TRANSPORT FOR THE NORTH

Thank you for taking the time to view our proposals. Please let us know your thoughts by filling out this feedback form. Please return your completed feedback form no later than 31st August 2021

Please Return your forms to us using either:

FREEPOST Decarbonisation Strategy response@tfndecarbonisationstrategy.com

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***PLEASE COMPLETE ALL SECTIONS IN BLOCK CAPITALS**

DIVERSITY AND EQUALITY

The equality and diversity questions below are designed to ensure that our consultation is socially inclusive and that the responses we receive are representative of all of society. If you would prefer not to provide this information you are free to answer 'Prefer not to say' to any or all of these questions

Gender: Male

Ethnicity: White British

DO YOU CONSIDER YOURSELF TO HAVE A DISABILITY, IMPAIRMENT OR LONG-TERM HEALTH CONDITION?

Yes ☐ No ☒ I would prefer not to say ☐

DO ANY OF YOUR CONDITIONS OR ILLNESSES REDUCE YOUR ABILITY TO CARRY OUT DAY TO DAY ACTIVITIES?

Yes, a lot ☐ Yes, a little ☐ Not at all ☒ I would prefer not to say ☐

YOUR DETAILS

If you choose not to fill in all parts of this section, we will **not** be able to include your comments in the consultation process.

First Name or Initial: Ambrose

Surname: White

Postcode: LS1 2DE

Age Group (please tick)

Under 13 ☐ 13-17 ☐ 18-24 ☐ 25-34 ☐ 35-44 ☒ 45-54 55-64 ☐ 65-74 ☐ 75-84 ☐ 85+ ☐

YOUR CONTACT DETAILS

We will use these details to contact you and update you on the proposals. You don't have to fill in this section if you'd rather we didn't contact you.

Telephone: 0113 348 1765

Email: ambrose.white@westyorks-ca.gov.uk

I am completing this form as a...

Member of the public ☐
Business group representative ☐
Environmental group representative ☐
Public body representative ☒
Other ☐

West Yorkshire Combined Authority

We have presented a range of information about present day emissions being generated by surface transport in the North, as well as the emissions we expect to be generated in the future without additional policy measures in place. Are there any other factors affecting these emissions, or additional areas for analysis, that would be important for us to consider?

West Yorkshire Combined Authority welcome this opportunity to comment on Transport for the North's Decarbonisation Strategy and take part in the discussion over the challenge of decarbonising transport in the North.

The Strategy would benefit from greater spatial analysis of the trips that are responsible for the most significant emissions. The data presented usefully demonstrates the contributions of journeys of different lengths to the total emissions – and shows that there is a fairly even split between journeys of 0-10km and 10km and over. TfN should consider greater spatial analysis of longer distance inter-regional and pan-Northern trips to understand which trip types should be a focus for mode shift and decarbonisation – and which interventions within the Investment Programme are most likely to enable this.

Further analysis of the type, locations and scale of car and freight trips that could feasibly be switched to alternative modes is also vital to understand better which movements should be targeted for modal shift. For example, understanding which longer distance car trips could be switched to rail (plus a sustainable access mode) given the coverage of the rail network across the North. TfN will have a particular role to play in assessing current car movements that cross between regions and local authority areas that could be switched to rail, as these may be difficult for individual authorities to assess in depth. Trip length is a useful element of building this understanding but wider factors considerations beyond this are needed More detailed analysis would provide greater insight into the potential for mode shift for longer distance trips. Although focussed on shorter distance trips, the approaches taken in Transport for London's Analysis of Cycling and Walking Potential studies offer an example of a detailed exploration of potential to switch to sustainable modes.

Greater analysis of impacts on different groups and the impacts they have on emissions would also be useful. There is high level analysis of gender, age and employment group – but further analysis could help understand the impact of other factors, in particular geography, settlement type and income level. As an example, the Place Based Carbon Calculator provides insight into how emissions vary between communities at LSOA level. This helps identify where alternatives to car are most needed to reduce transport-related emissions at a much more local level than the analysis in the Strategy which shows emissions level by authority area.

Use of the Place Based Carbon Calculator clearly shows that inner-city communities produce least transport carbon compared to the average, in agreement with TfN's analysis that the majority of emissions come from sub-urban and rural residents, and it highlights the importance of measures that target decarbonisation in these more dispersed communities.

TfN could undertake work to identify how emissions vary by settlement type, distance from local or urban centres, or other factors that might influence transport carbon emissions. This would help local partners develop packages of measures that respond to different decarbonisation challenges. Assessment of rural areas should consider seperately the impacts from travel in more affluent communities in rural areas, and the measures needed to support more affluent communities within rural areas to switch to lower carbon alternatives, as well as measures needed to support deprived communities in rural areas which are likely to suffer from transport poverty, isolation and inaccessibility to jobs, services and amenities – and who may be locked into unaffordable car dependency.

It should not be assumed that rural communities will be inherently dependent on car travel (as the analysis seems to do), and TfN should look to models outside of the UK that demonstrate that suitably comprehensive public transport networks can be provided in rural areas. The Campaign to Protect Rural England's "Every Village, Every Hour" report is particularly useful in envisaging such a network and how it might be achieved (see here Every village, every hour 2021 buses report: full report - CPRE).

Further analysis of the relative contribution of the different recommended actions to the overall carbon trajectory would help understand the priorities for TfN, national government and local partners. As an example, our Carbon Emissions Reductions Pathways study includes waterfall charts showing how different types of measure (e.g. technological change, demand reduction) cumulatively get us to net zero, broken down by sources (see here for example). We would be happy to discuss in more detail the approach taken to develop our own pathways work and how it feeds into our Connectivity Infrastructure Plan and our Climate and Environment Plan. The relative contributions of different actions and the themes identified by TfN should be used to prioritise the actions TfN take, as well as form part of prioritisation and review of the Investment Programme

Some of the assumptions and statements made as part of the analysis should be challenged to ensure they do not affect the analytical work underpinning the Strategy more widely.

Trips over 50km, which are responsible for 14% of all emissions, are clearly an important area to tackle. These are described as difficult to shift to “cleaner modes” – without further justification. The nature of the challenge of mode shift for these types of journey will vary significantly depending on the nature of the traveller and the journey itself, and some will be in scope for shift to rail which should be seen as the most suitable mode for journeys of this distance unless circumstances make it unsuitable.

70% of emissions in the North are identified as arising from trips on the Major and Strategic Road Network; this is provided as evidence that longer distance journeys are responsible for a high proportion of emissions. However as both Major and Strategic Road Networks (MRN/SRN) may be used for longer distance and local trips, further analysis of the range of journey lengths on both networks would be needed to understand in full their contribution to emissions.

The Strategy demonstrates the level of indirect emissions arising from electrification of the transport system, relative to overall emissions from surface transport, based on the Climate Change Committee’s (CCC) Balanced pathway assumptions. The Strategy should recognise that the CCC projections rely on a number of assumptions about future change, and whilst the CCC view them as achievable, they are not guaranteed to be achievable in the timescales required and so there is an element of uncertainty about the actual reduction in indirect emissions. The CCC analysis should be treated with caution and not as a prediction of future outcome or necessarily a probable future, but assumptions that would need to be achieved in order to achieve the Balanced Pathway.

