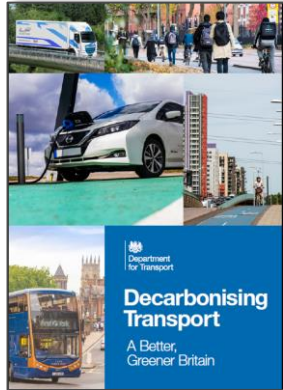
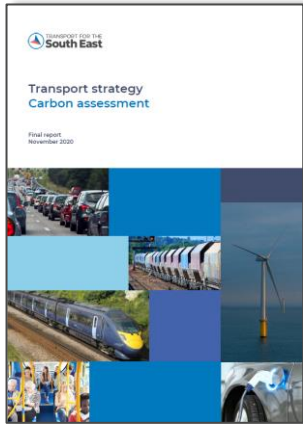
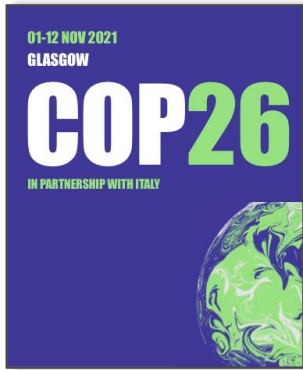


Transport Decarbonisation

Mark Valleley – TfSE

Transport Forum 21 September 2021



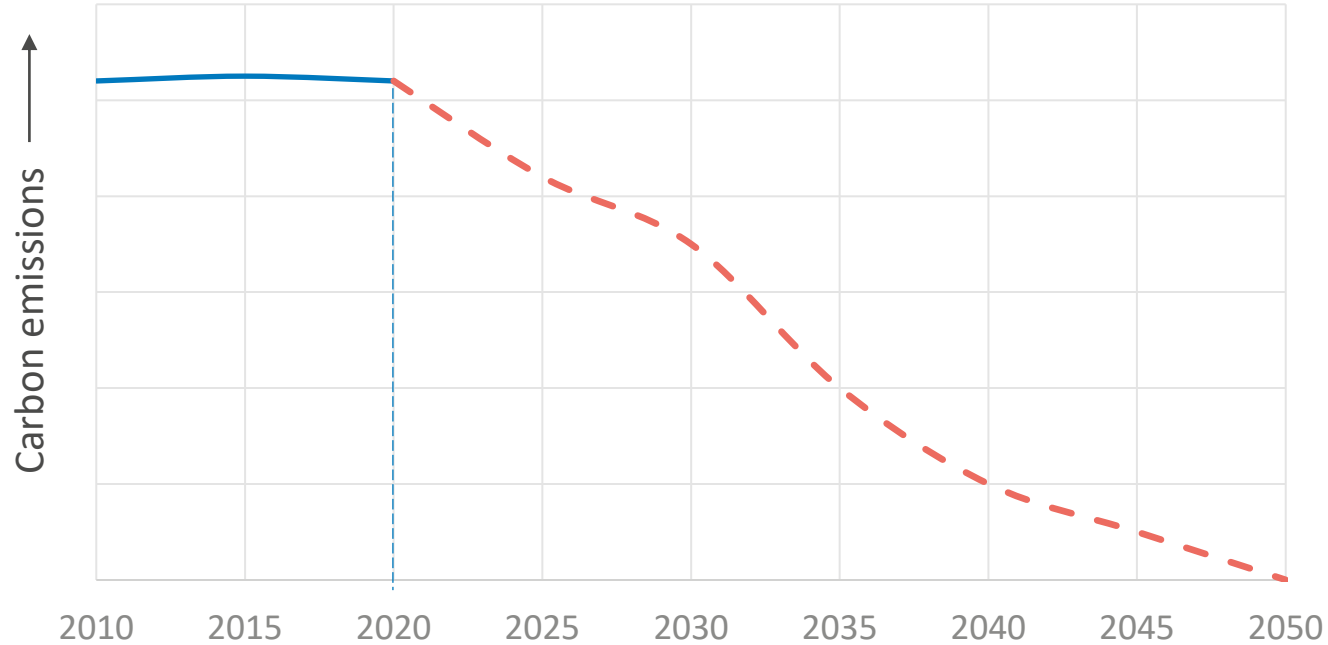
Content

1. The transport decarbonisation challenge
 - *Discussion*
2. The Government's Transport Decarbonisation Plan
 - *Discussion*
3. TfSE's work on decarbonisation
 - *Discussion*

