



Bridging the Gap

A MAJOR NEW RESEARCH PROJECT ABOUT PEOPLE AND PLACE: THE MISSING PIECE OF THE SURFACE TRANSPORT DECARBONISATION AGENDA



A photograph of a residential street with parked cars and brick houses under a clear blue sky. The street is lined with trees and a white dashed line runs down the center. The houses are multi-story brick buildings with white window frames. The sky is a clear, light blue.

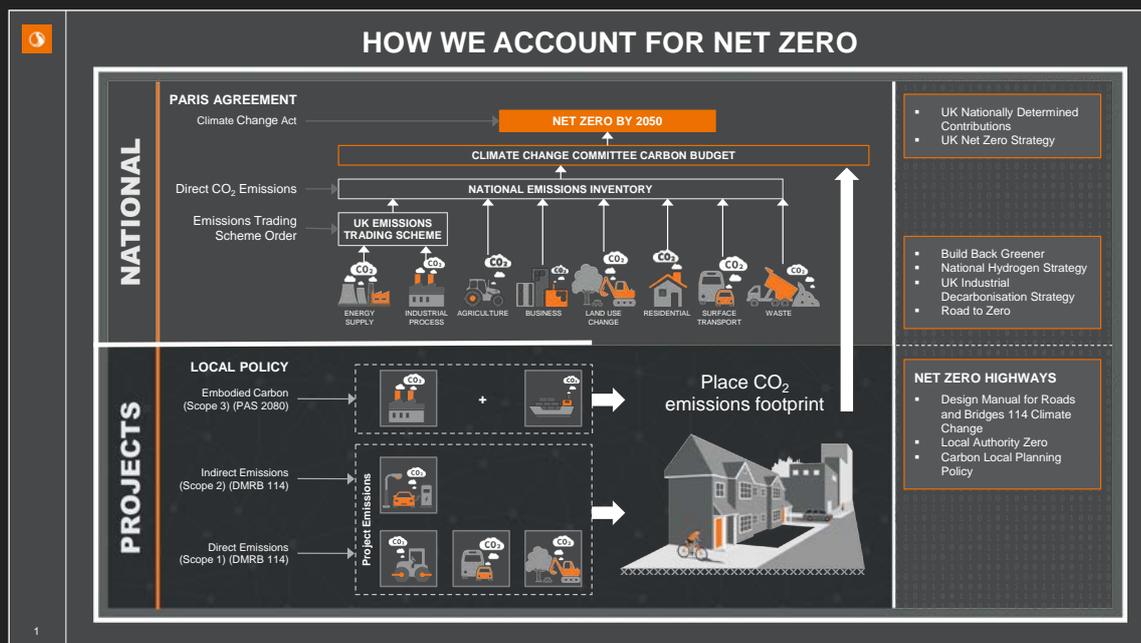
When Britain's plan for transport decarbonisation was published in 2021, it was widely welcomed, albeit with some reservations from some informed commentators.

Many pointed out the welcome level of ambition and clear actions that could be seen to provide routes towards decarbonisation of the sector. Less welcome was the seeming reliance on technology transformation as the key to unlock what has been a sector otherwise highly resistant to change, and the lack of focus on the need for behavioural change as a key part of moving to a net zero transport sector.

This deserves a few words of explanation:

The decarbonisation of surface transport is largely planned to be delivered through the decarbonisation of a range of other sectors. Manufacturing of electric vehicles, the transition to net zero energy generation, and decarbonisation of construction, materials and waste are all proposed to contribute

to a net zero transport sector, an objective assigned to Department for Transport. All of this is to be monitored through the National Atmospheric Emissions Inventory, but with oversight provided by BEIS against the Climate Change Committee's Carbon Budget, now set in law.



What happens at project level is not subject to the requirements of this process. Whilst national and local policy explains what should be happening in terms of planning and decision making for road, rail and place, this is lagging some way behind the decarbonisation plans, and there is no correlation between this and the attainment of the carbon budget. As a result, there is as yet no move towards the changes to planning, decision making or design that would be needed to facilitate the changes in behaviour needed to meet net zero.

Why is this important? There are two main factors, the first being that there is a finite carbon budget. If we are to stay within the 1.5° target, 65% carbon reduction needs to be achieved by 2035. There are many practical difficulties with this: not least the need to almost double the scale of electricity generation to meet the demand for full transition to electricity and hydrogen as the main sources of green power; the need to fundamentally change the distribution networks with associated time and carbon cost; and the need to build a whole new vehicle fleet with its own cost to carbon and natural resources.

