

Transport for the South East response to the request from the Department for Transport for ideas about the next steps to reducing emissions in transport and creating a decarbonisation plan ensuring we are net zero in emissions by 2050.

1. Introduction

1.1 This document constitutes the draft officer response to the request from the Department for Transport (DfT) for ideas about the next steps to reducing emissions in transport and creating a decarbonisation plan ensuring we are net zero in emissions by 2050.

1.2 Transport for the South East (TfSE) is a sub-national transport body (STB), which represents sixteen local transport authorities. These are Brighton and Hove, East Sussex, Hampshire, Kent, Medway, Surrey, West Sussex, the Isle of Wight, Portsmouth and Southampton, and the six Berkshire unitary authorities. These authorities are represented on the Shadow Partnership Board along with representatives from the region's five Local Enterprise Partnerships, District and Borough authorities, the protected landscapes in the TfSE area, Highways England, Network Rail and Transport for London.

1.3 TfSE provides a single voice on the transport interventions needed to support sustainable economic growth across its geography. The South East is crucial to the UK economy and is the nation's major international gateway for people and business with some of the largest ports and airports in the country. High-quality transport infrastructure is critical to making the South East more competitive, contributing to national prosperity and improving the lives of our residents.

1.4 TfSE welcomes the Government's ambition to develop a Transport Decarbonisation Plan (TDP) to guide the transport sector towards net zero, and we recognise the scale of the challenge as set out in the 'Decarbonising Transport - Setting the Challenge' document. Our response will share the commitment set out in the TfSE transport strategy to achieve net zero emissions by 2050 at the latest, and will share the findings of our decarbonisation work, commissioned in advance of our forthcoming area studies.

1.5 Our response will also identify a number of key issues that TfSE suggests the Transport Decarbonisation Plan will need to address in order to set out a robust trajectory to net zero, including the methodology for measuring emissions, the mechanism to identify local carbon budgets and trajectories to net zero as well as the identification of roles and responsibilities for Government, regional transport bodies and local authorities. We will also identify some of the key transport initiatives which have been identified by our constituent authorities as being crucial to the decarbonisation agenda.

1.6 TfSE recognises the need to take action to address what is the biggest transport challenge facing us over the coming decades. STB's are in a unique position to help drive this forward at the local level through their close partnership working with local transport authorities, LEP's, and other key stakeholders. We would therefore urge Government to make use of this unique partnership in order to deliver change at the local level.

2 TfSE decarbonisation work

2.1 Within the TfSE transport strategy, formally approved by the Shadow Partnership Board in July 2020, we have included a commitment within our vision to reach net zero by 2050 at the latest. The transport strategy sets out an overview of how we plan to manage and invest in the south east

transport network over the next 30 years, following a process of choosing a preferred future scenario and backcasting the schemes, initiatives and policies needed to help us to reach our vision for 2050. During the development of the transport strategy, the issue of decarbonisation became increasingly prevalent.

2.2 In April 2020, TfSE commissioned Steer to undertake additional work to enable us to assess the impact of interventions to be identified as part of our forthcoming area studies on carbon emissions. The scope of the work was discussed and agreed with DfT and involved the use of the Emissions Factor Toolkit, originally developed by DEFRA, which is now being enhanced by DfT. Part of the work involved designing an interface between the Emissions Factor Toolkit (EFT) and the South East Economic and Land Use Model (SEELUM), which was developed as part of the TfSE transport strategy. This work included the following tasks:

- Updating the existing South East Economic and Land Use Model (SEELUM) to enable the impact of the use of different fuel types, energy sources and fuel efficiency levels and potential changes in fleet mix to be assessed;
- Creating an interface for transferring highways data from SEELUM into the Carbon Emissions Factors Toolkit;
- Calculating future emissions for rail travel which are not undertaken in the Emissions Factor Toolkit;
- Testing the current future demand scenarios that were developed to inform the 2050 vision for the transport strategy to assess their impact on carbon emissions;
- Developing and testing new scenarios that would enable net zero emissions to be achieved by 2050.