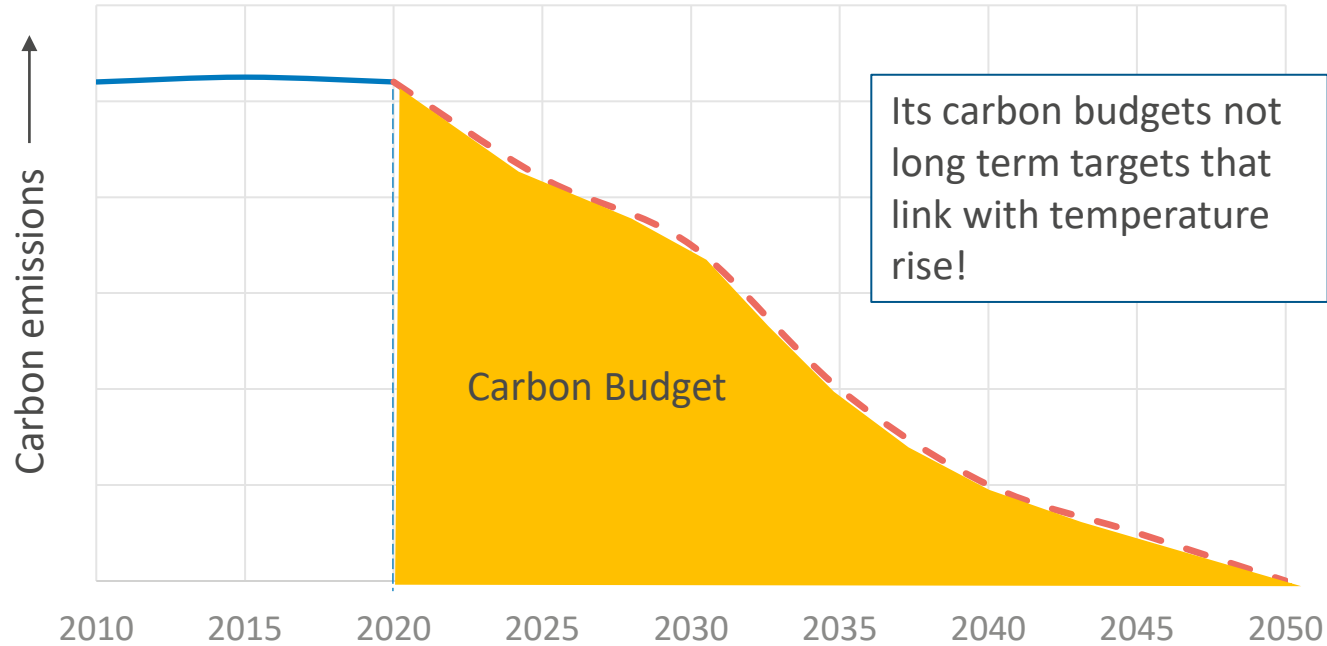
The climate emergency

- The Paris Agreement is a legally binding international treaty to avoid dangerous climate change.
- In recognition that climate change represents an urgent and potentially irreversible threat to human societies and the planet, 196 parties including the UK signed the Paris Agreement
- It is a legal binding treaty which aims to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.
- In the UK Climate Change Act, as amended in 2019, commits the UK to achieving 'net zero' carbon emissions by 2050.
- In November 2021, the UK will host the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow
- Key aim of COP26 is to Secure global net zero by mid-century and keep 1.5 degree global temperature increase within reach

