

Article in the Guardian on May 9th by Susanna Rustin ([click for full article](#))

An article in the Guardian on May 9th stated 'On 26 March, the government published a document, Decarbonising Transport, which went further in facing up to the problem of emissions from air and vehicle traffic than most campaigners had dared to hope for'.

The article continues 'The challenge is enormous. In 2016, transport overtook energy to become the biggest source of domestic emissions. Motor vehicles on their own are responsible for around a fifth of the total. On aviation, the UK is the world's third worst polluter, behind China and the US.

But here was the transport secretary, Grant Shapps, declaring that "public transport and active transport will be the natural choice", adding "we will use our cars less" for anyone who missed the point. Transport was to be a centrepiece of the UK's preparations for the postponed Cop26 climate talks. Finally, it appeared we were on the way to grasping the nettle of our polluting driving and flying habits.'

The author of the article, Susanna Rustin, continues on about how much has changed over the last 6 weeks due to the Covid-19 virus.

A few statements in her article:

'Probably the biggest risk is that governments will take their eye off the climate emergency, bailing out airlines and car manufacturers as they have already bailed out oil companies.'

'While it is only fair to point out that the country has been a leader on decarbonisation, when it comes to transport, we are a laggard.'

'This week Boris Johnson suggested that a "golden age of cycling" could be about to dawn.'

The Committee on Climate Change, which advises the government, has told ministers that green policies such as an accelerated transition to electric vehicles would be the strongest basis for an economic recovery.'

Brief Summary of 'Decarbonising Transport - Setting the Challenge' document

This document states how the government intends to end the UK's contribution to climate change by 2050 as far as transport is concerned. Later on in the document it states that the Government is consulting on bringing forward the end to the sale of new petrol and diesel vehicles to 2035 (from 2040), which sounds very positive.

Transport is now the largest contributor to UK domestic GHG emissions, contributing 28% of UK domestic emissions in 2018. Within transport, road transport is the largest emitter of GHG at 91%. Cars contributed 55% of domestic transport emissions. The other road transport domestic emissions are from heavy good vehicles (17%), vans (16%), buses and coaches (3%). The other domestic transport emissions include rail (1.4%), rail freight (?), domestic aviation (<1%) and domestic shipping (1.3%). UK international shipping in 2018 was 125% of domestic shipping and is expected to increase significantly by 2050 if no action is taken.

Given their global nature and the absence of any international agreement on how to assign international aviation emissions to individual states, action at an international level is the Government's preferred approach for addressing aviation's international carbon emissions.

The document goes through all sorts of transport for moving people and for moving goods, detailing investment in projects to reduce GHG.

- Cars are the most common mode of transport regardless of the journey type. 94% of these car journeys are under 25 miles, with 58% under five miles in 2018. 87% of car users in England are of the view that their current lifestyle means they need to own a car. There is an on-going switch to electric cars, but it is slow as yet. There is a massive investment in charging devices.
- Measures will be introduced to address declining bus usage across the country.
- Rail is a relatively low-carbon form of transport and is one of the most efficient ways of moving high volumes of people into city centres and moving people over long distances, with 10% of passenger miles being by rail, and there is expected to be an increase in passenger demand of 60% between 2018 and 2050
- Improvements in aeroplanes is offset by an increase in passenger numbers resulting in aviation GHG emissions projections remaining broadly flat.
- Cycling and walking are the ultimate forms of zero GHG emission transport. The Government's ambition is to make cycling and walking the natural choice for all shorter journeys or as part of a longer journey by 2040.
- In 2018, the Government agreed a voluntary, industry-supported commitment to reduce HGV (Heavy Goods Vehicle) GHG emissions by 15% by 2025, from 2015 levels
- Van GHG emissions are projected to fall by 17% from 2018 to 2050, despite a projected increase in van km of nearly 70% over the same period
- The government has consulted on proposals for new private charge-points to have smart functionality and related minimum device standards; and on changing building regulations to require a charge-point in every new home where there is an appropriate parking space, and minimum infrastructure provision in new non-residential buildings. We are also consulting on the introduction of green number plates for ultra-low emission vehicles to raise awareness and help normalise cleaner vehicles and increase their uptake. (*my comment - What about the hydrogen revolution?*).
- A fleet of five zero emission e-cargo bikes was used to deliver up to 100 orders a day to local customers who shopped via the retailer's groceries website. The findings from the trial showed that 96.7% of orders could be fulfilled in a single e-cargo bike journey. It also demonstrated shorter delivery routes and journey times.
- Since 2003, the number of freight train movements on the network has fallen by 47% yet the amount of freight moved on each train has increased by 74%. The government is considering how to make rail an even more attractive option for companies to move goods around the country
- Whilst maritime remains a significant freight mode, its contribution to UK passenger services is substantial
- Capital funding has been made available to projects that will produce low carbon waste-based fuels to be used in aeroplanes and HGVs.