TfN should consider the potential impacts of failure of these assumptions to be realised on the overall trajectory and whether there are any assumptions that put the expected reductions in grid carbon intensity at risk. Uncertainty over future travel demand, potential lower operating costs of Zero Emission Vehicles, continuing investment in the highways network and increases in capacity, could mean the trajectory is not achieved. If grid decarbonisation is not able to be achieved at the rate required, and take up of ZEVs does proceed in line with targets, then further burning of fossil fuels will be required to meet this demand. Scenario development beyond the Future Travel Scenarios should be undertaken that include different grid decarbonisation trajectories and the effects of this on overall emissions from an electrified transport system.

The Strategy should also recognise that in addition to potential emissions from the grid arising from electrification of road transport and private cars, generating capacity will need to meet demand not only for electrified transport, but for other sectors such as domestic energy use and heating, and decarbonised commercial and industrial energy supplies. In addition, the distribution system will need to be capable of meeting the future demand from all sectors. These factors mean that greater caution should be applied to forecasts of the ability of the grid to meet demand, especially if the shift to ZEVs does result in unexpected increases in travel demand and energy use.

The Strategy usefully sets out TfN’s position on embodied carbon but does raise some potential concerns. Although capital carbon may be a small proportion of overall carbon emissions relating to many forms of infrastructure development, it may have a relevance for major infrastructure schemes where significant volumes of materials are required. For example, schemes involving tunnelling or grade separation may involve new structures that could be difficult to implement without resulting in significant embodied carbon emissions.

It is not clear whether TfN regard embodied carbon from vehicle manufacture as part of total embodied carbon (including ZEV cars, buses, mass transit vehicles, HGVs and rail rolling stock). TfN should take a broader view about the embodied carbon inherent in achieving the trajectory identified, and in particular the potential for increased embodied carbon emissions from measures aiming to significantly accelerate ZEV uptake. TfN should also recognise the wider social and environmental impacts of current ZEV production and the importance of avoiding this where possible through mode shift and demand reduction as alternative means of decarbonisation.

Recent analysis by the International Council on Clean Transportation estimate lifecycle emissions from Battery Electric Vehicles in 2030. Whilst these are estimated to be significantly lower than those from Internal Combustion Engine vehicles, these are still estimated to be over 50g CO_2 equivalent/km. These lifecycle emissions need to be taken into account when considering future changes in levels of car use (both in terms of trip volumes and lengths) – whether in a scenario of 3-14% reduction in car miles, or in the case that these reductions are not achieved, or if overall car miles increase as a result in changes in operating costs.

In addition to the construction carbon elements identified in the Strategy, TfN should refer to Highways England's accounting of embodied carbon which recognises the impacts of maintenance and renewal which are an inherent part of a project's impact.

As well as learning from the embodied carbon pilot study on the Tyne and Wear/South Northumberland corridor, TfN should work with other sub-national transport bodies, government departments and bodies such as ICE and ADEPT, to work towards improving early stage estimates of projects within the Investment Programme.

For example, perhaps producing estimates of capital carbon in different scenarios based on current conventional construction materials and techniques; current known low carbon approaches (e.g. for example using guidance and case studies included in PAS2080); and potential future developments in low carbon construction that are not yet developed.

Once satisfactory estimates of embodied carbon can be made for schemes in the Investment Programme at the various stages of project development, TfN should use these not only to inform appraisal, review and sequencing of projects as part of an ongoing review process, but also to consider the total embodied carbon emissions likely to be generated as a whole by the IP. TfN should also be prepared to revise the carbon modelling to understand whether there is an effect on the trajectory arising from programme-level emissions including embodied carbon. Appraisal of carbon impact of individual schemes, without assessment at programme level, is one of the issues raised in the Transport for Quality of Life report on the carbon impact of the national roads programme (their report available here). The risk of underestimating the scale of impact of the programme as a whole on TfN's stated decarbonisation target should be avoided, including total embodied carbon arising from the programme.

Although the Strategy notes the challenges of estimating carbon emissions from embodied carbon at early stages, there should be scope for TfN to develop benchmarks and high-level estimates of likely ranges of emissions that could result from construction and delivery of future schemes within the IP, in conjunction with partners such as Decarbon8, ICE, ADEPT (as suggested above). These could be agreed with other sub-national transport bodies to provide a standard benchmark for major infrastructure. Some useful comparators will already exist, for example, Highways England's own carbon modelling (encompassing operational, construction and maintenance/renewal carbon) for its proposed schemes could provide benchmarks for major highways infrastructure such as grade separated motorway junctions or dualling of single carriageway roads. We are developing an approach to capital carbon as part of our own work to develop a Carbon Impact Assessment methodology, to help strengthen our Assurance Framework. We would welcome the chance to share our approach with TfN, and make use of the learning gained through the pilot projects and the estimates produced by TfN to inform the Investment Programme, as part of improving our own guidance.

To what extent do you agree or disagree with TfN's approach to developing a Decarbonisation Trajectory?

Strongly Agree ☐ Agree ☒ Neither agree nor disagree ☐
Disagree ☐ Strongly Disagree ☐

We have not undertaken a detailed review of the NoCarb model development, which we understand forms the basis of the trajectory development. As a result, our focus is more on the trajectory itself rather than the technical approach. The Strategy usefully shows how the TfN trajectory compares to local authorities' trajectories across the north. An equally useful comparison that should be made is to the CCC's 6th Carbon Budget and the Department for Transport (DfT)'s Transport Decarbonisation trajectory which has now been published – to demonstrate that the scale and pace of reduction matches or exceeds the requirement that has been identified nationally.

We recognise that levels of ambition for decarbonisation vary across the North, and that the TfN trajectory achieves a mid-point between different local partner trajectories and targets for net zero. However, we feel that TfN should adopt greater ambition and lead from the front, setting a faster pace of decarbonisation and seeking to achieve greater reductions in earlier years (up to 2030) – to reach net zero rather than "near net zero" (recognising that "net zero" itself relies on uncertain negative carbon emissions measures to achieve true zero carbon). Greater ambition from TfN could lead local partners to aim for more ambitious local targets.

It isn't clear how the TfN trajectory aligns with government's target of achieving a 78% reduction in carbon emissions by 2030 (on 1990 baseline) and whether in reaching "near net zero" by 2045, the North will be making the contribution required of it by the national target. More work to assess this alignment should be undertaken and the trajectory revised, if it is found to be needed in order to meet the national target.

The exclusion of aviation and shipping from the analysis to develop the trajectory – with a commitment to undertaking further work to understand the impact and update the trajectory – risks understating the role of TfN in national policy on these modes as a sub national transport body, as well as the role of the transport networks in the North that provide access to these modes. TfN may not have jurisdiction over aviation and shipping but do have influence, and it will be important to understand of the impact of these modes in terms of emissions and widening the scope of the trajectory beyond surface transport. This will ensure that TfN's trajectory reflects the scope of the CCC's 6th Carbon Budget and government's Transport Decarbonisation Plan.

The analysis expresses emissions in terms of CO_2 rather than CO_2 equivalent (CO_2e), which is the metric required by government for greenhouse gas emission reporting, and as used by the Committee on Climate Change, and local partners such as in our own Carbon Emissions Reduction Pathways work.

Choose the three Policy Gap Actions (for TfN to prioritise), that you consider to be of most importance?