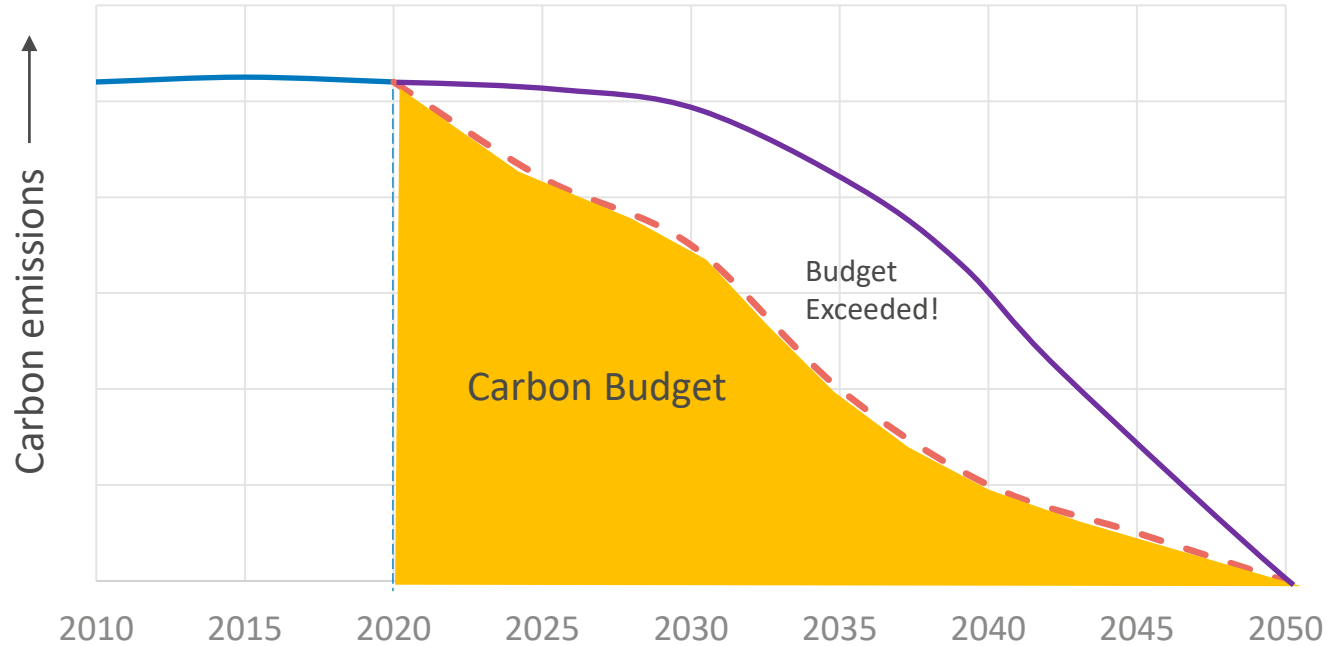
Pathways to zero



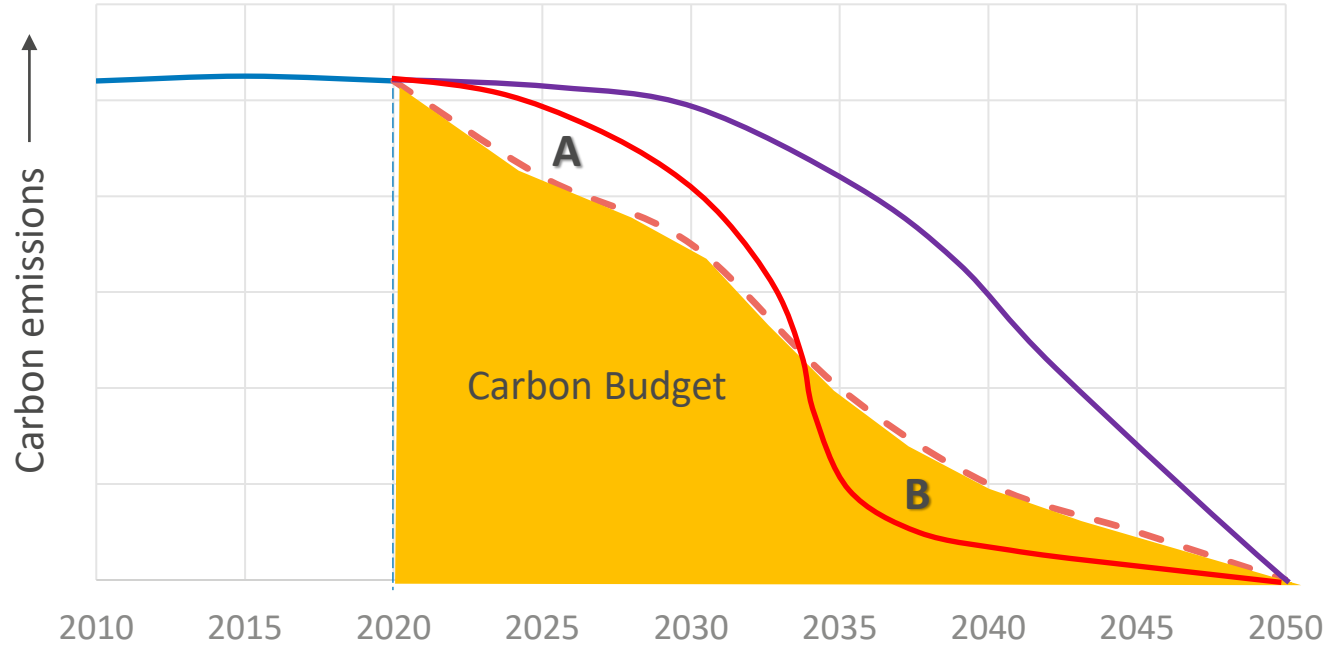
Pathways to zero



Pathways to zero

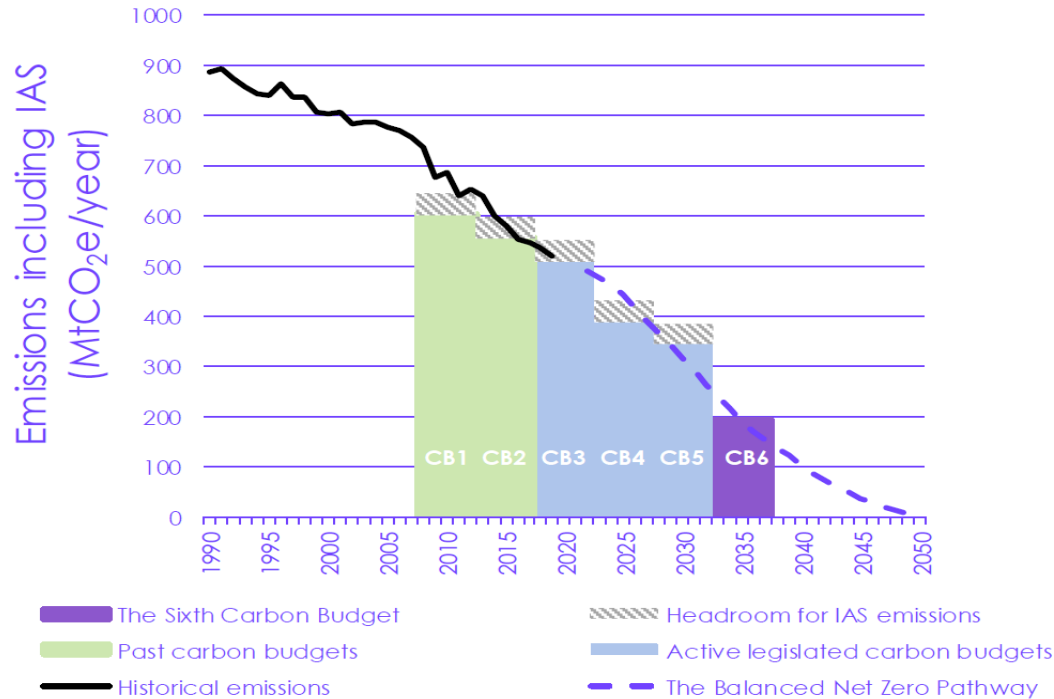


Pathways to zero



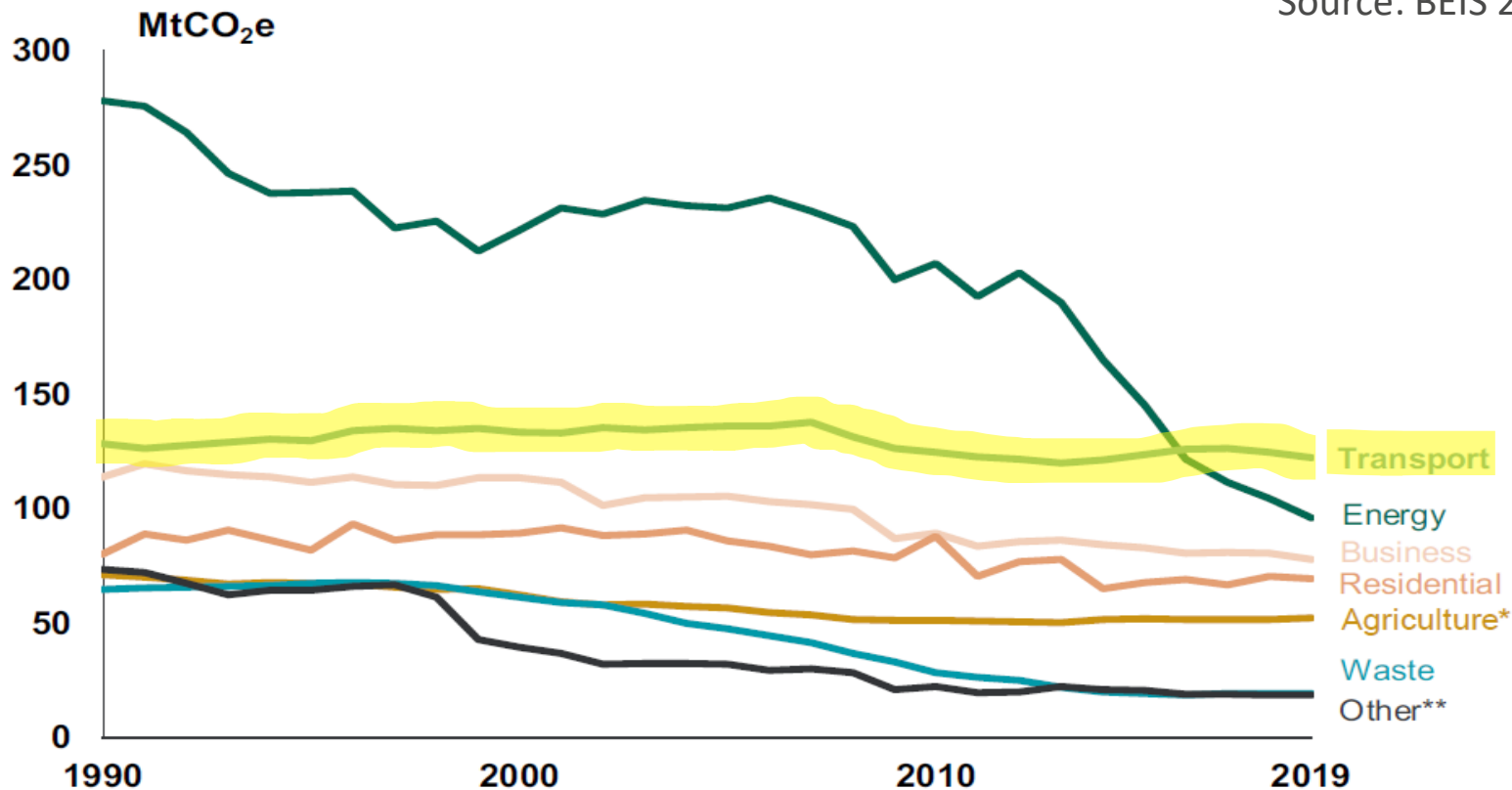
Recommended sixth UK carbon budget