DfT projects transport emissions to fall steadily as a result of the existing firm and funded policies, *but that the speed of reduction is much slower than what is likely to be needed if transport is to fully play its part in contributing to our legal obligations.*

To deliver the reduction in transport emissions needed for the interim carbon budgets and net zero, it will be necessary to go further than the existing plans set out in this document. This is not optional; there is no plausible path to net zero without major transport emissions reductions, reductions that need to start being delivered soon.

Whilst it is technically possible to deliver net zero based on "current consumer behaviours and known technologies", the target will only be credible if policy measures ramp up significantly and urgently. DfT agree and do not underestimate the challenge of delivering what will be fundamental changes to the way people and goods move around. This will require changes to people's behaviours, including encouraging more active travel and the use of public transport, alongside increasing the uptake of zero emission vehicles and new technologies.

There is a timeline plan that stretches over 7 months and shows how DfT intend to engage with a wide range of stakeholders and how feedback will inform the development of the plan.

Summary of 'Decarbonising Transport - Setting the Challenge' document with Key Points

[Click to access the 'Decarbonising Transport – Setting the Challenge' document](#)

The aim was to publish this document prior to COP26 being held in Glasgow in November 2020, which has now been postponed.

Six strategic priorities for the Transport Decarbonisation Plan, to deliver a vision of a net zero transport system

Figure 1: Six strategic priorities for the Transport Decarbonisation Plan, to deliver a vision of a net zero transport system



Foreword by Grant Shapps, Secretary of State for transport

- Climate change is the most pressing environmental challenge of our time.
- Transport has a huge role to play in the economy reaching net zero.
- We can improve people's health, create better places to live and travel in, and drive clean economic growth
- Through the Transport Decarbonisation Plan, 2020 will be the year we set out the policies and plans needed to tackle transport emissions.
 - Public transport and active travel will be the natural first choice for our daily activities. We will use our cars less and be able to rely on a convenient, cost-effective and coherent public transport network.
 - From motorcycles to HGVs, all road vehicles will be zero emission. Technological advances, including new modes of transport and mobility innovation, will change the way vehicles are used.
 - We will lead the development of sustainable biofuels, hybrid and electric aircraft to lessen and remove the impact of aviation on the environment and by 2050, zero emission ships will be commonplace globally.

The Transport Decarbonisation Plan (TDP) will set out in detail what government, business and society will need to do to deliver the significant emissions reduction needed across all modes of transport, putting us on a pathway to achieving carbon budgets and net zero emissions across every single mode of transport by 2050. The Government will publish the final plan in Autumn 2020.

Structure of this document

This document is the first step to developing the policy proposals and a coordinated plan for decarbonising transport. Delivering the emissions reduction needed from transport is a significant and sustained challenge and net zero demands a fresh approach. We have a duty to act and continue our global leadership in this area.