- ☒ PGA8: Develop and implement comprehensive plans for the regional public transport network, such as Northern Powerhouse Rail and wider improvements to the rail network.
- ☐ PGA9: Develop an evidence base on the extent to which less work-related travel has a detrimental effect on productivity and agglomeration to understand whether homeworking can be consistent with TfN's vision for a transformed Northern economy.
- ☒ PGA10: Use our role within the Rail North Partnership to promote shared mobility at train stations, including car share, car club, cycle hire and e-scooter schemes.
- ☒ PGA11: Provide evidence and strategic support to partners to identify opportunities for shared mobility.
- ☐ PGA12: Work with Government to support regional coordination of measures to improve logistics efficiency, including consolidation centres, mode shift to rail and information democratisation schemes.
- ☐ PGA13: Influence government to develop appraisal guidance that includes the full impacts of transport projects on carbon.

Choose the three recommendations for national government, that you consider to be of most importance?

Mode Shift

- ☒ Work with train operating companies to implement a targeted reduction in rail fares and increase integration and flexibility of ticketing systems.
- ☒ Provide a substantial and consistent funding stream to Local Authorities to improve public transport and active travel networks.

Reducing car travel

- ☒ Develop a coherent plan for taxing and pricing car travel that accounts for reduced Fuel Duty revenues and incentivises key outcomes such as reduced overall car travel, more efficient road network operation and uptake of ZEVs.
- ☐ Support employers to roll-out home working, flexible working and remote working hubs.

Shared mobility

- ☐ Ensure Local Authority funding and planning regimes support shared mobility solutions alongside traditional public transport options.
- ☐ Require employers to report on emissions from all employee travel to encourage a shift towards vehicle sharing.

Freight efficiency

- ☐ Require shippers to provide consumers with information on emissions from different shipping options and encourage uptake through information and pricing.
- ☐ Fund a project to develop common data collection methods, formats and sharing platforms that overcome competition and privacy barriers and enforce data reporting to government.
- ☐ Establish a framework for consolidation centre planning as well as funding and support for Local Authorities to perform local area assessments.
- ☐ . Support the licensing of high capacity vehicles on specific roads (major motorways) for specific users where the benefits are clear.

Planning policies

- ☐ Use the National Planning Framework to '15/20-minute neighbourhoods'.
- ☐ Develop appraisal guidance that includes the full impacts of transport projects on carbon

Choose the three recommendations for local government, that you consider to be of most importance?

Mode Shift

- ☐ Use marketing policies to re-build confidence in the safety and value of public transport.
- ☒ Subject to Government funding, invest in bus and light rail networks to offer improved journey quality, accessibility and cheaper fares to passengers.
- ☒ Implement policies to enhance dedicated cycle networks, low-traffic neighbourhoods, and activities to promote behaviour change.
- ☐ Implement policies to promote safe and accessible use of e-bikes and e-scooters.

Reducing car travel

- ☐ Roll out parking policies to reduce congestion and make space for sustainable infrastructure.
- ☐ Consider charging policies such as clean air zones or congestion charging, particularly where and when sustainable transport modes are a viable alternative option.

Shared mobility

- ☐ Utilise planning contributions from new developments to enable shared vehicle provision.
- ☐ Develop mobility-as-a-service (MaaS) platforms and mobility credit systems, to link public transport journey stages and improve accessibility and reliability.
- ☐ Support the provision of demand-responsive bus services to complement existing networks.
- ☐ Trial and roll out cycle hire / e-scooter sharing schemes.

Planning policies

- ☒ Use local planning policy to promote '15/20-minute neighbourhoods', prioritise development close to public transport hubs and encourage car-free or car-lite development.
- ☐ Consider introducing a Workplace Parking Levy, utilising lessons learnt from Nottingham.
- ☐ Support and facilitate the roll out of car-free zones and streets.
- ☐ Develop park-and-ride sites with integrated EV charging infrastructure and cycle parking.
- ☐ Implement planning policies that support the development of freight consolidation centres.

Do you feel we have missed any policy actions or recommendations?

The Policy Analysis and actions identified are based around three themes: Zero Emission Vehicles, Demand Management, and Improvements to conventional vehicle efficiency. A focus on mode shift and demand reduction – including consideration over a national approach to road pricing – should be at the forefront of TfN's actions. The shift to lower/Zero Emission emitting vehicles and technological change should be seen as a secondary measure.

We suggest that a hierarchical approach would be more appropriate, making clear that technological shifts would be of lower priority than reducing demand and shifting modes. The Northern Ireland Department for Infrastructure's recent "Planning for the Future" Report sets out priorities for the future of transport in Northern Ireland, and includes a clear hierarchy for action on reducing transport carbon:

1. Substitute trips (remove them completely, shorten them)
2. Shift modes (use more energy efficient forms of transport)
3. Switch fuels (use zero or less carbon intensive fuels)

The current Demand Management section includes measures to reduce demand and to shift to lower emitting modes; to give both of these elements necessary prominence, TfN should consider splitting this into two separate themes. The themes are presented without any sense of priority or hierarchy, and without suggestion of the different scales of impact they would have across the trajectory period.

There is little action identified for TfN or national government in terms of demand management measures such as charging or pricing – this type of measure is only suggested for local authorities to undertake. There could be a role for TfN to investigate options, potential benefits and impacts of different types of travel demand management measure at regional, sub national and national levels, in conjunction with local partners and government. The measures identified for TfN under "reducing car travel" don't seem to reflect the options and issues raised in the proceeding policy analysis and how TfN can support this.

Action PGA10 is an action that requires partnership between Rail North Partnership and Local Authorities. This should be broadened to encompass all sustainable modes of access to rail stations, including walking, bus, and light rail rather than focussing solely on shared mobility. The Rail North Partnership can help raise this issue up the agenda with local authorities, train operating companies and Great British Railways, to ensure that rail stations are as accessible as possible to local communities, and that sustainable access is prioritised, enabling low or zero carbon end-to-end journeys.

Actions SD2 and SD8 (Stakeholder Driven Actions) recognise the significance of developing approaches to low carbon rural transport provision and the range of approaches needed. SD2 may help identify potential solutions but TfN must ensure this work is rooted in real life examples and work with local partners. Some West Yorkshire districts with extensive rural areas could be useful pilot project locations, such as Calderdale. We would encourage TfN to make contact with us on this action. The proposal around SD8 suggests that TfN risks placing too much emphasis on technological solutions to rural transport challenges. Existing challenges such as sustained revenue support to deliver convenient conventional public transport services should be seen as of equal importance in tackling rural inaccessibility.

Actions for national Government identified around rail ticketing policies should be prioritised and widened to encompass TfN and government working together with Transport Authorities to make it easier to introduce fare policies that reflect patterns of everyday travel to work and other amenities/services, ensuring that unintended outcomes don't arise due to discrepancies between areas and travel from boundary zones (e.g. people regularly driving to stations in neighbouring areas to benefit from reduced fares rather than using local stations)**.**

As the body responsible for identifying the MRN and monitoring performance against the conditional outputs agreed previously, TfN should review whether these conditional outputs still provide the right performance framework in the light of the decarbonisation challenge.