Source: CCC 2020



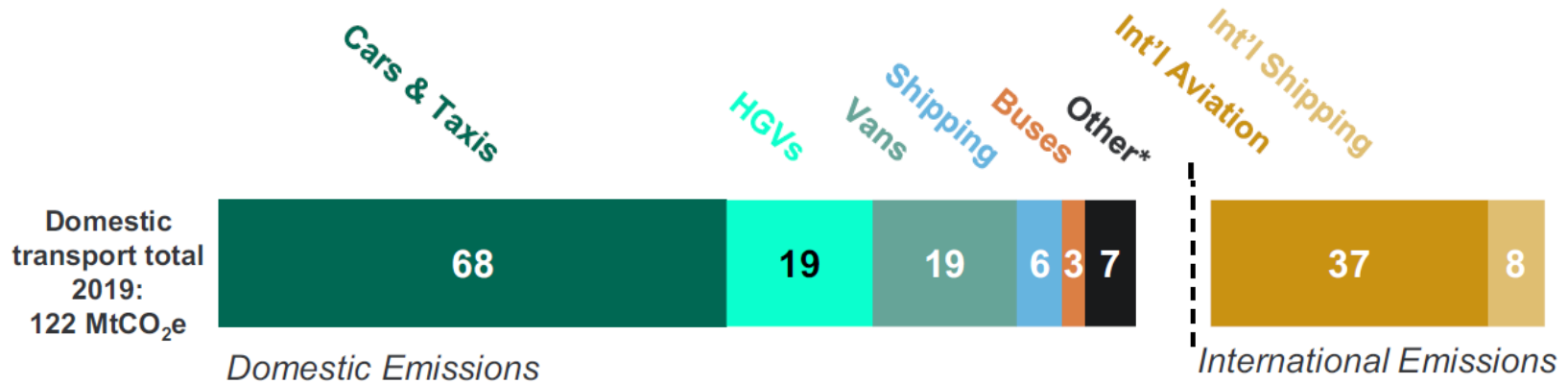
Greenhouse gas emissions by sector 2019

Source: BEIS 2021



Greenhouse gas emissions by mode 2019

Source: DfT 2021



Avoid, shift, improve

Improve vehicle technology and fuel efficiency (EVs, Hydrogen)

