DecarboN8

Place-based decarbonisation for transport

Final Report: Decarbonising Transport with Neighbourhood Plans in Northern England

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Executive summary

Since its introduction, neighbourhood planning has been proved to be very popular, with 2882 neighbourhood planning areas designated and 1292 plans that have passed local referenda to become part of the statutory development plans for their local area. A recent study commissioned by MHCLG found that the climate emergency featured strongly in virtually all the plans they scanned, demonstrating communities' willingness to tackle climate change from the bottom up. However, researchers also pointed out that many of these plans do not have a measurable and tangible action plan to deliver a lower carbon future; and much less a low carbon transport future.

This is a missed opportunity. Although most transport powers rest with the County Council or Unitary Authorities as the statutory local transport authorities, neighbourhood planning can help reduce the need for car journeys and enable people to make sustainable transport choices by influencing the location, scale, density, design and mix of land uses at the neighbourhood level. The thrust of neighbourhood planning as a tool to decarbonise local transport is that innovation, solutions and policies all come from the community and are then tested by all the residents through a local referendum. Therefore, in order to empower communities and to lead change to a just transition to lower carbon futures from the bottom up, it is crucial to identify practical ways of integrating sustainable transport policies into neighbourhood planning,

This research uses Carnforth, a small market town in Lancashire, as a pilot to explore the ways in which sustainable transport can be integrated into the development of a neighbourhood plan. It uses co-production and theory of change as methods to help create the conditions in which communities can identify practical ways to be empowered to integrate sustainable transport policies into their built environment and lifestyles and lead change to a just transition to lower carbon futures from a bottom up perspective.

The overarching consensus from this research is that the development of planning policies in a neighbourhood plan can contribute to the decarbonisation of local transport. With rapidly evolving technologies and new ideas, neighbourhood areas can act as testbeds where real change could be made. To help communities, the authors of this report have created a toolkit to decarbonise local transport via neighbourhood plans, suggesting detailed strategies to adopt sustainable transport policies in neighbourhood plans and providing good practice examples.

Project background and aim

Since 2016, transport (excluding international aviation and shipping) has been the largest emitter of greenhouse gases in the UK, with the large majority coming from road transport and, in particular, passenger cars (Department for Business, Energy & Industrial Strategy 2020). While total CO2 emissions in the UK have fallen by 43.1% between 1990 and 2018, the emissions from road transport have continued to grow, despite the availability of more energy efficient cars, because motor vehicle traffic volumes have generally increased throughout this period. It is well recognised that road transport plays a significant part in air pollution in urban environments and contributes to traffic congestion. This is estimated to cost approximately £7.8 billion per year to the UK's economy due to productivity losses and fuel wastage (RTPI 2018).

In the midst of this change, over half of the UK local authorities have declared a climate emergency, pledging to act on the causes and impact of climate change and be carbon neutral as early as 2030. It is positive that almost one in four councils are seeking to radically exceed the government's net zero target by 20 years. However, critics were quick to point out that many of these local authorities do not have a measurable and tangible action plan to deliver a lower carbon future (Electrical Contractors' Association 2020; Climate Emergency UK 2022). Without the right policies and action plans in place, social acceptance and public support to overcome barriers – and accelerate transition – to lower carbon futures will also be limited.

By focusing on Neighbourhood Planning (NP), this research investigated and contributed to the development of a community-led and place-based solution to decarbonise travel choices and transport infrastructure in Carnforth, Lancashire. NP was introduced by the Localism Act 2011 as part of the statutory development plan to give communities direct power to develop a shared vision for the development and growth of their neighbourhood areas. Since its introduction, NP has been proved to be very popular: with 2882 neighbourhood areas designated and 1292 plans having passed local referenda to become part of statutory development plans for their local area (as of November 2021). However, there is a paucity of research on the incorporation of sustainable mobility into NP and to examine the types of transport issues a neighbourhood plan can address. There are also a lack of practical and accessible toolkits helping communities to devise planning policies to decarbonise their travel choices and transport infrastructure; partly due to the fact that most transport power rests with the County Council in shire areas as the statutory local transport authority, which leaves very little room for community input in sub-regional transport plans.

However, this research found that NP can help reduce the need for car journeys and enable people to make sustainable transport choices by influencing the location, scale, density, design and mix of land uses at the neighbourhood level (e.g. EV charging points, bicycle docks, walking friendly design). Moreover, NP can assemble a list of projects with different priorities for funding from the local authority (through CIL and S106). These projects can then have tie-ins to the policies put forward in NP. For example, if NP puts forward cycle lanes as a potential project for funding from the local authority, one of the policies in the neighbourhood plan can be to support developments that propose bicycle parking/storage provision within the plan area. This empowers local communities to shape travel choices and transport infrastructure provision in their local areas and provides a strong opportunity to push neighbourhood level actions and policies of sustainable mobility to the district or sub-regional level.