Revised outputs could balance the current focus on journey time reliability and delay, to include outputs that measure whether vehicle miles or traffic volumes on the MRN are increasing or decreasing (linked to the known reductions in vehicle mileage required in the North). They could also allow TfN to understand whether the MRN is facilitating and prioritising movement between the key economic assets identified in the Major Roads Report – or whether it is moving more local journeys that might increase following investment and additional capacity. The current conditional outputs include a measure of vehicle occupancy provides a basis for widening this to include the kinds of other metrics suggest that better support the decarbonisation trajectory.

In addition, Revisions to the Network Management Duty to reflect more clearly the current imperatives of decarbonisation, encouraging healthier forms of transport and an emphasis on technology (could see a need for review of the principles of management of the Major Road Network and the conditional outputs, to ensure that the approach remains aligned to the Duty.

Furthermore, government strategies for bus and active travel should be a prompt for TfN to consider how national objectives can be achieved on the MRN in the North. The National Bus Strategy and Gear Change Active Travel Strategy (which included a commitment to a revised network management duty) both set out the expectation and requirement that roadspace will need to be allocated to bus, walking and cycling on key routes which will0 include the MRN in both urban and rural areas. TfN will need to work with Government and local authorities to consider how the MRN can be improved and managed to deliver on these objectives.

Equally TfN should consider how the current programme of improvements for the MRN can be delivered whilst ensuring the reductions in car, HGV and LGV traffic that the Strategy identifies as necessary are achieved, or whether there is a contradiction. TfN should review the 2018 updated Major Roads Report to address any conflict with the Decarbonisation Strategy, its trajectory and in particular the required reduction in vehicle miles identified.

The Major Roads Report was developed in partnership with Highways England and future management of the MRN will require collaboration to ensure the SRN and MRN function well in combination. TfN should look to further develop this working relationship with Highways England, to ensure that use of the Strategic Road Network supports decarbonisation rather than leads to increases in carbon emissions.

As the Decarbonisation Strategy recognises, emissions from the SRN are similar in scale to those from the MRN, and HGV emissions form a significant proportion – so ensuring that longer distance journeys that use the SRN are a focus for decarbonisation is important. TfN and Highways England could develop joint plans to shift road freight currently using the SRN to rail where possible, ensuring that the HGV traffic using the SRN relates to movements that cannot be shifted. Collaborative working on ZEV HGV fuelling infrastructure could support hauliers to invest in new vehicles where shift to rail is not possible.

With respect to local government actions, it should be recognised that measures to reallocate roadspace and make space for sustainable infrastructure are challenging to deliver, and will need to be implemented with other measures to ensure that reductions in travel demand are achieved, to avoid the risk of traffic levels remaining unchanged but capacity reduced and delay increased.

Similarly, TfN's suggestion that local authorities introduce car free zones and streets should be accompanied by the recognition that these measures should be introduced with close community consultation and engagement. The Secretary of State has set out to local authorities suitable consultation on these kinds of schemes should include objective tests of public opinion, such as professional polling. Government published an example of this kind of polling in January 2021, with the results of residents' surveys on Low Traffic Neighbourhoods in four locations, alongside research on broader public opinion on traffic and road use. Both of these surveys found that the majority of people supported reductions in traffic and reallocation of road space in their local area – but implementation of local schemes need to be accompanied by similar consultation to understand local public opinion.

Quantifying the level of policy commitment – Demand management (page 56 to end of page 57)

	No focus	Less focus	Balanced	More focus	Entirely focused
Technology	☐	☒	☐	☐	☐
Demand reduction	☐	☐	☒	☐	☐
Mode shift	☐	☐	☐	☒	☐

ZEV and ICE efficiency

Choose the three Policy Gap Actions (for TfN to prioritise), that you consider to be of most importance?

- ☒ PGA1: Develop a pan-northern ZEV infrastructure plan to ensure trans-boundary road trips are considered, factoring in interoperability across the region and optimal locations for high-power charging hubs on the Major Road Network, with input from Local Authorities and the Distribution Network Operators (DNOs).
- ☐ PGA2: Work with Local Authority partners and Highways England to facilitate large ZEV truck trials in high traffic corridors in the North.
- ☐ PGA3: Work with Local Authorities and freight stakeholders to help aggregate large orders of ZEV vans and trucks across the North and overcome demand shortages.
- ☒ PGA4: Through the Northern Powerhouse Rail programme, support the government and Network Rail in identifying appropriate routes for electrification and associated implementation.
- ☒ PGA5: Work with Network Rail and train operating companies to ensure service patterns are based around the progression of electrification and minimising the use of diesel-only trains.
- ☐ PGA6: Influence Government to trial alternative technology freight locomotives in the North.
- ☐ PGA7: Work with Network Rail to ensure there is sufficient capacity to allow freight traffic to run directly and with minimal dwell times, reducing emissions from existing diesels.

Choose the three recommendations for national government, that you consider to be of most importance?

Road vehicles

- ☐ Strengthen the existing policy to phase-out ICE car and van sales by 2030 to include hybrids.
- ☒ Increase taxes on new ICE vehicles from the early 2020s, with rates escalating in line with emissions intensity.
- ☐ Develop a coherent and comprehensive strategy for charging infrastructure, defining a role for local and regional bodies, providing public funding where appropriate and developing a regulatory regime that enables the private sector to invest and ensure interoperability.
- ☒ As more ZEV HGV models become available in the 2020s, introduce a system of strong grants and tax incentives.
- ☐ Fund large ZEV HGV trials in high-traffic corridors.
- ☐ Implement measures to rapidly increase supply of ZEV models. This could include measures that stimulate domestic manufacture, which also have the potential to drive green growth in the North (see Chapter 8).

Rail

- ☒ In partnership with Network Rail, identify and fund a core network for electrification with the highest traffic density, then prioritise secondary, lower density routes where alternative technology will be the permanent solution.
- ☐ For routes where alternative technology is the long-term solution, provide funding to procure new rolling stock.
- ☐ In partnership with delivery bodies, work with freight operating companies to understand the need for incremental electrification of freight, and the need to electrify the full distance to the main freight nodes (e.g. ports).
- ☐ . Support freight operating companies and rolling stock builders in the development of alternative technology freight locomotives.

Choose the three recommendations for local government, that you consider to be of most importance?

General

- [x] Develop a model for delivery and maintenance of electric vehicle charging infrastructure, covering rapid hubs, on-street charging, public parking spaces, and council fleets. Initially proactive bidding for Government funds will be needed, but over time private sector investment will support this, subject to an effective national and local regulatory regime.
- [ ] Implement a common procurement framework for infrastructure across administrative areas to encourage economies of scale and interoperability across the region.
- [ ] Carry out community engagement to increase understanding of EVs and EV infrastructure.
- [ ] Implement policies to prioritise ZEV shared transport, such as car share and car clubs.
- [ ] Collectively adopt taxi licensing policies that require new vehicles to be zero-emission. This will need to be coupled with provision of charging infrastructure at taxi ranks.
- [x] Aggregate purchases of ZEV vans and trucks across the North (supported by TfN).
- [ ] Engage with bus operators to set targets and standards for rapid roll-out of ZEV buses.

In smaller towns, villages and dispersed communities:

- [x] Incentivise EV uptake (including electric bikes) and development of home charging infrastructure through direct funding and awareness raising (e.g. telematic tests, EV trials).
- [ ] Develop charging infrastructure at rural tourist spots to counter range anxiety. These should be developed in such a way to avoid unsustainable traffic levels within protected rural areas (e.g. National Park park-and-ride schemes).