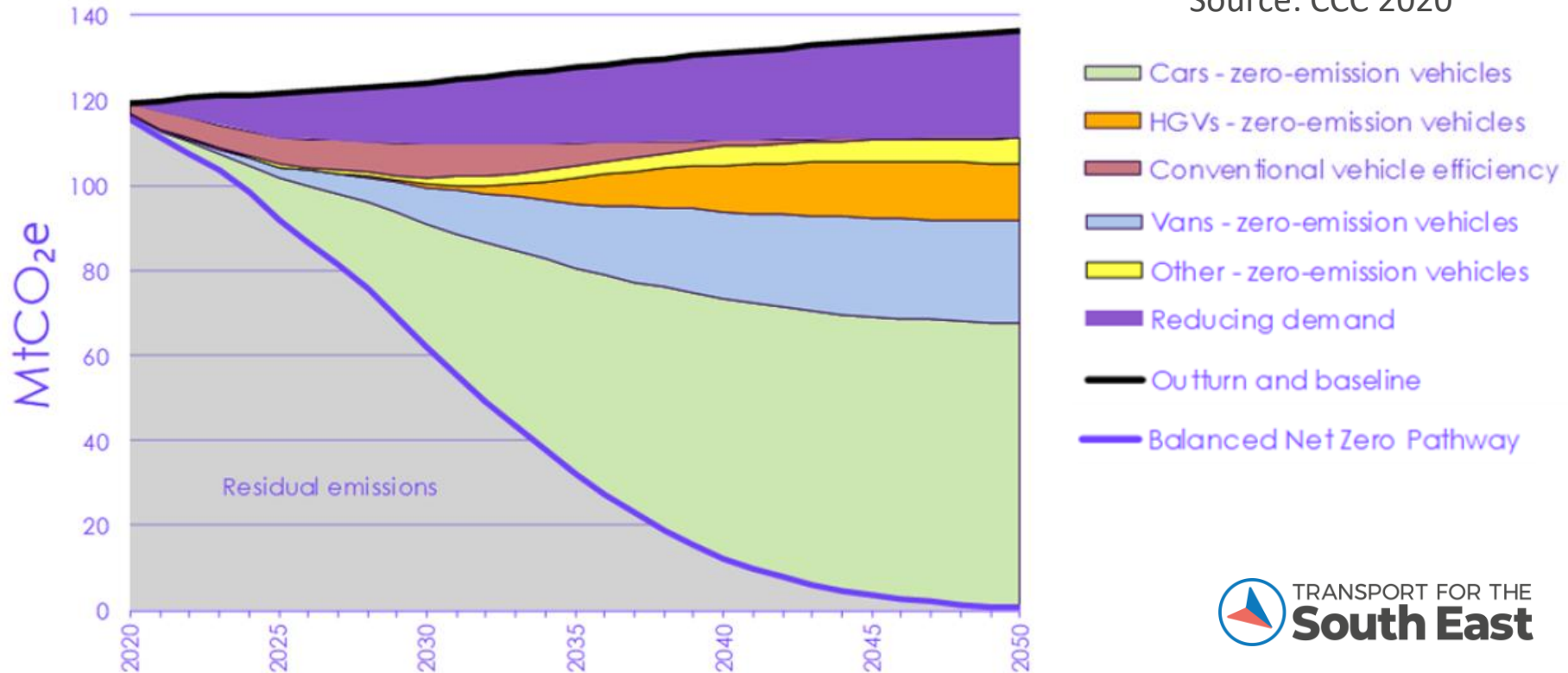


Avoid and reduce the need to travel (home working, demand management)

Shift to more energy efficient modes (public transport/active travel)

Balanced net zero pathway for surface transport

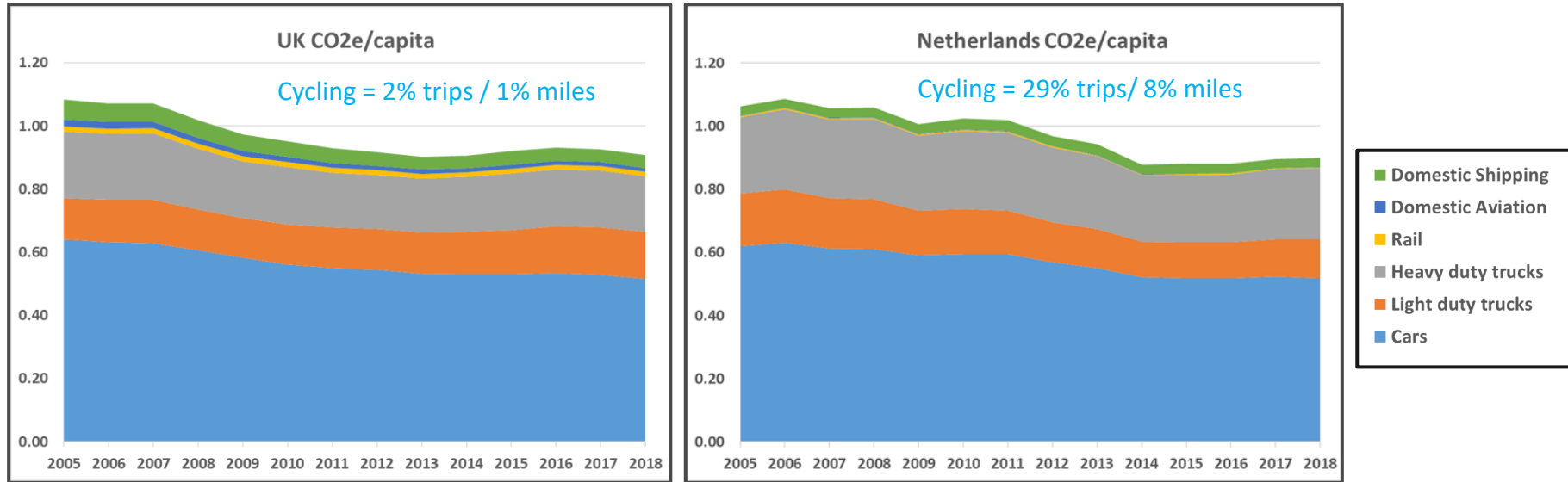
Source: CCC 2020



Comparative levels of car use in UK and the Netherlands

Dutch people's carbon footprint from travel is as large as ours in the UK

Like us, short and local trips only account for a small proportion of all the miles