2.3 TfSE will submit the report detailing the findings of this study to the Transport Decarbonisation Plan team at DfT once finalised, to assist with evidence gathering for the plan. The headline findings from this work were as follows:

- Emissions from rail are forecast to reduce heavily between now and 2050, however, these emissions comprise a relatively small percentage of all transport emissions from travel in the TfSE area. Based on DfT forecasts of the conversion of vehicle fleets to electric rolling stock, still resulted in 11% of 2018 emission levels for rail travel by 2050.
- Road transport is the greater challenge both in terms of percentage reduction still required and as a proportion of total emissions. Based on DfT forecasts of the conversion of vehicle fleets to electric vehicles, still resulted in 67% of 2018 emission levels for road travel by 2050.
- The report modelled three alternative and more “optimistic” options for conversion rates to zero emission road vehicles for 2050; ‘Conservative’, ‘Intermediate’ and ‘Express’. The three options resulted in 35%, 28% and 13% residual emission by 2050 on 2018 levels, respectively. This demonstrates that ‘electrification’ is unlikely to be sufficient to achieve net zero carbon by 2050.

- The work demonstrated that if we are to achieve net zero carbon emissions from transport by 2050, a greater shift to sustainable modes will be required, including a reduction in the total number of trips we make or generate, particularly by private vehicles.

2.4 The report goes on to make recommendations about the policy interventions that will be needed to ensure that we achieve net zero emissions by 2050. These include the need for:

- policy and wider intervention to accelerate the conversion of private car fleet to zero emission;
- policy and wider intervention to accelerate the conversion of road freight to zero emission vehicles and more sustainable modes;
- policy and wider intervention to increase active travel mode share considerably; and
- policy and implementation of:
 - localised demand management interventions;
 - investment and roll out of enhanced digital technology to facilitate home working and online access to services and amenities;
 - more wholesale review of local planning and its impacts on carbon emissions, including from transport and travel; and
 - the operation of other generators of travel demand (e.g. education, healthcare).

2.5 We will explore these themes in more detail in the rest of our submission and provide further insight as to how this will assist in the journey to net zero.

3 Key issues

3.1 As the initial findings of our decarbonisation report demonstrate, the decarbonisation of transport across the UK is complex and challenging, requiring a step change in approach to ensure that we commit to a trajectory that will ensure we reach the desired target date of 2050. TfSE advocates the need for whole systems approach, to provide consistency across Government departments, regional and local transport bodies. The aim of this approach, and the derived benefits, would be to identify a carbon baseline which all key actors sign up to, along with an agreed methodology for identifying the trajectory to net zero. Having defined this the TDP should then set out clear roles and responsibilities for all those with a role in delivering reductions in emissions so that they are aware of the part that they must play.

3.2 STB's and local authorities will have a vital role to play in delivering the country's response to the challenge. We therefore advocate that legislated national carbon budgets should be translated into regional and local carbon budgets, with associated central Government funding aligned with the plans and policies required to ensure those authorities can follow the emissions reductions trajectories that will be needed to ensure they do not exceed the carbon budget for their areas. There is a role for STB's in assisting their constituent authorities in identifying regional and local solutions to deliver the reductions necessary to achieve net zero emissions.

3.3 The role of carbon budgeting, in particular carbon budgets already set out in legislation as proposed by the Committee on Climate Change (CCC) and formally adopted by Government, are key to the UK reaching net zero by 2050. To date these budgets have been reached, but on the current policy trajectory Carbon Budget 4 (2023 – 2027) and Carbon Budget 5 (2028 – 2032), will not be reached. The TDP should set out the indicative trajectories to net zero 2050 beyond the carbon budgets that have already been set. The TDP needs to include an action plan, that will set out the

actions required to ensure those budgets are not exceeded and the role of the Government, regional transport bodies, and local transport authorities in delivering those actions.

3.4 Currently funding for regional and local transport bodies is predominantly competition-based. With the challenge of reaching net zero, there is the need for certainty over long term funding, so that strategies and implementation plans can be planned, and bought into locally, without the uncertainty of funding coming to an end, and the damaging prospect of emission reductions stalling. This would also ensure a consistent approach to the challenge across the country, and across more local areas.

