DecarboN8

## Place-based decarbonisation for transport

# Reducing car use amongst older drivers

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August 2021

**Reference as:**

Clark, J., Docherty, I. and Swift, S. (2021) Reducing car use amongst older drivers

**www.decarbon8.org.uk**

UKRI Engineering and Physical Sciences Research Council

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This project was supported by DecarboN8. DecarboN8 is funded by the EPSRC Energy Programme, grant agreement EP/S032002/1.

## Executive summary

Our work comprised a pilot study exploring potential means to support older people to reduce their car use. This group is under-represented in behaviour change research in transport, which often focuses on delaying the take up of driving or other critical stages in the life course such as having children. Indeed, research on older drivers is largely dominated by work exploring the potential negative impacts on their physical and mental health of driving cessation. Nonetheless, given the demands of the climate emergency and the scale of the requirement to reduce car use implied in any credible decarbonisation pathway, all sections of society will have to change their travel behaviour, at least to some extent. It is our contention that research into how this can be achieved for older drivers is not only a necessary component of informing wider car use reduction behaviour change strategies, but also that older age groups have a crucial role to play in signalling the need for change to others.

Given the scale of the project, the research was wholly qualitative in nature. It comprised the following principal elements:

- Contextualisation interviews with four transport sector professionals exploring the extent to which older drivers as a group had been considered in policy development for decarbonisation;

- An online survey (fourteen respondents) exploring opinions from long-established drivers in the North of England who have experience of reducing the number of cars in their household, reducing their levels of car use, stopping driving, or switching to electric or hybrid vehicles, and;

- A virtual focus group with three participants drawn from the online survey to explore their responses to the questionnaire in more depth.

Our pilot study reported here highlights what is likely to be necessary to support decarbonisation effectively. Policies need to consider socio-economic and demographic factors as well as the level of urbanisation, accessibility and environmental quality. Our

participants demonstrated a broad range of different decarbonisation behaviours; however, their activities are not necessarily associated with a particular/self-declared interest in the environmental impact of driving, suggesting that there may be greater societal readiness for change than might generally be assumed. The results offer insight into the extent of change still required to make lower carbon choices more convenient and realistic, even for people with committed environmental interests. Our interviews with older adults explored how mobility needs change over the life course, including continuing, complex obligations to others and shifting contexts for travel more generally in later life. The relationship between planning and land use is identified as a central issue, but the quality of public transport and active travel options also come under scrutiny. Primarily, participants stressed the need for infrastructure improvements, including effective enforcement of safer behaviour on the roads. The value of emphasising economic and health benefits in lower carbon options is also advocated, as is simplifying and reducing the time and cost of using public transport.

# Reducing car use amongst older drivers

**Julie Clark, Iain Docherty and Sarah Swift**

## 1: Introduction

This project comprised a pilot study exploring potential means to support older people to reduce their car use. It is one of a range of experimental 'seedcorn' projects funded by the DecarboN8 research network, which aims to explore novel and urgent ways to reduce carbon emissions from transport in the North of England. The purpose of our work reported here is to identify appropriate and effective ways of supporting older people to reduce their car use and ownership, encouraging more sustainable transport behaviours with lower carbon emissions.

The project has as its focus older, more experienced drivers. This group is under-represented in behaviour change research in transport (Graham et al, 2018), which often focuses on delaying the take up of driving or other critical stages in the life course such as having children (see, for example, Scheiner, 2014; Newbold and Scott, 2017). Nonetheless, there is important potential for older people to lead a significant and sustained reduction in carbon consumption and so send a powerful signal to the community at large about achieving society's carbon goals in a fair and socially acceptable way. Many older people have driven for decades, and have therefore structured their lives around the car in many complex ways. This means that their efforts to change their own mobility behaviours can offer valuable insight into changes in personal mobility needs across the life course and the impacts of the changing transport landscape (Buys et al, 2012; Shergold and Parkhurst, 2010).

Without the personal mobility that a car can offer, alternative travel options and local quality of place become far more important. However, research on older drivers is largely dominated by work exploring the potential negative impacts on their physical and mental health of driving cessation (see, for example, Musselwhite and Shergold, 2012; Siren and Haustein, 2015). Others have considered the role driving in relation to the risk of social exclusion for older people living in more rural environments (Hansen et al, 2020; Shergold and Parkhurst, 2012). Nonetheless, given the demands of the climate emergency and the scale of the requirement to reduce car use implied in any credible decarbonisation pathway, all sections

of society will have to change travel behaviour, at least to some extent. It is our contention, therefore, that research into how reduced car use can be achieved whilst maintaining quality of life older people is not only a necessary component of informing wider car use reduction behaviour change strategies, but also that older age groups have a crucial role to play in ***signalling the need for change to others***, perhaps even acting as role models.