This research therefore **explored the ways in which neighbourhood planning as a statutory development plan can offer place-based, community-led solutions to**

decarbonise local travel choices and transport infrastructure, using Carnforth, Lancashire, as a case study area. Carnforth Town Council, having declared a climate emergency in 2019, had already identified transport as a key issue. In spite of being compact and having an accessible railway station, Carnforth suffers from congestion in its town centre and large volume of car-borne commuting trips (ONS Census 2011). The town is often a stop on the way to Lake District, has an established air-quality-management-area (AQMA) and has substantial congestion in its town centre. Under the emerging Lancaster local plan, designated growth areas in Carnforth are expected to increase the number of vehicles on the road, which will push NO2 emissions above the AQMA threshold. The combination of these factors makes a sustainable-transport-focused carbon reducing neighbourhood plan very appealing to the local residents in Carnforth.

Methods

The authors used two different, yet complementary, methods to conduct this study.

Co-production

Co-production is an approach built on the principle that those who are affected by a service are best placed to help design it. It involves an early knowledge brokering process, which allows time and space to develop trust, to negotiate and to agree research outputs that would be most useful. This knowledge production process is important as it takes into account context and stakeholder interests not generally achievable by other methods (Ostrom 1996). For effective coproduction and stakeholder engagement, the authors adopted an approach that goes beyond simply observing issues and events and involved actively participating and influencing them in order to be a catalyst for change and a broker of knowledge (Cheetham et al. 2018).

The three principal partners of this project with which coproduction activities were undertaken were

- Carnforth Town Council: This is the principal body that represents the views of the community, as well as being the main driver behind the emerging neighbourhood plan. Information on context, interests and ideas has been exchanged between partners through one-to-one meetings, through feedback in response to specific ideas and formally through the community presentations (of which there were three), workshops (also three) and an online survey with residents (which received 49 responses). Suggestions on policy wording to strengthen the planning policies within the emerging neighbourhood plan related to sustainable transport were submitted to the community and the local authority for their consideration.
- Troy Planning + Design: A private planning consultancy firm which contributed to the neighbourhood planning process in Carnforth. Close working between the authors and Troy P+D has led to information exchange on the development of Carnforth's Neighbourhood Plan and its sustainable transport policies.
- PJA, a leading transport planning consultancy in England, worked with the authors to provide technical research on the local transport evidence base for Carnforth. This research contributed to assembling an evidence base for the designated neighbourhood area that has a heavy sustainable transport/accessibility focus; to create a vision for the plan around which evidence for congestion-management, air quality and active travel could be assembled. This report was also shared with the

Local Transport Authority to be considered in their emerging Local Cycling and Walking Infrastructure Plans.

A small number of local transport providers and stakeholders were also interviewed (2 planners from the local authority; 2 transport planners from the local transport authority; 1 business manager from local GP surgery; 1 headteacher from a local school). These interviews were instrumental in exploring the ways in which a sustainable transport focused, carbon reducing, neighbourhood plan can be more collaborative and strengthened through engagement with transport providers and the wider community. The Covid-19 pandemic meant that all of these activities were undertaken online and, when the second and third waves of the pandemic hit the UK, this limited the opportunities to include a wider spectrum of stakeholders.

