetical scenario in which richer households are much more likely to drive EVs in the short-to-medium term, if the government preserves motoring revenues through fuel duty hikes (and leaves EVs untaxed), the share of fuel duty costs borne by the poorest 40% of households would rise from 20% at present to 41%.

<sup>34</sup> <https://stsg.org/a-new-look-at-making-sustainable-transport-work-for-everyone>

<sup>35</sup> <https://es.catapult.org.uk/tools-and-labs/our-place-based-net-zero-toolkit/local-area-energy-planning/>