3.5 The development and approval process for major transport schemes, particularly those that would assist with the decarbonisation of the network, are time consuming, expensive to navigate and do not adequately take into account the carbon reduction benefits of these schemes e.g. a rail scheme that has significant potential for encouraging modal shift from road based to rail. We would support a move to ensure that the appraisal process adequately measures the carbon reduction benefits of major schemes so that schemes with a high contribution towards net zero can be suitably fast-tracked through the development process. The separate joint STB response to this consultation advocates the development of a Transport Infrastructure Fund to remove the current mode-based funding mechanisms and evolve a holistic approach to funding major infrastructure. TfSE supports this position.

3.6 The TDP should identify the need for a national conversation about how we use and pay for travel and transport. This is particularly pertinent in view of the impact that the ending of the sale of diesel and petrol fuels will have on revenue generated from Vehicle Excise Duty and Fuel Duty. We believe there is an opportunity for a national conversation about the development of a pay-as-you-go mechanism for travel and transport, that would manage demand for individualised forms of transport, reduce emissions and generate revenue that could be hypothecated to support public and shared transport schemes. The development of smart ticketing systems has the potential to place users at the heart of the transport network, and to help on the route to net zero by encouraging modal shift. STB's are well placed to assist with the planning and implementation of this approach with their constituent authorities.

3.7 Throughout the development of the TfSE transport strategy, key stakeholders have identified the current disconnect between transport planning and spatial land use planning. This issue should be identified as one for action within the TDP and its associated action plan. Currently there is a very high risk that many of the planned development sites set out in Local Plans are at risk of locking in car use, due to the lack of integrated planning around how future residents will travel to and from local services. TfSE would suggest that there is an opportunity to refocus to place planning for people and places at the heart of the planning system, with a higher priority given to new developments on sustainable transport corridors to help reduce carbon emissions.

4 Transport initiatives

4.1 In this section we will set out transport initiatives that could help the trajectory to net zero. The suggestions have been compiled with the assistance of our constituent authorities. We should be clear that each constituent authority faces many unique local challenges, that they are best placed to make informed decisions on. In particular, mobility in urban and rural settings require fundamentally different approaches, and this should be acknowledged and catered for in the outcomes of this consultation.

4.2 With the electrification of the transport network and the end of the internal combustion engine (ICE) a Government commitment, the TDP must set out a pathway to achieve this. There must be a clear action plan that identifies a pathway to electrification of the road fleet, along with clear responsibilities set out for those organisations involved in its' delivery. This must include all tiers of government, the private sector, as well as energy companies and the National Grid. As the TfSE decarbonisation work has shown, the current trajectory of policy for electric vehicles is not ambitious enough to decarbonise before 2050, and therefore a more ambitious timeline will need to be planned and implemented.

4.3 The current pause on new electrification schemes on the rail network risks this sector losing its current low carbon status over the longer term. TfSE looks forward to seeing the recommendations of the Network Rail 'Traction Decarbonisation Network Strategy' when this is published and would support an ongoing programme of electrification which would remove diesel trains from intensively used routes. The consideration of battery and hydrogen technology for less intensively used routes, and/or combinations of bi and tri-mode traction should also be considered as a short-term step towards decarbonisation. Consideration should be given within the decarbonisation plan to the clear benefits of electrification, and the other societal benefits, including improved air quality, and the long-term health benefits from the removal of diesel traction.

4.4 TfSE is aware of planned hydrogen schemes beginning to move from concept to planning across the south east area. The use of hydrogen fuel cells for both road and rail has the potential to accelerate the decarbonisation of the transport network, alongside electrification. We would urge the department to set out its ambition for production of carbon free hydrogen generation, using the current and future renewable energy generation which is operating and planned around the south east coastline.