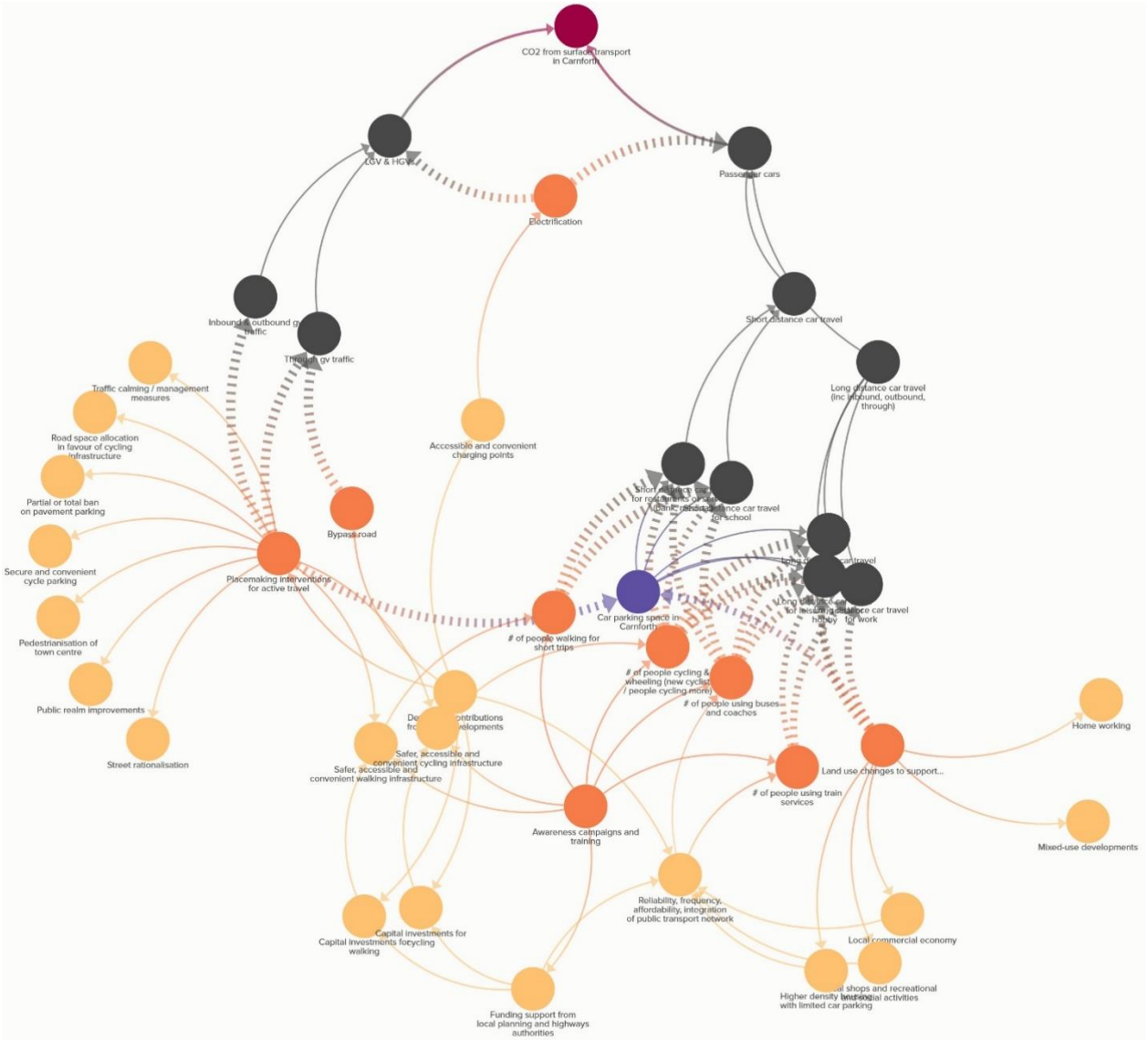
Theory of change

At its most basic, a 'theory of change' is an outcome-based framework and an impact evaluation tool that starts the analysis from the final intended outcome by helping a group build consensus on what the final expected outcome(s) should look like and then maps backwards, to identify necessary interventions and pathways, to bring about the desired change that contributes to achieving the final intended outcome (Mayne 2015). This method is especially useful for measuring spatial planning outcomes such as sustainable transport because proactive placemaking and quality development requires teams with a diverse range of skills and knowledge and who often aim to achieve different outcomes. A theory of change method helps different teams develop a shared understanding of what they are trying to achieve; what pathways of change are required; what assumptions they have; and how success is defined and measured.

The original idea was to produce a series of theories of change pathways towards decarbonising local transport in Carnforth with a wider stakeholder group in workshops and other consultation events as part of the emerging neighbourhood plan. However, the Covid-19 pandemic made this practically impossible due to the restrictions on face-to-face activities, as well as the impact on people's schedules and lives. Online platforms were used as alternatives but this proved very challenging due to the necessary digital skills to run and participate in such environment when running community events.