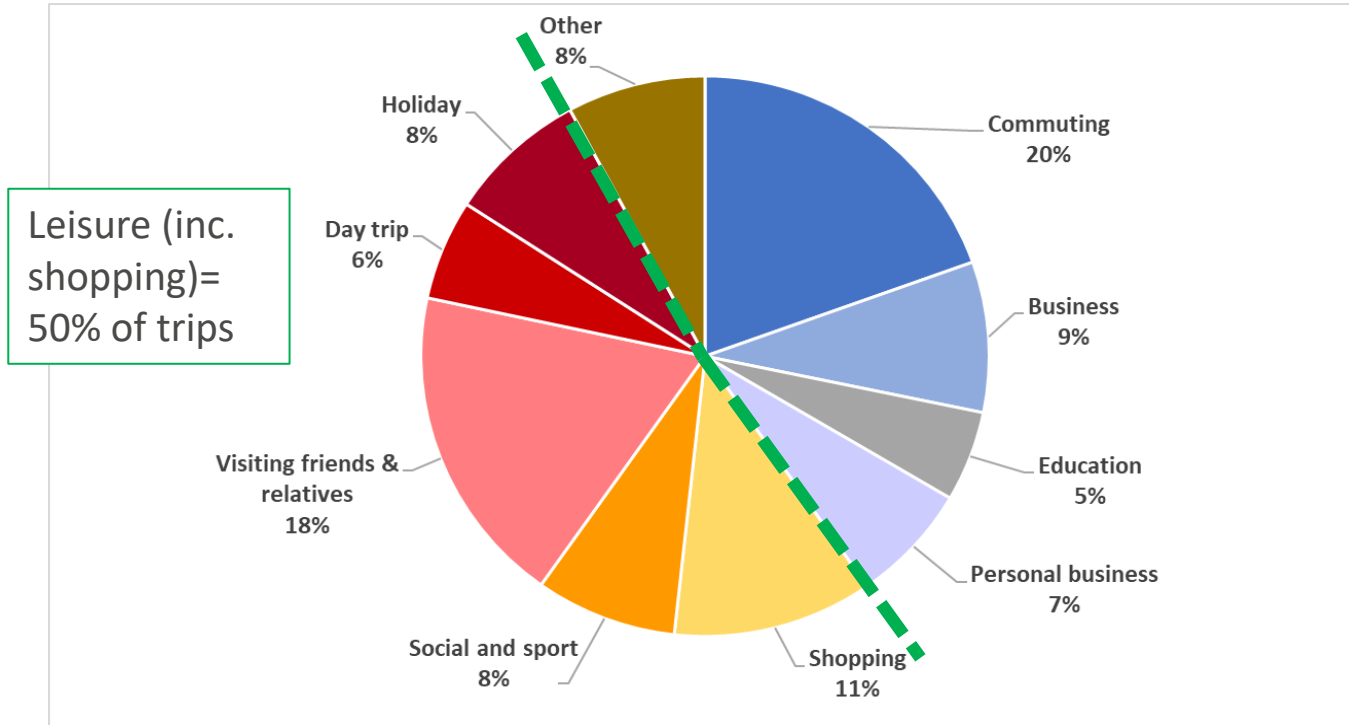


Derived from: EEA greenhouse gases - data viewer <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>



TRANSPORT FOR THE
South East

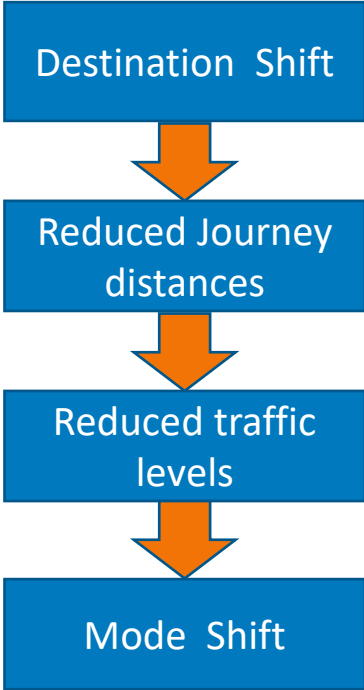
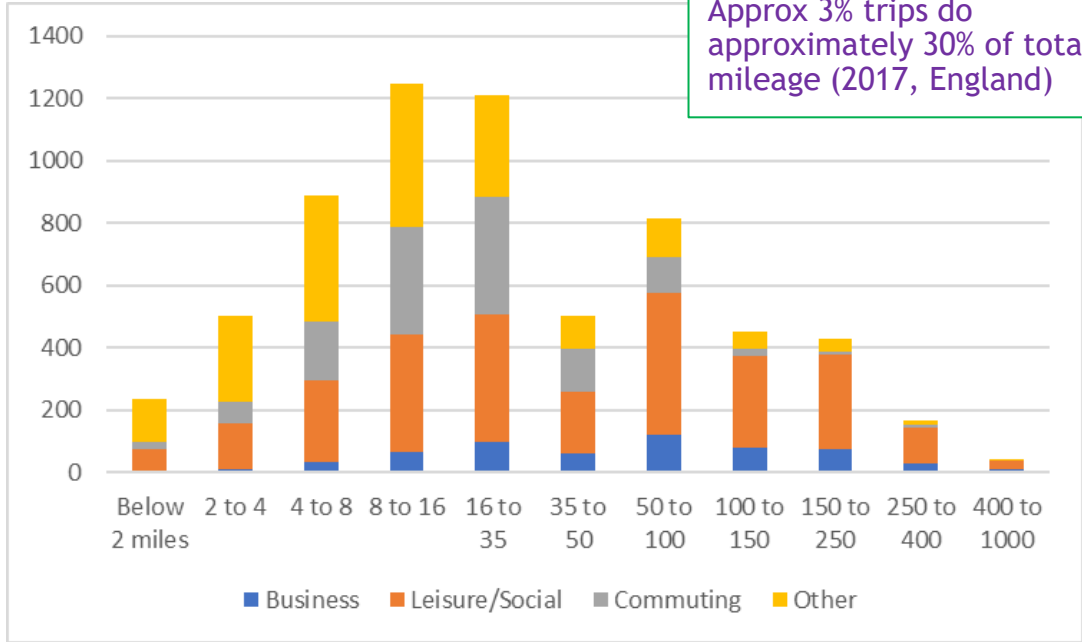
Proportion of miles undertaken by journey purpose



Source: NTS (England) 2018

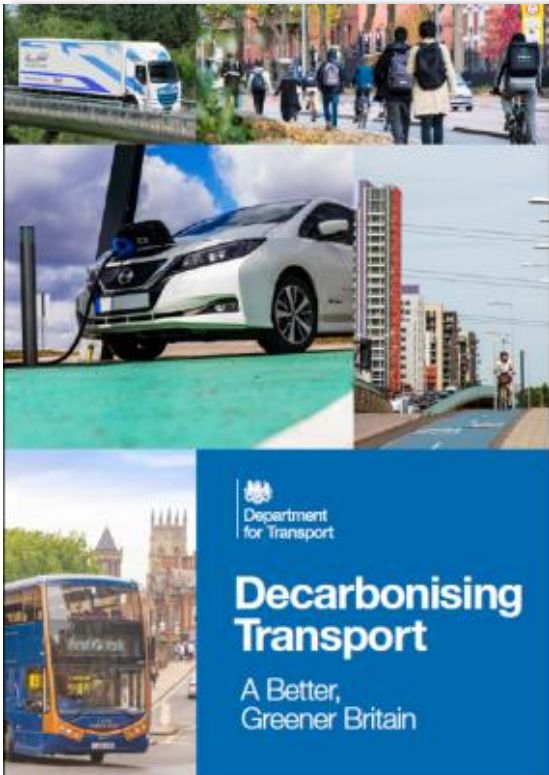
Need to reduce journey distances in addition to mode shift

Approx 3% trips do approximately 30% of total mileage (2017, England)



Analysis of undertaken by University of Leeds of National Travel Survey 2017

Discussion




“The Transport decarbonisation plan.....is not about stopping people doing things: it’s about doing the same things differently. We will still fly on holiday, but in more efficient aircraft, using sustainable fuel. We will still drive on improved roads, but increasingly in zero emission cars. We will still have new development, but it won’t force us into high-carbon lifestyles.”