4.5 The decarbonisation of the freight network is particularly challenging. The electrification of road freight HGV's and their current projected range is a considerable barrier to their decarbonisation. Similarly, the space required to transport the volume of hydrogen required to allow the range for fuel cell HGV's to remain similar to ICE HGV's, presents challenges. TfSE would support continued investment in the development of electric and hydrogen powered HGV's to overcome these barriers. TfSE also strongly supports the shift from road to rail freight wherever possible, as a low carbon freight solution. We are aware of the implications that this has for the rail network, in terms of accommodating increasing passenger and freight services. We would therefore suggest that all future Network Rail 'Continuous Modular Strategic Plans' (CMSP's) and 'Rail Network Enhancement Pipeline' (RNEP) schemes should have enhancing rail freight as a core component of their study.

4.6 Linked to the above, we would urge the department to recommend a review of the strategic locations of distribution hubs as an outcome of the TDP. Within the south east, TfSE is aware that much of the freight arriving at our ports and gateways is transported from it's arrival point, on to distribution points in the Midlands and the north, to be deconsolidated and then transported back to the consumer within the south east. For last mile delivery in towns and cities, consideration should be given to regional freight consolidation centres, with 'last mile' delivery undertaken by electric vans and cargo bikes.

4.7 TfSE would also highlight the importance of the TDP addressing rural transportation, as well as that within and between urban centres. We are aware that decarbonising transport within rural areas is challenging due to the lack of alternatives to the private car. This is a particular issue in our geography as a large part of the TfSE area is made up of rural areas. We would recommend that the

department consider the potential for Mobility Hubs at strategic locations on the transport network and set out within the TDP how this can be progressed and by whom. The sustainable transport connections between the mobility hubs and rural settlements should also be considered. This should include a review of technology to improve accessibility, including Mobility as a Service (MaaS), shared transportation, Demand Responsive Transport (DRT), Micromobility, as well as traditional modes of public transport.

4.8 Earlier in our submission, we identified the importance of beginning to plan for people and places, rather than the traditional transport planning approach of planning for vehicles. This entails a shift towards planning for modal shift, away from road based private transportation, towards attractive, high quality public transport alternatives. This also includes the necessity to plan an integrated transport policy, with land use planning which reduces the need to travel, adopting emerging transport technologies and implementing more significant demand management policies.

4.9 TfSE would also strongly support a funding mechanism for local authorities that provides long term revenue and capital funding certainty for active travel schemes beyond the recent funding that has been provided to capitalise on the changes in travel behaviour which have manifested themselves during the Covid -19 pandemic. As mentioned previously, these funding streams such as the Local Sustainable Transport Fund (LSTF) and the Access Fund for Sustainable Travel have been competition based, which has meant that many local authorities, and consequently residents, have been unable to derive the benefits that these projects have delivered elsewhere. We strongly believe that travel behaviour change must be at the centre of the decarbonisation plan. There is a need to understand how citizens can be encouraged into healthier travel behaviours, and the incentives that may be required to facilitate that change.

4.10 Finally in this section, TfSE would identify the importance of consistent messaging across all levels of Government on the importance and immediacy of decarbonising transport, and the wider economy. As the impact of change required is so challenging, we would highlight the importance of holding a national conversation with the public, clearly setting out the challenges and the medium, and longer-term, benefits of decarbonisation. This will need to be an open and frank conversation, and clearly set out the benefits for the individual and the wider good of our society, including improvements to health, air quality, reduced congestion and quality of life. Quality conversations will be needed so that schemes with a higher decarbonisation outcome are acceptable to the public and are able to be progressed with local support.

5 Conclusion

5.1 TfSE fully supports the development of the TDP and recognises the scale of the challenge in reaching net zero by 2050. As set out in our transport strategy, in our view this must mean a shift from the traditional transport planning approach of planning for vehicles, to a longer-term vision of planning for people and places. This needs a more integrated transport system, which is also integrated with the spatial planning system in order to reduce the need to travel, provide low carbon choices, an improved public transport offer, and improved opportunities for active travel.

5.2 TfSE recognises that decarbonisation is the biggest challenge of our generation, and we are keen to work closely with DfT to play our part in meeting it. Our unique partnership with our constituent authorities, LEP's and stakeholders means we are ready to help government on the journey to net zero over the coming years.