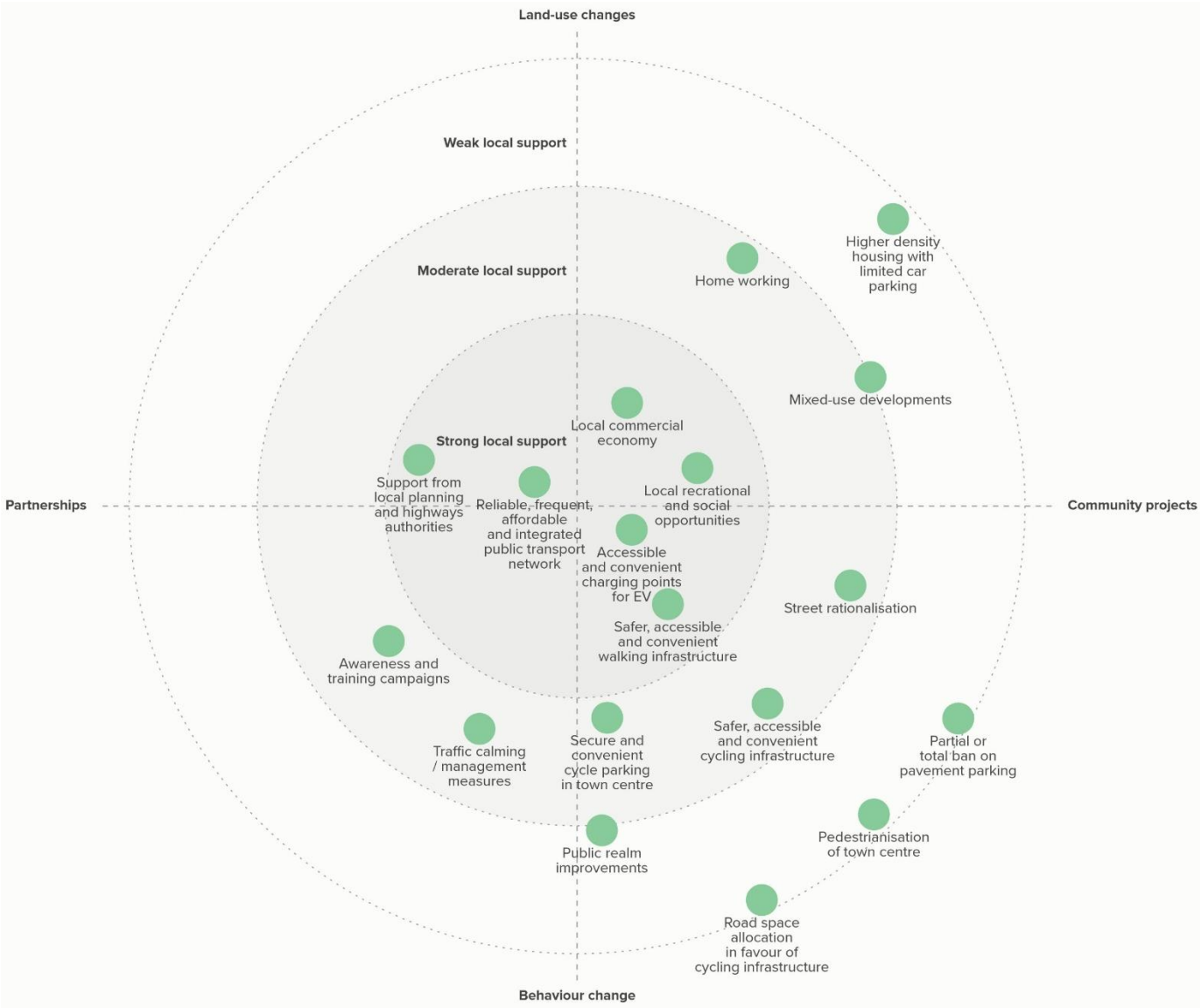
Instead, data from fieldwork and activities (interviews, surveys, and workshops), as well as documentary analysis and literature review, were used to produce a pathway map towards reducing the carbon-dependency of local transport systems and solutions from a land-use perspective, including causal, non-linear feedback loops and relationships. This diagram (Figure 1) and an associated solutions / community support matrix (Figure 2) were also circulated to the community and received a low, yet very positive, feedback.

FIGURE 1: HOW IS CO2 PRODUCED FROM SURFACE TRANSPORT IN CARNFORTH AND HOW CAN LAND-USE PLANNING REDUCE IT?



[6]

FIGURE 2: SOCIAL ACCEPTANCE AND SOCIAL READINESS OF LAND-USE INTERVENTIONS TO DECARBONISE LOCAL TRANSPORT IN CARNFORTH



Findings & Outputs

The overarching consensus from this research is that the development of planning policies in neighbourhood plans can contribute to the decarbonisation of local transport. With rapidly evolving technologies and new ideas, neighbourhood areas can act as testbeds where real changes can be made. To help communities, the authors of this report created a toolkit to decarbonise local transport via neighbourhood plans, suggesting detailed strategies to adopt sustainable transport policies in neighbourhood plans and providing good practice examples.