- There are chapters about the present transport modes and their current greenhouse gas (GHG) emissions, the existing strategies and the policies already in place to deliver against our current targets and any future activity or work already committed or underway.
- There is a chapter that presents the projected trajectory of the forecast GHG emissions from transport to carbon budget 5 (2028-2032) and beyond based on the firm and funded commitments outlined.
- There is a chapter that describes the challenge in meeting carbon budgets and net zero by 2050 and how we have split the challenge into six strategic priorities.
 - Accelerating modal shift to public and active transport
 - Decarbonising how we get our goods
 - UK as a hub for green transport technology and innovation
 - Decarbonisation of road vehicles
 - Place-based solutions
 - Reducing carbon in a global economy
- There is a chapter that outlines the approach for engaging on this work. The plan will not be deliverable without input from a wide range of stakeholders.

Greenhouse gas emissions and transport

- We agree with the need to limit global warming to well below 2°C and have legislated to end the UK's contribution to climate change by 2050.
- Because of this success elsewhere, transport is now the largest contributor to UK domestic GHG emissions, contributing 28% of UK domestic emissions in 2018.
- Within transport, road transport is the largest emitter of GHG. Cars contributed 55% of domestic transport emissions. The other domestic emissions are from heavy good vehicles, vans, bus, rail and domestic shipping.
- Regional variations to people's travel behaviours – for example, across Great Britain, 68% of workers typically travelled to work by car in 2018. London having a substantially lower proportion at just 27%
- Vehicle mileages have increased but GHG has decreased for cars which have become more efficient
- Indicative GHG emissions for a passenger travelling from London to Edinburgh, 2018: flight 144kg; car 120kg; train 29kg; electric car, bike walking 0kg – *(my comment - this does not include the power station GHG power so must assume green energy).*
- Individuals need to be able to access clear, transparent information about the emissions associated with their journeys

Moving people: emissions by mode

- The majority of the trips we make annually are for leisure, including trips to visit friends, attend sports events, for holidays and day trips, followed by commuting and journeys for work or business purposes. Cars are the most common mode of transport regardless of the journey type. 94% of these car journeys are under 25 miles, with 58% under five miles in 2018. 87% of car users in England are of the view that their current lifestyle means they need to own a car.
- A greater understanding is required at a transport-system level to help to support people to change to lower carbon travel options.
- £5 billion funding for investment in local buses and cycling and walking infrastructure was announced in February - includes funding at least 4,000 zero emission buses
- The creation of a long-term cycling and walking programme and budget that will enable delivery of the Government's aim to double cycling and increase walking by 2025
- Cars
 - Motorists are making the switch to electric vehicles - there are over 240,000 battery electric and plug in hybrid vehicles registered in the UK, nearly 230,000 of which are ultra-low emission cars (ULEV).
 - Battery prices, a large part of the current total cost of EVs, have fallen almost 80% since 2010. However, falling battery costs have largely been offset by an increase in the battery size used in vehicles, increasing the vehicle range.
 - The move to the mass adoption of ULEVs will require more infrastructure. Whilst many EV drivers are likely to choose to charge their vehicles at home, or at their workplace, 20 to 30% of motorists do not have off-street parking.
 - The Government is consulting on bringing forward the end to the sale of new petrol and diesel vehicles to 2035 (from 2040), or earlier if a faster transition appears feasible, as well as including hybrids for the first time.
 - The Government is investing around £2.5 billion with grants available for plug in cars, taxis and motorcycles, as well as funding to support charge point infrastructure at homes, workplaces, on residential streets and across the wider roads network
 - *My comment - There is no information given about hydrogen cars, with Toyota, the biggest car company in the world, pursuing this route. Hydrogen would be available at fuel stations, would be pumped into a car, with the conversion to power being provided by a fuel cell.*
 - A long way to go - a public attitudes tracker survey from December 2017 indicates that 17% of people considering buying or replacing their current car or van would choose a hybrid and 5% would choose an electric vehicle. *My comment - Note that a hybrid car just increases the mpg of my petrol car to being about the same as a diesel car – it is not really an electric car.*
 - Government funding and leadership, alongside private sector investment, has supported the installation of more than 18,000 charging devices providing over 25,000 public charge points. There is massive Government investment to install many more charge points.
 - Regulation to reduce tailpipe emissions for new cars and vans remains a crucial lever. New cars CO2 emission reductions regulations came into effect on 1 January 2020 setting targets out to 2030.
 - The Government is supporting R&D to ensure that technologies for electric vehicles are developed and brought to market as early as possible, to help make electric vehicles more affordable for consumers, and to find innovative solutions.
- Buses and Coaches
 - In 2018, 5% of journeys were made by bus. Buses and coaches represented 3% of domestic transport GHG emissions
 - The Confederation for Passenger Transport set a target in their recently published bus strategy for all buses to be ultra-low or zero emission by 2025
 - The aims prioritised by government are that conventional buses will be replaced with zero emission buses and infrastructure over a period of time, and that measures will be introduced to address declining bus usage across the country.
 - Since 2015 the Government has provided £89.6M to fund 742 low or zero emission buses.
 - Bus and coach GHG emissions are projected to fall by 25% from 2018 to 2050.
 - In September 2019, £220 million was announced to transform bus services, to deliver a better deal for bus users. This includes creating Britain's first all-electric bus town, which will see an entire place's bus fleet change over to zero emission electric capable buses
 - A National Bus Strategy, with accompanying long-term funding, is expected to be launched in 2020.
 - The Government currently supports bus services through a grant of around £250 million per year
- Passenger Rail
 - Rail is a relatively low-carbon form of transport and is one of the most efficient ways of moving high volumes of people into city centres and moving people over long distances. In 2018, GHG emissions from rail (passenger and freight) made up just 1.4% of the UK's domestic transport emissions, while 10% of passenger miles travelled in Great Britain were by rail.
 - Whilst over 70% of passenger rail vehicles are already electric powered, there are currently about 3,700 wholly or partially diesel-powered passenger vehicles in use on the network