Do you feel we have missed any policy actions or recommendations?

The proposed action PGA1 will require continued work with local partners to ensure interoperability between any MRN-based network and other local networks in development. TfN must also work with local partners to gain local knowledge and understand local priorities but can provide valuable insight with sub-national level assessment of existing and forecast demand for electric vehicles, taking into account targets to reduce car usage.

With regards to local government actions on ZEV infrastructure, the role of the public sector may be better focussed on facilitating third parties and the private sector to deliver infrastructure (e.g. through grants or access to land) rather than acting as an infrastructure provider or owner. TfN's focus on interoperability becomes significant in this regard, with a role to work with different providers to ensure a system that is easy to use for the end-user.

However, a common procurement framework as proposed as one of the actions could be important in delivering infrastructure in locations where purely commercial demand may not be sufficient (for example in smaller towns). Developing a common framework is an action better suited to TfN rather than local partners.

PGA4 is critical to achieving not only traction decarbonisation but creating the range of benefits offered by rail electrification (see comment in our response on Risks and Benefits). Government and TfN will need to develop a clear strategy setting out how and when all major passenger and freight routes will be covered, and what technology will be used for the remaining few routes not electrified. As part of this strategy a target to remove diesel only and bi-modal rolling stock from the network will be needed.

Government's actions should include continuing to invest in other improvements to the rail network beyond electrification, that increase capacity, capability, efficiency and convenience to passengers should be recognised in enabling greater levels of mode shift to rail from less energy efficient modes. As identified in our response on PGA10, both TfN and government should recognise the importance of ensuring that the rail network is fully integrated with local sustainable transport networks, and that rail freight is likewise connected with intermodal transfer and distribution facilities required, to enable mode shift from car and HGVs to rail.

Actions proposed in this section and policy analysis elsewhere in the Strategy suggest a risk that TfN focus too much on untested or limited suitability technological solutions e.g. ZEV HGVs, alternative technology freight locomotives. Although there is a role for innovation and development of new technologies, this should not come at the expense of more fundamental activities or become a point of reliance to support a "business as usual" approach.

The Policy Analysis and identified actions make no reference to the role of mass transit modes such as tram and trolleybus as low emission transport modes. Although these operate at a local/regional level, they form part of a low emission sub-regional and national transport system, providing attractive, high-capacity modes to link with the national rail network as well as potentially meeting demand for the urban and suburban journeys that the Strategy currently show as contributing almost half of car kilometres in the North. Our Connectivity Infrastructure Plan and Mass Transit Vision sets out our ambitious proposal for a regional mass transit network, and TfN's support will be important in making the case for the investment required to deliver the Vision, including recognition in its Decarbonisation Strategy of the role that mass transit networks should play in decarbonising more local journeys.

Similarly, there is no recognition of the need for support and investment from national government in moving to a zero emission (at tailpipe) bus fleet. This is a significant challenge for operators given investment cycles and the number of vehicles within the fleet and at a sub national transport level should be recognised as a key element in decarbonising the North's transport system, even if it forms part of local transport systems.

Actions to invest in new rail rolling stock should recognise the challenge and opportunity in replacing the current ageing diesel passenger rolling stock. This should be highlighted amongst actions for TfN and national government relating to rail decarbonisation and electrification.

TfN identify a priority action to work with government to support regional coordination of measures to improve logistics efficiency; but as a sub-national transport body could play a more expansive role in bringing together freight stakeholders across the region, including businesses, logistics and haulage companies, rail freight operators, last mile delivery companies and local authorities. There may be a need to build on the 2018 Enhanced Freight and Logistics Analysis Report and understand the requirements of different sections of the industry; consider how to address the challenges of decarbonisation both in switching to ZEVs and reducing miles travelled; and agree on the measures that TfN, local authorities and government should undertake in terms of infrastructure investment but also seek commitments from industry for change in business practice.

PGA14 - increasing public awareness of efficient driving styles and associated benefits. Successful activity of this kind would have a range of benefits, but campaigns of this sort should aim to raise awareness of wider issues around driving behaviours, including engine idling, and the impact of driving versus alternatives as part of individual carbon footprints.

The wider benefits and risks of decarbonising transport

Are there any important potential wider risks or benefits that you feel have not been considered?

COVID19 and future travel behaviour is referenced in the Strategy as a factor taken into account when modelling carbon emissions in the Future Travel Scenarios; without further detail of this (reference to this was not found in the NoCarb modelling report) it is hard to know if some of the potential trends our surveying has identified in West Yorkshire will be reflected in TfN's analytical work and policy making.

For example, our latest COVID19 survey (available here) suggests that there may be long term change, particularly relating to bus and rail travel, with around 15-20% people who used bus and rail before COVID19 stating that they would be likely to make a permanent change to use those modes less. Although the data does not attribute a cause to this (e.g. less travel overall or switch to car), it highlights uncertainty about attitudes and future use of these modes. The survey also reveals uncertainty about longer term car use – with 11% of people who said that they will be using cars more in coming weeks saying that it was likely to be permanent; and around the same number saying less car use was likely to be permanent.

TfN should avoid placing too much focus and emphasis on commuting and business travel trips, and will need to consider existing, and future travel behaviour and resulting carbon from other types of journey. For example, whilst home working may reduce commuting level; shopping trends are also likely to be important in determining travel behaviour. Over 30% of people asked in our COVID19 survey said that they were likely to make a permanent change to shop online for non-food or basic items; this may affect trips to certain types of retail locations. The significance of non-work resalted travel is reflected in figure 9 of the Strategy, which shows that "other" (non-business or commuting) trips shown as responsible for over 65% of all car-based emissions. Further breakdown and analysis of these types of trips and the opportunities for decarbonisation seems essential to achieve net zero.

We would like to see more detail on when the carbon emissions impacts of the Investment Programme will be included in an updated calculation of the overall trajectory. This could include whether there is a further review planned or a regular series of reviews of the trajectory with updated modelling, and what type of action might be taken if key assumptions or a more detailed understanding of the carbon impacts of TfN investments were found to put achievement of the trajectory at risk.

The Strategy usefully sets out a range of co-benefits and risks in table 7 and elsewhere in the Strategy but could go further to recognise other potential risks and benefits:

- Low Emissions Vehicles are recognised as likely to reduce noise; this is only the case in low speed, urban situations, but for higher speed environments such as the SRN, noise reduction may be minimal, as noise from tyres on road surfaces are likely to be unaffected.
- The lower operating costs of low or zero carbon vehicles could mean that congestion is not only maintained, but worsened as take up of EVs increases – a risk that could be magnified as a result of measures to accelerate EV uptake.
- Switching car trips to public transport, active travel and shared mobility will not only reduce congestion but make better use of limited road space as more space efficient modes – allowing road space to be used as productively as possible, providing wider benefits from wider purposes. TfN should be focussed on the need to reduce both car miles driven, and vehicle ownership – through a combination of measures introduced simultaneously to disincentivise private vehicle use whilst making alternatives more competitive in terms of convenience, journey time, price, and quality.
- There is insufficient recognition of the impact of motor traffic and a car dependent transport system on communities and the benefits that arise from reducing car use and vehicle ownership. There is no reference to road danger or severance caused by current traffic levels; nor the space required to store and move cars operating at low levels of occupancy.
- Rail electrification has a range of benefits in addition to traction decarbonisation that should be recognised – e.g. improving services, capacity and attractiveness of the system enabling greater mode shift from car, reducing industry costs, and local environmental benefits.