“....decarbonisation will rely, in part, on future transport technology, coupled with the necessary behavioural and societal change.”.

Rt.Hon. Grant Shapps MP, Transport Secretary - 14 July 2021

Strategic Priorities in the TDP

1. Accelerating modal shift to public and active transport



2. Decarbonising Road Transport



3. Decarbonising how we get our goods



4. UK as a hub for green transport technology and innovation



5. Place-based solutions to emissions reduction



6. Reducing carbon in a global economy



Source: DfT 2021

Strategic Priorities in the TDP

Source: DfT 2021

1.

Accelerating modal shift to public and active transport



- Public transport and active travel will be the natural first choice for our daily activities.
- We will have a cohesive, widely available, net zero public transport network designed for the passenger
- We will use our cars differently and less often, with new technology helping reduce our carbon footprint

↓ ↓
CO₂e
1-6
MtCO₂e savings
from 2020 to 2050

Increased walking and cycling

↓ ↓
CO₂e
35-37
MtCO₂e savings
from 2020 to 2050

Zero emissions buses and coaches

Strategic Priorities in the TDP

Source: DfT 2021

2.

Decarbonising Road Transport



- We will phase out all new non-zero emission road vehicles, from motorbikes to HGVs, by 2040*
- Delivered by a world leading regulatory framework and support packages, leading the global race to zero emission road transport
- We will ensure infrastructure will not be a barrier to the zero emission transition



Zero emission fleet of cars, vans, motorcycles and scooters

Strategic Priorities in the TDP

Source: DfT 2021

3.

Decarbonising how we get our goods



- We will decarbonise our freight system, pioneering new zero emission technologies with mass scale demonstrators for HGVs
- Increasing amount of freight will shift from road and air to more sustainable modes, with digital solutions and data sharing optimising efficiency
- The last mile will be decarbonised and places will have the logistics solutions best suited to their specific needs


200–220
MtCO₂e savings
from 2020 to 2050

Strategic Priorities in the TDP

Source: DfT 2021

Place-based solutions to emissions reduction



- By 2050 every place in the UK will have its own net zero transport network
- We will reform the way local transport infrastructure is funded to drive decarbonisation at a local level
- All places will have the ability to take bold action to decarbonise transport, to radically change how people travel and level up the UK

5.

'New' announcements in the TDP (1)

- an all electric bus town or city and a zero emissions transport city
- consultation on phase out dates for all non zero emissions HGVs, non zero emission powered two wheelers and buses and coaches
- domestic aviation to be to be net zero by 2040 (and consult on airport operations by 2040) and shipping 2050
- review of National Networks National Policy Statement
- Local Transport Plans will need to deliver ambitious quantifiable carbon reductions in transport in line with carbon budgets and net zero.
- a Local Authority Toolkit to be published in 2021, providing guidance to support local areas to deliver more sustainable transport measures

'New' announcements in the TDP (2)

- commitment to reform of local transport funding to better deliver decarbonisation and levelling up
- transport decarbonisation principles to be embedded in spatial planning and across transport policymaking
- review of how to best represent decarbonisation measures in transport business cases and appraisals to be completed
- Consultation on a Mobility as a Service Code of Practice
- specific opportunities for decarbonisation through innovation in rural areas will be identified in the upcoming *Future of Transport: Rural Strategy*
- Sub-national Transport Bodies to facilitate cross regional work and provide a single voice on a pathway to net zero

Avoid, shift, improve

Improve vehicle technology and fuel efficiency (EVs, Hydrogen)



Avoid and reduce the need to travel (home working, demand management)

Shift to more energy efficient modes (public transport/active travel)

Development of a Transport Decarbonisation toolkit

Shift

- Demand Responsive Transport
- Promoting zero emission car clubs
- Cycling infrastructure and encouraging active travel
- Behaviour change through communications
- Encouraging car / ride sharing

Changing behaviours



- Space reallocation
- Greater use of existing planning powers allowing for the implementation of low carbon transport i.e. spatial planning
- Best practice implementation of mobility hubs and transport hubs

Reducing the need to travel



Avoid

Transport decarbonisation toolkit

Avoid

ULEZ Charging schemes

- Parking policies more broadly e.g. park and rides
- Congestion charging
- Emissions zones



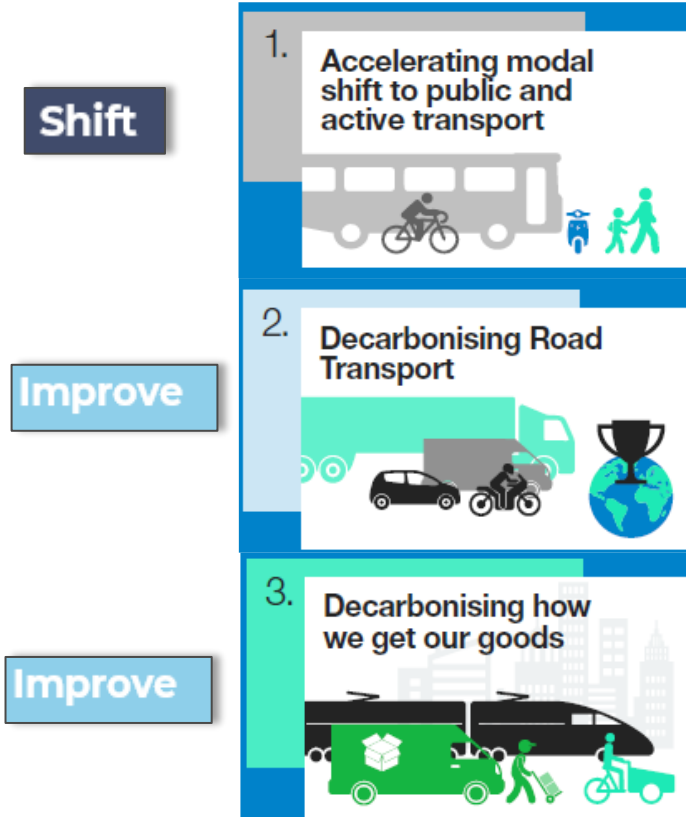
Decarbonising the vehicle fleet

- Ultra Low and zero emission buses
- EV infrastructure and incentives
- Freight / e-cargo bikes
- Decarbonisation of LAs' own fleets, and requiring contractors to use zero emission vehicles

Improve

Avoiding Avoid?