The second factor relates to demand, and the suggestion that we can carry on doing the things we always have, just with clean technologies. This is wrong because it does not deliver carbon reductions quickly enough. It is also wrong because if we see a shift to electrification without any wider changes to how we pay for movement, then the private costs will fall and people will drive more. This leaves the planning system faced with the additional social costs of congestion and safety. There is a need for clarity on the travel demand futures we are planning for so we can change our decision-making about the infrastructure we need and how we deliver new places.

Together these factors leave a gap between our current ambitions for removing carbon from the transport sector and our target for carbon reduction. This is why DfT and Department for Levelling Up, Housing and Communities need to grasp the nettle and swiftly develop the policies and strategies needed to deliver against the carbon target through the planning, delivery and operation of our transport systems. Elsewhere, we are now beginning to see more radical departures from previous policy norms, such as the 20% traffic reduction target in Scotland deemed necessary to bridge the gap. This requires a far more determined approach to creating viable alternatives and incentives, through design and how we pay for our mobility services so that people and place become a catalyst for decarbonisation, rather than a constraint.

Last month saw the publication of two separate, but related and relevant documents. **Computer Says Road**, published by Create Streets makes the point that **we have outdated assessment tools that contribute to our continuing reliance on road building to support economic growth** rather than looking for ways of supporting our future prosperity through a different movement paradigm. It advocates a move away from Predict and Provide towards a Vision and Validate approach to assessment. Not a new call to action, but a very important one.

At about the same time, **Everything Counts** hit the shelves. Written by Greg Marsden and colleagues from the DecarboN8 group of universities, this important paper explains why the decarbonisation of the transport sector needs action on all fronts - embedded carbon as well as operational carbon. It makes the point that offsetting is not really a net gain for the planet and shouldn't be accounted for in the consideration of carbon performance of projects, leaving a hard to shift carbon cost of additional transport provision, particularly roads. Its key recommendation is that the **carbon cost of infrastructure needs to be accounted for in local carbon budgets**, (and by implication then counting towards our national carbon budget), and that we need to begin to ask ourselves the question, '**what transport infrastructure will we need in a zero carbon future?**'

There does seem to be a growing and consistent voice about these issues, advocating the importance of moving away from our existing, outdated ways of planning for the future. But is anyone listening? Stantec's Places First programme of research has been making many of these points over the years but in reality, most progress has been achieved through developing practice on the ground.

Now Stantec is announcing a major new programme of research - in partnership with the Universities of Leeds, Lancaster and Newcastle and Transport for the North. This work is aimed at understanding how planning and design can influence our transition to net zero mobility places. Critical to the success of this programme will be how we work with key stakeholders to deliver study outcomes through practical experience and collaborative endeavour.

This one-year study will be based on real locations and challenges. Making use of Transport for the North's work on Future Travel Scenarios, it will develop alternative place typologies as 'visions' based on urban centre, urban edge and new community locations, and will use these to establish the place-based parameters that could most influence the delivery of low carbon mobility futures.

Identify alternative places **likely to change** as future mobility options emerge

How might alternative **place typologies** look under different **future travel scenarios?**

Define the planning and design **parameters** that could act as a **catalyst for new zero mobility**

Prepare **design materials** to describe life in each place typology, for base and future years

Local Authority, community and private sector partners will be invited to form Key Stakeholder Groups. These groups will participate in 'readiness assessments' of each place typology/ future travel scenario combination, and the development of study recommendations.



Through a series of workshops, **the Key Stakeholder Groups will provide expert insight and challenge** to an assessment of the challenges of delivering future place typologies for each future travel scenario:

- **Societal Readiness:** backcasting workshops to assess the kinds of problems people want to see resolved as the climate crisis is addressed.
- **Technological Readiness:** assessment of the readiness of technology and systems to facilitate the required changes.
- **Market Readiness:** assessment of the how the market could deliver new and unfamiliar solutions to their customers.

These workshops will inform the development of land use and design optimisation techniques aimed at providing evidence about how people and place can best act as a catalyst for a net zero mobility future, which in turn **can be used to support planning, decision making and design.**

It is also hoped that this work will support stakeholders' future plans for their communities or their assets by creating insights into the future needs of the places and people they are planning for, **thus helping to people and place to bridge the gap between current plans for transport decarbonisation and our ultimate goal.**



Stantec UK.
UK Headquarters,
Stantec House, Kelburn Court, Birchwood,
Warrington WA3 6UT
Tel: +44 (0)1925 845000

Creative Services UK 6030_22
© 2022 Stantec. All rights reserved

Keith Mitchell

Stantec:

Director Transport & Place

Greg Marsden

University of Leeds:

Professor of Transport
Governance and Decarbon8
Director

Follow Stantec

@Stantec



@Stantecinc



For further information, please visit
[Stantec.com/uk](https://www.stantec.com/uk)