The Co-benefits/risks analysis considers measures in isolation but this does not reflect likely implementation; as an example, measures to restrict car use should be introduced – and will enable – improvements and increased convenience of alternative modes (e.g. through greater dedicated road space). Measures can also be designed with mitigation measures to minimise the risks identified. The analysis could be improved by identifying potential mitigations to the risks – which would include implementation alongside other measures assessed.

The Strategy makes little or no mention of protecting biodiversity, the need for nature recovery and preserving greenspaces. This may be out of step with national policy and the new Environment Bill, with requirements for Net Biodiversity Gain and forthcoming Local Nature Recovery Strategies. TfN should take a positive view towards the contribution its investment programme could make to enhancing the natural environment, and commit to ensuring its investment programme results in net biodiversity gain, and seeks to avoid damage to nature in the first place.

We welcome the Strategy's recognition of the need to understand the vulnerability of the North's transport system to climate change impacts, and the need to increase its capacity for adaptation and resilience against these impacts. The applicability of the predictions produced by the Environment Agency tool used to the North is uncertain and just how different regions within the North (with their geographical variety) will be affected by changing weather patterns driven by climate change. More recent reports suggest that impacts may be more severe than previously forecast.

In any case, the severity of the impacts presented in the Strategy's Climate Change Adaptation and Resilience should resonate throughout the document as a warning of the real local consequences of failing to deliver net zero; not just as a measure to understand the scale of adaptation required. The effects of climate change on communities and infrastructure are already being felt in West Yorkshire with devastating consequences for some in our region with increasing frequency.

It isn't clear from the proposed actions how TfN propose that the transport system be improved to create the ability to adapt and remain resilient in the face of climate change impacts – TfN's Investment Programme should be reviewed to ensure that measures to try and create this resilience are included wherever needed, to ensure that future investment safeguards the infrastructure we have already before expansion of networks and capacity is made.

TfN should also be realistic about the extent to which measures can be put in place to adapt our transport system and make infrastructure resilient against climate change impacts (e.g. through infrastructure approaches) given the scale of potential change and variability shown by the Strategy. A transport system less reliant on vulnerable modes (e.g. one that is dependent on car or road haulage to move the majority of people and goods) is likely to be more resilient against climate change impacts and this should also be recognised by TfN. Equally the themes identified for climate change adaptation do not seem to include recognition of the role of having a range of alternative routes in case of diversion or blockage. This is a factor that should be considered when considering resilience of long distance rail passenger and freight traffic and how projects that provide alternative route options can help increase resilience and reduce disruption to services.

Are there any parts of the population that you think will be disproportionately impacted by transport decarbonisation? why?

It is not inevitable that there will be disproportionate impacts from decarbonisation. There are both risks of negative impacts on particular communities, as well as opportunities for potential benefits for the same communities or others. Assessment of negative impacts and opportunities for different groups should be undertaken in a balanced way to understand the full range of impacts.

Equally, decarbonisation measures that are insufficiently targeted, and designed without mitigation to reduce any disproportionate impacts, are of course likely to lead to parts of the population that may be disproportionately impacted by such a form of transport decarbonisation. The challenge for TfN, local partners and national government is to ensure that this is avoided. This can be helped by more detailed and nuanced analysis, as suggested earlier in our response, as well as collaborative and careful policy and scheme design.

The IPPR's Environmental Justice Commission released their "All Aboard – a plan for fairly decarbonising how people travel" in June 2021, supported by a series of citizens' juries. This uses CCC data to suggest that private car ownership could rise from 34 to 43 million by 2050, and traffic levels rising by 11% by 2050. The report finds that people in the lowest income households are half as likely to own cars, and more likely to walk, than those with a higher income. The Commission identify commitments for national government, but that are relevant at a sub-national level as well, including

- defining a level of "socially necessary connectivity" with an aim to make it possible to live a good life wherever you live, without needing a car
- higher investment in good transport options that deliver good alternatives to private car ownership
- setting targets to reallocate road space to cycling, walking and greenspace

TfN should engage with the Environmental Justice Commission and other groups involved in social exclusion (such as researchers working as part of the CREDs FAIR programme) as part of the proposed priority action to investigate Transport Related Social Exclusion to ensure that the work reflects national research and policy development work in this area.

The analysis summarised in chapter 5 on TRSE provides examples of some potential impacts which could disadvantage certain groups; this should be expanded into a more comprehensive assessment of the measures proposed to examine potential risks and opportunities to different groups, including those of protected characteristics, as part of the "Co Benefits and Risks" work. This assessment should also consider the mitigations that should be applied to minimise any disproportionate impacts.

In addition to the Government's proposed measures, documented in their Net Zero Review, what additional actions could TfN take to ensure that all parts of the population benefit from transport decarbonisation?

TfN's own analysis shows that the majority of car journeys are local or shorter distance, and for purposes other than business or commuting; and that in terms of emissions these types of journeys remain very important, with about half of all car journeys arising from journeys of up to 10km.

In order to achieve near net zero in the region, TfN must view decarbonisation of local travel as equally important to the longer distance, pan-Northern movements. The role of TfN in this area can be to support local partners in securing from government assured long-term capital funding for local sustainable transport infrastructure, and in particular the sustained revenue funding that is vital to enable and support the behaviour change that government, CCC and TfN have identified as required to move to a zero-carbon transport system.

Stimulating clean growth in the North

Are there any parts of the population that you think will be disproportionately impacted by transport decarbonisation? why?

The opportunities identified don't seem to recognise existing manufacturing and servicing centres for sustainable transport vehicles, including electric buses (such as Switch Mobility based in Sherburn) or the numerous cycle manufacturers within our region and the north. Supporting and growing production of the north's zero carbon public transport vehicles alongside conventional cycles and e-bikes should be seen as a priority, offering green jobs that help transition to a less car dependent transport system. Currently the Zero Emission Vehicle section seems focussed on the opportunities around switching to electric cars.

This section could go further in setting out clearly the economic opportunities from decarbonisation of transport in the North, including job creation opportunities. Government set out the national opportunity in November 2020 with the 10 point plan for a Green Industrial Revolution; a similar, more supportive framing of the economic opportunities arising from delivery of the Decarbonisation Strategy would be welcomed.

The Prime and Enabling Capabilities in the North identified through Northern Powerhouse Independent Economic Review and forming a basis for the TfN Strategic Transport Plan do not seem to be reflected in this section on Clean Growth – where they combine with the economic opportunities for decarbonisation. Further work to understand whether there is potential to grow prime capabilities that will support decarbonisation could be useful in reviewing how the Decarbonisation Strategy aligns with the STP and whether it changes the context for proceeding work by TfN.

The Clean Growth section appears to omit a range of regional challenges, including the current regulatory environment for bus services and challenges to deliver alternative arrangements; the lack of a long term rail electrification programme and rail capacity constraints including freight paths.

Transport for the North's Interactive Decarbonisation Evidence Portal

Are there any other areas where TfN should focus its future decarbonisation analysis?

See our response to question 1 for suggestions of where future analysis should be focussed.