Neighbourhood Planning and Transport Decarbonisation Toolkit

The toolkit sets out detailed strategies to adopt sustainable transport policies in neighbourhood plans and provides good practice examples. Its intended audience are neighbourhood forums and parish and town councils in England who are producing, or planning to produce, a neighbourhood plan. It is also aimed at Local Planning Authorities and Local Transport Authorities who are helping communities in the development of neighbourhood plans within their boundaries.

This toolkit advocates a community-led, place-based approach to decarbonise local transport. This means that appropriate strategies and plans must come from the community (bottom up) and be tailored to the unique opportunities and challenges of the neighbourhood area. Therefore, this toolkit is designed in such a way to provide generic principles and methods of thinking that underpin a transport decarbonisation strategy. It also provides recent good practice examples from adopted neighbourhood plans to demonstrate how generic principles can be applied in real life.

Additional funding was secured to create short video clips where headline findings can be shared on social media with a link to the toolkit, as well as an accompanying website where the users can choose the right solutions for their problems using interactive flow charts.

Neighbourhood plans, and other bottom-up approaches to decarbonise and build climate resilience, empower the public to act and increase climate literacy. The climate crisis impacts everyone differently; therefore, it is important to give the right messages to the right people. The toolkit addresses that by demonstrating different wider outcomes of different pathways to the decarbonisation of transport, i.e. co-benefits. For example, reducing the need to travel will also have a positive impact on the local economy as well as health (e.g. less congestion, more active travel). The short video clips showcase a few examples from the toolkit being applied to real life problems in small communities in England, signposting other solutions available within the toolkit. The website will host the toolkit as well as acting as a repository for other resources relevant to the decarbonisation of transport at the community level. The timing of the publication is also very convenient against the backdrop of COP26, national conversation on the climate crisis and upcoming plans to decarbonise transport from the Department for Transport.

To monitor and reinforce the impact of the toolkit, key stakeholders (including all local authorities in England and neighbourhood forums) will be invited to an online survey 6 and 18 months after the publication of the toolkit and the associated materials such as the website and short videos. The first online survey will ask whether the participants are aware of the toolkit; whether they used it; and whether the neighbourhood forum has engaged with a highlighted good practice case in regard to sustainable transport in the last six months. The second survey will follow up the first survey after a further 12 months and ask the same questions.

Decarbonising local transport in Carnforth

The toolkit was then applied to Carnforth to co-produce pathways to transport decarbonisation. As is clear from Figures 1 & 2, the results are mainly in line with other research on transport decarbonisation in small market towns in rural England (CILT 2021, RTPI 2020).

There is strong community support for transport decarbonisation, both at the national and local levels. A majority of the feedback received from the members of the community expressed strong support in reducing carbon emissions from local transport; mainly due to the negative impact of the traffic on local air pollution and the wider impact on the climate crisis. EV was seen as a potential solution, not least to the air pollution problem, but its wider impact on car-dependent culture and the negative environmental consequences of EV were also recognised. It was stressed that the main traffic problem was caused by fast-moving traffic through Carnforth, as the A6 passes through the town centre.

With regard to land-use planning and infrastructure investment strategies, at the disposal of the local community to make local transport greener and reduce greenhouse gas emissions from surface traffic, there was strong support for softer measures rather than radical or more interventionist solutions. The former, for example, would involve public realm improvements in the town centre and better traffic management; whereas the latter might mean an increase in density and dramatic measures to reduce car parking provisions in the town centre to actively discourage in-town car travel, or road space allocations in favour of cycling infrastructure. Strong support was shown for buses to help reduce dependency on cars, despite the impact of the pandemic on public transport in general.

There was much stronger support for public awareness and behavioural strategies to decarbonise transport such as traffic-calming measures, promotional activities to make people aware of the environmental, economic and health benefits of walking and cycling, and so on.

There was, however, reserved optimism towards the feasibility of decarbonising local travel and transport in Carnforth. This was true for both local travel in Carnforth (e.g. travelling to the town centre) and inbound and outbound travel to and from Carnforth. The main reason for this was that most transport powers are held at the county level, which has a strategic role to manage and plan for transport for the wider Lancashire County. Further engagement opportunities therefore need to be explored between the local transport authority (LTA) and the Town Council.

The authors will continue to monitor the development of Carnforth's neighbourhood plan to see the extent to which the proposed solutions from the project still appear in the final plan and whether the Town Council remain in active collaborative engagement with key transport partners in the local area.