- Rail passenger numbers have more than doubled since privatisation, reaching a record high of 1.759 billion passenger journeys in 2018-19
- In 2018, the Government challenged the rail industry to produce a vision for the removal of all diesel-only trains from the network by 2040.
- Most passenger journeys are made on electric trains
- There is a massive investment in decarbonisation projects
- Rail GHG emissions are projected to rise by 19% between 2018 and 2050, against an increase in passenger demand of 60% over the same period
- There is a world-first initiative to directly power trains using solar energy
- Aviation
 - In 2018, UK domestic aviation was contributing less than 1% of UK GHG emissions
 - International aviation emissions in 2018 was 25 greater than UK domestic aviation emissions.
 - Aviation, at present, is a relatively small contributor to domestic UK GHG emissions. Its proportional contribution is expected to increase significantly as other sectors decarbonise more quickly.
 - Given their global nature and the absence of any international agreement on how to assign international aviation emissions to individual states, action at an international level is the Government's preferred approach for addressing aviation's international carbon emissions.
 - The UK has been instrumental in securing many important environmental agreements including the 2016 Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) agreement – *my comment - does this mean planting more trees but still polluting the atmosphere?*
 - Between 2018 and 2050 demand is projected to increase by 73%. However, emissions reductions per plane and per passenger km are driven by larger and more efficient planes, and limited uptake of low carbon sustainable aviation fuels. **This results in aviation GHG emissions projections remaining broadly flat.**
 - The Government is minded to include international aviation and shipping emissions in the carbon budgets if there is insufficient progress at an international level.
- Cycling and Walking
 - Cycling and walking are the ultimate forms of zero GHG emission transport. Committed spending on active travel could reduce total car km in England by around 0.9% in 2020, compared to what it would otherwise be
 - In 2017, the Government published its first statutory Cycling and Walking Investment Strategy (CWIS). The CWIS set out the Government's ambition to make cycling and walking the natural choice for all shorter journeys or as part of a longer journey by 2040. Data from Transport for Greater Manchester indicates that more than 30% of journeys under half a mile in Greater Manchester are made by car.
 - £2.4 billion has been and is being invested in this cycling and walking since 2016.
 - The Government will establish a £350 million Cycling Infrastructure Fund as one element of a wider investment package for active travel which will also include extending Bike-ability cycle training to every child and engage parents
 - Travelling to education is the most common single purpose of walking journeys but there is huge potential to increase the proportion of children walking to school.
 - A project run in 2018-19 is estimated to have encouraged around 10,000 extra children and around 2,500 extra adults to walking to school over this period.