Next steps and proposed priority actions

Chapter 1 of the Decarbonisation Strategy defines the overarching role that we feel TfN should be playing in the decarbonisation agenda. We'd like to understand the types of activities that people feel that TfN is best placed to undertake and that would be of most value in delivering transport decarbonisation.

For each of the 'priority activities to 2025' identified by TFN, which role do you feel do you feel TfN is best placed to fulfil? (1=lead, 2=support, 3=not a role for TfN)

Decarbonisation Strategy

SD1: Regional route-map for transport decarbonisation

SD2: Developing place-based decarbonisation pathways for rural typologies.

SD3: Formation of decarbonisation working group/s with TfN partners

SD4: Exploring the relationship between transport decarbonisation and transport-related social exclusion (TRSE) (inclusive of PGA11)

SD5: Research into embodied carbon analysis for strategic transport infrastructure programmes

SD6: Programmatic assessment of Investment Programme (IP) against TfN Decarbonisation Trajectory

SD7: Consideration of emissions from aviation and shipping generated by the North

Policy	SD1:	SD2:	SD3:	SD4:	SD5:	SD6:	SD7:
Your answer	2	2	2	3	1	1	1

For each of the 'priority activities to 2025' identified by TFN, which role do you feel do you feel TfN is best placed to fulfil? (1=lead, 2=support, 3=not a role for TfN)

Electric Vehicles and Fuel Efficiency

CGA1: Develop a regional ZEV charging framework (inclusive of PGA1)

CGA2: Supporting local partners in the development of local ZEV charging infrastructure

PGA14: Increase awareness of fuel-efficient driving styles

Policy	CGA1:	CGA2:	PGA14:
Your answer	1	2	2

Hydrogen

CGA2: Supporting local partners in the development of local ZEV charging infrastructure

CGA3: Undertake or support a pan-northern hydrogen transport refuelling study

CGA4: Supply chain support for future hydrogen infrastructure solutions

Policy	CGA2:	CGA3:	CGA4:
Your answer	2	1	1

Demand Management

SD8: Supporting the development of scalable digital solutions for incentivising greener, shared and active mobility in rural areas.

CGA5: Supporting a Demand Management Narrative for the North

CGA6: Supporting local partners in the development of Mobility Hubs

PGA10: Consider role of micro-mobility/shared mobility in first and last mile journeys at train stations

PGA8: Develop infrastructure to improve regional public transport network

PGA9: Research on the effects of home-working upon productivity and agglomeration.

Policy	SD8:	CGA 5:	CGA 6:	PGA 10:	PGA 8:	PGA 9:
Your answer	3	1	2	2	2	3

Freight

SD9: Low carbon urban freight scenarios

CGA7: Developing and supporting partnerships to consider zero carbon, port to port freight corridors

PGA2: Facilitating large ZEV truck trials in the North

PGA3: Support partners to aggregate large orders of ZEV vans, truck and buses across the North

PGA12: Supporting freight information democratisation schemes

Policy	SD9:	CGA7:	PGA2:	PGA3:	PGA12
Your answer	1	1	1	1	2

Rail

CGA8: Supporting our partners to attract testing and pilots of new low emission train technologies (inclusive of PGA6)

PGA4: Identify appropriate routes for electrification

PGA5: Work with Train Operating Companies (TOCs) and Freight Operating Companies (FOCs) to exploit operational efficiency opportunities (inclusive of PGA7)

Policy	CGA8:	PGA4:	PGA5:
Your answer	2	3	2

Project-level Carbon

SD10: Developing an embodied carbon database for major infrastructure developments

PGA13: Influence government to seek augmented DFT appraisal guidance

Policy	SD10:	PGA13:
Your answer	2	1

Awareness Raising and Behaviour Change

- ☐ SD11: Engagement and awareness-raising activities
- ☐ SD12: Behaviour change research

Policy	SD11:	SD12:
Your answer	2	3

Of the 'priority activities to 2025' identified, choose the three which you consider to be the top priority for urgent action?

Decarbonisation Strategy

- ☐ SD1: Regional route-map for transport decarbonisation
- ☐ SD2: Developing place-based decarbonisation pathways for rural typologies.
- ☐ SD3: Formation of decarbonisation working group/s with TfN partners
- ☐ SD4: Exploring the relationship between transport decarbonisation and transport-related social exclusion (TRSE) (inclusive of PGA11)
- ☐ SD5: Research into embodied carbon analysis for strategic transport infrastructure programmes
- ☒ SD6: Programmatic assessment of Investment Programme (IP) against TfN Decarbonisation Trajectory
- ☐ SD7: Consideration of emissions from aviation and shipping generated by the North

Electric Vehicles and Fuel Efficiency

- ☐ CGA1: Develop a regional ZEV charging framework (inclusive of PGA1)
- ☐ CGA2: Supporting local partners in the development of local ZEV charging infrastructure
- ☐ PGA14: Increase awareness of fuel-efficient driving styles

Hydrogen

- ☐ CGA3: Undertake or support a pan-northern hydrogen transport refuelling study
- ☐ CGA4: Supply chain support for future hydrogen infrastructure solutions

Demand Management

- ☐ SD8: Supporting the development of scalable digital solutions for incentivising greener, shared and active mobility in rural areas.
- ☐ CGA5: Supporting a Demand Management Narrative for the North
- ☐ CGA6: Supporting local partners in the development of Mobility Hubs
- ☐ PGA10: Consider role of micro-mobility/shared mobility in first and last mile journeys at train stations
- ☐ PGA8: Develop infrastructure to improve regional public transport network
- ☐ PGA9: Research on the effects of home-working upon productivity and agglomeration.

Freight

- ☐ SD9: Low carbon urban freight scenarios
- ☒ CGA7: Developing and supporting partnerships to consider zero carbon, port to port freight corridors
- ☐ PGA2: Facilitating large ZEV truck trials in the North
- ☐ PGA3: Support partners to aggregate large orders of ZEV vans, truck and buses across the North
- ☐ PGA12: Supporting freight information democratisation schemes

Rail

- ☐ **CGA8:** Supporting our partners to attract testing and pilots of new low emission train technologies (inclusive of PGA6)
- ☒ **PGA4:** Identify appropriate routes for electrification
- ☐ **PGA5:** Work with Train Operating Companies (TOCs) and Freight Operating Companies (FOCs) to exploit operational efficiency opportunities (inclusive of PGA7)

Project-level Carbon

- ☐ **SD10:** Developing an embodied carbon database for major infrastructure developments
- ☐ **PGA13:** Influence government to seek augmented DFT appraisal guidance

Awareness Raising and Behaviour Change

- ☐ **SD11:** Engagement and awareness-raising activities
- ☐ **SD12:** Behaviour change research

Are there any other potential activities that you feel have not been considered and could be effectively delivered by TfN?

Investment Programme

TfN's approach to managing and reviewing its own Investment Programme in the face of the decarbonisation challenge should be a priority, working with local partners. There is a need to better understand the proposed approach to sequencing on basis of fit with carbon trajectory, and challenge of whether delaying schemes is sufficient action.