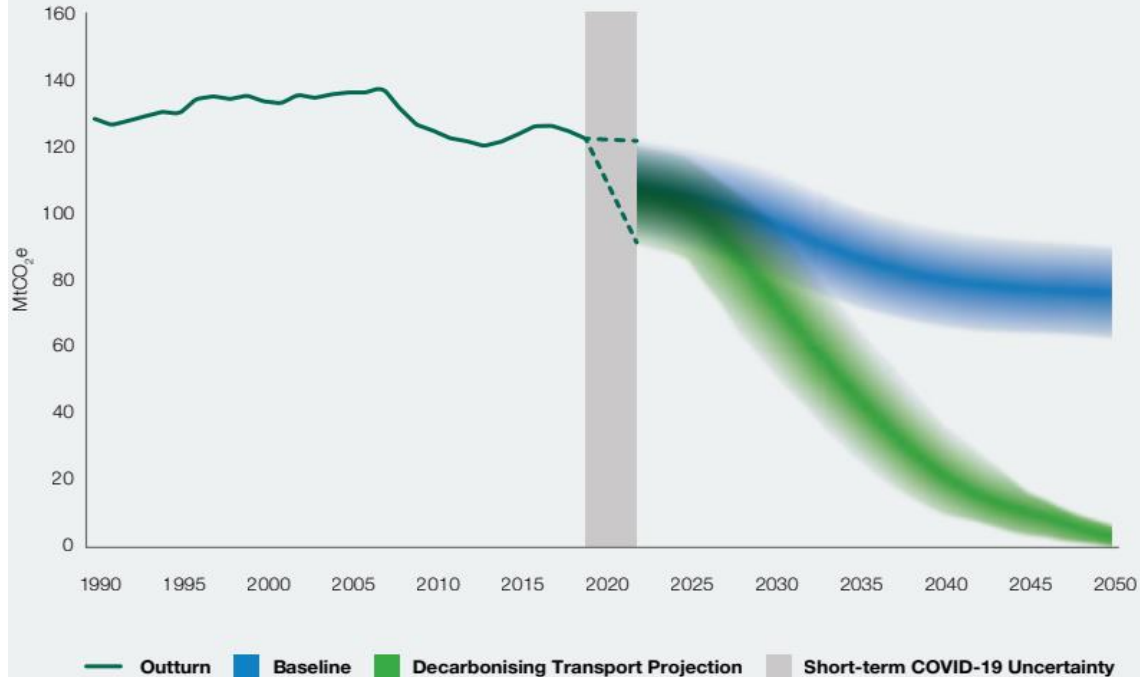
Source: DfT 2021

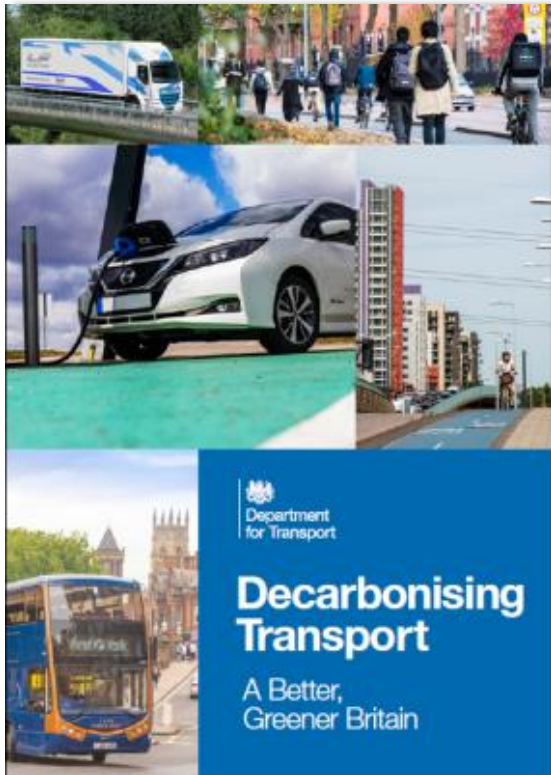


Achieving net zero by 2050

Figure 2: Decarbonising Transport domestic transport GHG emission projections, versus the baseline*

Source: DfT 2021





“...reaching the point of actual zero emissions may require additional measures beyond those identified here to support the final transition to fully zero emission surface transport.”

“Projecting emissions out to 2050 is inherently uncertain, and technology, behaviour and policy development will continue to evolve. This is why we have committed to the next transport decarbonisation plan within five years, to ensure transport is on the correct pathway to achieve net zero”.

Discussion

TfSE's work on decarbonisation

- **Carbon assessment** - TfSE's land use, economy and transport model adapted to enable impact of schemes identified in area studies on emissions to be assessed <https://transportforthesoutheast.org.uk/our-work/decarbonisation/>
- **Place based carbon calculator** – assisted with trialling of tool developed by Centre for Research into Energy Demand Solutions (CREDS) that enables carbon footprint of English neighbourhoods to be assessed <https://www.creds.ac.uk/new-neighbourhood-carbon-calculator-helps-communities-target-action-on-local-emission-hotspots/>
- **Decarbonisation pathways** – ongoing technical work to identify a carbon budget, trajectories to zero emissions, existing policies and policy gaps that need filling to achieve zero emissions across the TfSE area

TfSE's work on decarbonisation

- **South East Regional Transport Decarbonisation Forum** – for local authority officers to share best practice, identify areas for joint working and oversee TfSE's work on decarbonisation
- **DfT's four additional workstreams for STBs 2021/22:**
 - **Decarbonisation** - helping local authorities to implement the commitments made in the Transport Decarbonisation Plan
 - **EV charging** – assisting local authorities with the rollout of EV infrastructure, potentially through regional strategies.

Discussion

Thank you

Find out more
[tfse.org.uk](https://www.tfse.org.uk)

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tfse@eastsussex.gov.uk

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