# Exhibit 1: Local and National Transport Sustainability

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# Document details

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# 1 Introduction

**Section Overview**
This note examines some critical uncertainties relating to the sustainability of transport across the UK and, within that, the North. It addresses carbon as a key sustainability outcome measure but also touches on justice in mobility transitions. The brief is for a two page note and so a detailed dive into air quality or noise is not possible and these are more spatially bounded, legislated for at a local level and *generally* less directly within Transport for the North's (TfN) remit or sphere of influence. The note focuses on critical uncertainties related to carbon, taxation and spending.

This paper, drafted in 2019, prior to the Covid 19 pandemic provides examples of long term trends and potential policy developments relating to this theme which are likely to have an impact on travel outcomes, an influence on TfN's transport strategy, and on environmental, social and economic outcomes across the Northern Powerhouse. The current global impacts of COVID-19 are creating significant additional uncertainty, yet the basic conclusions in this note still remain or have been emphasised during 2020.

## 2. Recent Developments - Carbon

Since the publication of the Strategic Transport Plan for TfN there has been a series of publications which have changed the nature of the climate debate and transport's role within that. The UN Paris Agreement to aim for well below 2°C and pursue 1.5°C and the IPCC report on 1.5 degrees provide an international context within which the UK government has committed to Net Zero by 2050. It is important to note that Net Zero has yet to be operationalised into interim carbon budgets for the UK. What we know is that there has never been a Net Zero compliant transport strategy nor anything close to one which would be consistent with it. For example:

- Domestic transport emissions are 33% of UK emissions (121.4 MtC) and only 3.2% lower than 1990 levels
- CCC found a policy gap of between 40 and 60MtC even against the 80% pathway by 2032 and found all bar one indicator off track in 2019
- In its initial carbon analysis, Transport for North found in its lowest demand highest mitigation strategy that average emission reductions from 2015 to 2030 would still only be 3% per annum - and this has not been achieved between 2015 and 2018.
- Brand et al. found that a high EV (66% of car fleet BEV or PHEV by 2030) and high behavioural shift (14% reduction in distance and only a 41% car mode share) strategy for Scotland was only just sufficient for an 80% target.

## 3. Taxation and the Transport Sector

The shift to electrification changes the basis on which we pay for transport. Electricity will only incur domestic energy VAT rates unless new smart systems are deployed which can differentiate vehicle charging. The Department for Transport suggests that, absent any policy intervention the lower per mile costs will lead to traffic growth of 50% in traffic by 2050 versus a reference case of 35% and a lowest projection of 15% across the North. This creates potential for a huge additional infrastructure demand. It does so at a time where income from transport fuel duty is set to fall from around £28bn to zero. Whilst, unlike VED, this is not hypothecated for transport spend it is still an important source of income.

It is unclear whether VED will remain ring fenced for Highways England in the event of wider motoring revenue shortfalls. It may also be refocussed on differentials by $CO_2$ emissions although this may have small impacts on uptake rates and some negative social justice impacts. There will also be divergence between passenger car and heavy goods vehicles which may be more likely to be fuelled by hydrogen.

## 4. Spending Priorities

In 2016/17 the government spent £29.1bn (around 1.5% GDP) on transport with two-thirds of this on capital spending. Given the importance of central government priorities to the quantum and nature (capital/revenue) of the budget for transport in the North then this must be a critical uncertainty. We are currently in the middle of an 'infrastructure turn'. It has not always been thus (0.8% GDP in 1998-2000). There is also the potential for spending to be directed in very different ways. Rail for example is 2% of all trips, 8% of distance and people in the highest income quintile make three times more rail trips compared to the lowest income quintile, opposite to the profile of bus use. Government spend on rail is around double that on bus support.

Elsewhere in the world different strategies are being deployed (e.g. annual 365 euro pass in Vienna where 50% of residents now have a pass and extending free travel for young adults or redistributing current concessions). This comes in part due to different views as to how to promote 'inclusive and sustainable growth'. The infrastructure turn focuses the UK narrative on big capital investment and 'trickle down benefits', whereas the more pro-social model of subsidising access to transport tries to address access today with greater short-run co-benefits.

A critical uncertainty therefore is the approach of national government to determining its spending priorities and how it cascades those down to TfN and the constituent local and sub-regional bodies. How much local self determinism is there and how much money? Rural services are now at skeleton levels in most areas. Brexit would perhaps bring a short term infrastructure splurge but seems likely to increase national debt and have a feedback on future funding. The extent to which new local sources of funding are available, truly additive and seen to be feasible to enact (politically and technically) will affect the future capital and revenue envelope.

# 5. Initial List of Key Uncertainties

| Uncertainty | Alternative Positions & Implications |
|---|---|
| Climate Science | Paris Agreement is Enough: Challenge will be defined broadly in terms of Net Zero or equivalent emission envelopes |
| | Need to go beyond Paris: Science has so far become more and more constraining as negative climate feedbacks feature. Deeper cuts needed. |
| Negative Emissions Technology | Come on stream in line with CCC: Allows for some industrial emissions to be taken out – requirements for transport unchanged |
| | Are not viable: Without them the trajectories are even steeper (at least 12% reductions per year across the North). |
| Social Movement | Tolerant of slow delivery: Current pathways are deemed acceptable (climate strike and extinction rebellion fall by the wayside) |
| | Demand greater action: Climate emergency requires governments to reduce emissions and travel demand more quickly, civil disobedience. |
| Government position on carbon budgets | Budgets are indicative: Failure to meet budgets is accepted as part of uneven progress globally |
| | Budgets are real: UK maintains global leadership position and this means hard limits which stop or postpone some investments |
| How we pay for transport | No structural change: Traffic levels grow by an additional 15% and further carbon emissions are incurred early in the period before the grid is 100% clean energy |
| | Pay as you drive option A new system could allow time of day as well as distance based charging to be the norm, allowing for congestion externalities to be corrected |
| Public Spending Levels | Maintained Infrastructure spending envelope around 1.5% GDP and critical arguments are around where and what gets the funding |
| | Shrunk Infrastructure programmes need to be cut back to perhaps half of current spending levels. May result from lower GDP and higher borrowing as a result of Brexit |
| Capital Spending Levels | Maintained 2/3:1/3 capital to revenue preference maintained |
| | Reduced A government more focussed on social inclusion and short-run options could flip the capex/revenue balance quickly |

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