TfN should ensure that they have created a robust process for appraising and reviewing the Investment Programme: both to ensure there is a focus on schemes with greatest carbon reduction potential, that maximise co-benefits; and to create a suitable framework for reviewing schemes that are likely to result in significant emissions where mitigation potential is limited. The current process outlined at programme and project level goes some way towards this but should go further. The proposed framework for carbon benchmarking suggests sequencing of the programme based on benefits and GHG emissions – but does not confirm that other social and environmental impacts as well as benefits will be included in consideration as part of this sequencing. There is also little confirmation of the significance that will be attributed to GHG emissions within the sequencing.

On this basis, it seems that the approach will be to try and deal with any misalignment between the sequenced IP and the carbon trajectory through new decarbonisation policies – rather than any revised sequencing or more fundamental review of the schemes within the programme (e.g. reviewing those that are responsible for greatest levels of carbon emissions). With little detail of what those additional policies might be and whether they are likely to be achievable and deliver the carbon reductions required, this approach may not be suitably robust to ensure TfN's future investment priorities align with the carbon trajectory and help deliver emissions reductions as quickly and as deeply as possible.

We welcome TfN's proposal to support to local partners in understanding the carbon impact of proposals throughout the project lifecycle, as part of the business case development. However review at Investment Programme and project level is proposed to focus only on sequencing, mitigation and delay (if project impacts are not consistent with the decarbonisation trajectory and sufficient mitigation measures are not available).

The framework for review at project level should be more comprehensive, allowing for consideration of other options including review and rescoping/design of the project, and potential removal from the Investment Programme, alongside delaying the project. If the framework allows only for projects to be delayed, this may provide insufficient review of projects that may result in important operational and embodied carbon emissions (both arising from construction, maintenance and renewal, but also in terms of ZEV production) that are inconsistent with the carbon trajectory, regardless of when they are delivered within the IP period.

Equally, delaying projects to later within the trajectory when they may result in less operational carbon may mean the strategic, and economic case for the project is weaker – for example, in a future with 14% fewer car miles, and 10-15% fewer LGV/HGV miles travelled. At national, regional, and local levels, there is an emerging commitment to a future of reduced travel demand, and reduced car usage. The TfN carbon benchmarking framework and review process needs to ensure that the IP and constituent projects align well with the net-zero carbon future.

Local partners will be better supported by a review framework that can demonstrate that sufficient consideration of impacts, and potential options for dealing with those impacts has been followed in developing a revised IP – which will help in local development and delivery of projects.

We would be happy to discuss further our own Carbon Impact Assessment methodology being developed to strengthen our Assurance Framework and how whether there is useful learning or alignment for both ourselves and TfN.

Proposed Priority Actions

We welcome TfN's recognition of the need to act with urgency up to 2025 but a more detailed timeline is required for priority actions (currently either identified as "continuous" or "by 2025"). The proposed review of priority actions on an annual basis in conjunction with partners is essential should include review of progress on actions, suitability of actions, and direct impacts of actions in terms of carbon emission reductions achieved. Progress against the Trajectory should also be tracked, and revisions considered if necessary. For example, failure to achieve reductions in early years will mean the trajectory will need to be revised with steeper reductions in later years.

Other comments on the Strategy and proposed actions

The development of the Decarbonisation Strategy should act as a prompt for review of a number of TfN strategies and study work developed to date. As well as the suggestions above that include review of the Major Roads Report and Investment Programme, and the NPIER, the Decarbonisation Strategy highlights a potential need for review of the Strategic Transport Plan. This should include review of the STP objectives which form the basis for the Decarbonisation Strategy, and whether they provide sufficient weight to decarbonisation and the significance of the climate emergency as a driver for policy – beyond "environmental conservation". The current objectives seem to underplay the role and responsibility of the North's transport sector in terms of contribution to global emissions and in delivering significant and urgent reductions. West Yorkshire Combined Authority's Strategic Economic Framework puts Tackling the Climate Emergency as one of 5 key strategic priorities, and the forthcoming Climate and Environment Plan 2021-2024 will set out our proposed actions across all sectors, including transport, to address this within our region.

The Strategy makes reference to working with TfN's partners throughout. Actions should be clearer as to specific partners or sectors TfN see the need to work with and what their responsibilities are thought to be (e.g. whether public or private sector).

As referenced before, greater understanding of the contribution to carbon emissions reduction of priority actions is needed, and should be more clearly communicated to national, regional and local partners as part of a rationale for prioritisation.

The Strategy does not identify any investment range required (either from public or private sector), or the resourcing levels and capabilities required for TfN and local partners to deliver the actions successfully. TfN, as the Sub-regional Transport Body, has a key role to play in making the investment case for the North, as previously done through its Strategic Transport Plan. This effort, and the additional investment now required to deliver net zero carbon, needs to be replicated as part of this Decarbonisation Strategy.

In respect of the proposed approach to monitoring and evaluating delivery of the Decarbonisation Strategy, the proposal to monitor road transport emissions solely on the MRN does clearly link to TfN's area of control, but would benefit from additional monitoring of total road transport emissions in the north, including on local roads and in particular the SRN. These networks do not operate in isolation and although management responsibility varies for different networks, journeys on one of these networks is likely to involve use of another, and be stimulated by improvements to another. Focussing on emissions on one element of the overall road network may risk giving an inaccurate view of overall performance in reducing road transport emissions in the north.

The decarbonisation-related indicators included in the TfN Monitoring and Evaluation Framework include a measure around the proportion of vehicle kilometres travelled by battery electric vehicles. Monitoring uptake of EVs as part of the fleet mix in isolation of total emissions from the fleet could risk providing insufficient understanding of the overall changes to fleet mix, and ability to track actual progress in moving to a more efficient vehicle fleet with lower carbon emissions, if trends for purchase of heavier, larger and less efficient ICE vehicles continue.

TfN should monitor and report emissions in terms of CO_2 equivalent (CO_2e) in line with industry best practice, rather than solely CO_2 as proposed in the Strategy. The proposal to update decarbonisation indicators every 5 years is not sufficient and more granular data is needed to ensure that the trajectory is being met. This proposal may be as a consequence of the resources needed to carry out runs of the NoCarb model – if this is the case TfN should look to supplement these indicators with other sources to ensure that emissions reductions can be tracked much more closely and adjustments made to programmes.

Other potential activities

SD11 refers to the need to develop an engagement approach but frames this as part of public awareness raising. TfN should recognise the need to develop a stakeholder engagement strategy to engage with local authority Leaders and private/third sector stakeholders to ensure that there is sufficient leadership in place at a regional level to support local partner and TfN's decarbonisation ambitions. The majority of actions focus on technical activity but stakeholder engagement and influencing is of equal importance.

The Strategy discusses the carbon benefits of speed limit enforcement; however speed limit reductions could offer greater carbon emission reductions, as well as air quality improvements (as being trialled on the M1 in Sheffield) and potential noise and road safety benefits. Recent results from these kind of measures in Wales offer insight into the potential benefits for air quality, safety and carbon (see "Air quality and safety improves after trunk road speeds reduced", Local Transport Today, 10th August 2021).

TfN could usefully help investigate data collection techniques to look at addressing data gaps – in particular origin-destination information for all journey purposes (ideally including mode choice and route), and for all modes (including walking and public transport). Currently we only have this type of data for motor traffic (e.g. from Google etc), or 2011 Census Travel to Work (for all modes). Some partners supplement this by travel diary surveys which are resource intensive. TfN could work with technology companies to address this data gap which will help provide intelligence on the most carbon intensive activities, and the potential for change.

Opt in ☒