Delivering goods and services: emissions by mode

- Heavy Good Vehicles (HGVs)
 - In 2018, road transport accounted for 91% of UK domestic transport emissions⁶⁷. Heavy goods vehicles (HGVs) accounted for 17% of this
 - GHG emissions from HGV traffic increased by 14% between 2012 and 2018
 - In 2018, the Government agreed a voluntary, industry-supported commitment to reduce HGV GHG emissions by 15% by 2025, from 2015 levels
 - New Heavy-Duty establishes, for the first time, CO₂ reduction targets for HDVs. The new regulation sets binding CO₂ emission reduction targets for HDV manufacturers of 15% by 2025 and 30% by 2030.
 - In 2018, the Road to Zero strategy set out government aspirations for zero emission HGVs
 - HGV GHG emissions are projected to fall by 26% from 2018 to 2050, despite a projected increase in HGV km of 7% over the same period.
- Vans
 - Vans accounted for 16% of UK domestic transport emissions. Van emissions have increased by 19% since 2012.
 - The government is investing around £2.5 billion with grants available for plug in vans and lorries, as well as funding to support charge point infrastructure at homes, workplaces, on residential streets and across the wider roads network.
 - New van CO₂ emission reductions regulations sets binding CO₂ emission reduction targets for new vans of 15% by 2025 and 31% by 2030

- Van GHG emissions are projected to fall by 17% from 2018 to 2050, despite a projected increase in van km of nearly 70% over the same period
- Rail Freight
 - Rail is one of the most carbon efficient ways of moving goods over long distances. The level of CO₂e emissions per freight tonne km in 2018-19 was 4.1% lower than the equivalent figure for 2017-18
 - Rail freight is becoming more efficient. Since 2003, the number of freight train movements on the network has fallen by 47% yet the amount of freight moved on each train has increased by 74%
 - The main way to achieve rail freight decarbonisation is to stop using diesel traction, through direct government intervention to roll out further electrification
 - The Government has invested £235 million in the Strategic Freight Network between 2014 to 2019 to improve the capacity and capability of the rail network for freight.
 - In 2018, the Government challenged the rail industry to produce a vision for removal of all diesel-only trains from the network by 2040.
 - The government is considering how to make rail an even more attractive option for companies to move goods around the country
- Maritime
 - Shipping accounts for 95% of UK trade, and is considered one of the most carbon-efficient modes of transport
 - Whilst maritime remains a significant freight mode, its contribution to UK passenger services is substantial
 - The overall contribution of the maritime sector to the UK economy in 2017 amounted to £17 billion in GVA and 220,100 jobs for UK employees
 - A study for the European Parliament suggests that international shipping could account for 17% of global CO₂ emissions by 2050 if no further action is taken
 - The UK has been at the forefront of pushing for an ambitious global strategy to reduce GHG emissions from shipping
 - At an international level, the UK will continue to concentrate its efforts on transitioning the sector to zero emissions
- Cross-modal decarbonisation actions: Low Carbon Fuels
 - Low carbon fuels play an important role in reducing emissions by displacing fossil fuel use, and their increased use have made one of the most significant contributions to reducing the GHG emissions of UK road transport over the last ten years. Sustainable, low carbon fuels, typically bioethanol and biodiesel, are blended with petrol and diesel.
 - The government is committed to increasing the use of renewable fuels in road transport and non-road mobile machinery (NRMM), doubling the targets to 9.75% between 2018 and 2020, and to at least 12.4% by 2032. These targets are enshrined in legislation.
 - To minimise the risk of some kinds of crop biofuels indirectly leading to increased emissions, and to support the move to advanced waste-based fuels, we have put in place a cap that limits the maximum contribution that biofuels made from agricultural crops can make to our renewable transport fuel targets
 - The Government's Future Fuels for Flight and Freight Competition (the F4C) makes £20 million in capital funding available to projects that will produce low carbon waste-based fuels to be used in aeroplanes and HGVs.
- Cross-modal decarbonisation actions: Government support for regional solutions
 - Through the £2.5 billion Transforming Cities Fund, the Government is taking a new approach to tackling urban transport investment priorities to combat congestion and drive productivity through low carbon transport infrastructure investment.
 - At Budget 2020, the Government announced packages of investment with 12 further cities as part of the £1.28 billion competitive fund, in part being used for new cycle ways and Bus Rapid Transit

The Current Trajectory

- The UK has maintained a flexible approach to meeting carbon budgets, by not setting individual sector targets for emissions. This means that transport is not currently legally required to achieve specific emissions targets.
- DfT projects transport emissions to fall steadily as a result of the existing firm and funded policies, but that the speed of reduction is much slower than what is likely to be needed if transport is to fully play its part in contributing to our legal obligations.
- There is, of course, considerable uncertainty over how far and fast transport emissions will fall in the future.
- It is clear that the UK must go much further in reducing domestic transport emissions than currently projected if we are to meet the emission levels set out in the 2032 Clean Growth Strategy scenario and to meet our legal obligation to reach net zero GHG emissions by 2050
- International shipping and aviation emissions must also be reduced, and Government agrees with CCC advice that the primary policy approach to reducing these emissions should be international. DfT continues to provide "headroom" for these emissions within our carbon budgets, meaning that the UK can remain on the right trajectory for net zero GHG emissions across the whole economy

Setting the challenge

- DfT projects transport emissions to fall steadily as a result of the existing firm and funded policies, but that the speed of reduction is much slower than what is likely to be needed if transport is to fully play its part in contributing to our legal obligations.
- To deliver the reduction in transport emissions needed for the interim carbon budgets and net zero, it will be necessary to go further than the existing plans set out in this document. This is not optional; there is no plausible path to net zero without major transport emissions reductions, reductions that need to start being delivered soon.
- Whilst it is technically possible to deliver net zero based on “current consumer behaviours and known technologies”, the target will only be credible if policy measures ramp up significantly and urgently. DfT agree and do not underestimate the challenge of delivering what will be fundamental changes to the way people and goods move around. This will require changes to people’s behaviours, including encouraging more active travel and the use of public transport, alongside increasing the uptake of zero emission vehicles and new technologies.
- Whilst we know the scale of the challenge, we do not currently know the optimal path for delivering a decarbonised transport network. We, therefore, intend to work with business, academics, researchers and innovators, environmental NGOs and the wider public over 2020 to design the package of decarbonisation policies that can serve the needs of both passengers and wider society, and deliver our goals.
- Strategic priorities
 - Accelerating modal shift to public and active transport
 - Decarbonising how we get our goods
 - Decarbonisation of road vehicles
 - Place-based solutions for emissions reduction
 - UK as a hub for green transport technology and innovation
 - Reducing carbon in a global economy
- Departmental Chief Scientific Advisers are developing Science Plans to set out how Departments will support the Government’s goal of increasing R&D investment in the UK to 2.4% of GDP

Next steps

- This document marks the beginning of a conversation to develop the policies needed to decarbonise transport. DfT will take a holistic view of transport, looking at challenging new cross-modal approaches to mobility whilst maximising the potential in each mode to deliver our carbon budgets and reach net zero. DfT want to build on the policies outlined by working with industry and business groups, academics and researchers, community and interest groups, environmental NGOs, local authorities and the public. DfT will do this through various forms of engagement, focused around our six strategic priorities.
- There is a timeline plan that stretches over 7 months and shows how DfT intend to engage with a wide range of stakeholders and how feedback will inform the development of the plan.

Mike Newton