The report is structured as follows. After offering a brief background to the research in terms of the critical arguments from the literature on decarbonisation and older people's mobility, we describe the research design adopted, which combined a range of qualitative techniques. We then go on to set out the key themes that emerged from our data collection involving professional stakeholders, qualitative questionnaire survey respondents, and the small group interview participants. We organise our findings around a number of potential policy interventions to support reductions in car use by older people that our respondents explored in conversation with us. Key to this is an understanding of the ways in which interventions that might be variously described as economic, environmental or social play out in different lived experiences, and what this means for how individuals trying to work out how to use their cars less.

## 2: Background

It is now well understood that for the UK to meet its climate change obligations under the Paris Accord, substantial and early reductions in the use of private road vehicles will be required (CCC, 2019). Indeed, it is likely that even with a transition to 100% electric and/or hydrogen powered vehicles, the overall size of the fleet will need to reduce substantially, perhaps by around one third, given the whole life carbon content of the vehicles themselves (Brand et al., 2018). Any credible pathway to decarbonisation therefore requires individuals' use of private vehicles to reduce substantially, and certainly to a greater extent across society than has been achieved through policy intervention since the advent of the motor vehicle.

Despite the urgency of the decarbonisation imperative, there are nonetheless emerging concerns about spatial polarisation and the inter-generational justice implications of managing the transition to Net Zero fairly (Bolton and Priestly, 2019; Minton and Clark, 2018; Sabater et al., 2017). Perhaps understandably, much of the literature about behaviour change

to reduce car use addresses younger people, focusing on issues including delaying driving licence take up and the acquisition of cars (see, for example, Delbosc, 2007; Hjorthol, 2016; Thigpen and Handy, 2018). In contrast, there has been much less focus on the potential for older people, particularly the post-war demographic cohorts, to reduce their car use voluntarily. We see this an important issue to confront since drivers in this cohort have already consumed very substantial amounts of carbon across the life course, and there is therefore a clear inter-generational justice case for intervention. We would also argue that a set of mobility behaviour changes agreed across the generations stands more chance of actually achieving the required reductions in car-based mobility in a fair and socially acceptable manner.

However, reducing their car use – or even becoming 'former drivers' – is extremely challenging for people who have led car dependent lives for decades (Dickerson et al, 2019), and it is well established that the sudden loss of mobility through giving up the car in later life can shatter social networks and have many deleterious effects on health and wellbeing (Chihuri et al, 2016). Nonetheless, many older people transition away from driving successfully, and learning more about how this is achieved might also be considered an ideal test case for exploring which combinations of interventions will encourage reductions in levels of car ownership and use, precisely because older motorists have driven so much for so long. Indeed, we might even learn more in general about why people who are used to very high levels of car-based mobility might actively *want* to reduce their levels of car ownership and use by working with older people more.

## 3: Research Design

The research design for the project recognised the pilot nature of the research, and was focused on developing a methodology for future larger investigations of policy options to promote modal shift that are sensitive to the lived experiences of older people, and how they interact with the places in which they live (Figure 1). The research was carried out in three phases, which in part reflected a pragmatic arrangement of tasks given the disruption brought about by COVID.

**Phase One** of the study included the creation of a project website and gaining ethical approval, including amending the originally planned face-to-face interview methodology so that the research could be undertaken remotely as a result of the pandemic. Our choice of a qualitative approach for this study was deliberate, in recognition that qualitative methods are especially appropriate for the exploratory investigation of complex phenomena, where it is necessary to understand why people make particular choices (Kalu and Bwalya, 2017), and also pragmatically given the scale of the project and the resources available to it. The specific tasks in this phase were:

- Outreach to local organisations active in the transport policy domain to test key assumptions and identify individuals for interview;

- An online qualitative survey inviting opinions from long-established drivers in the North of England who have experience of reducing the number of cars in their household, reducing levels of car use, stopping driving, or switching to electric or hybrid vehicles; and

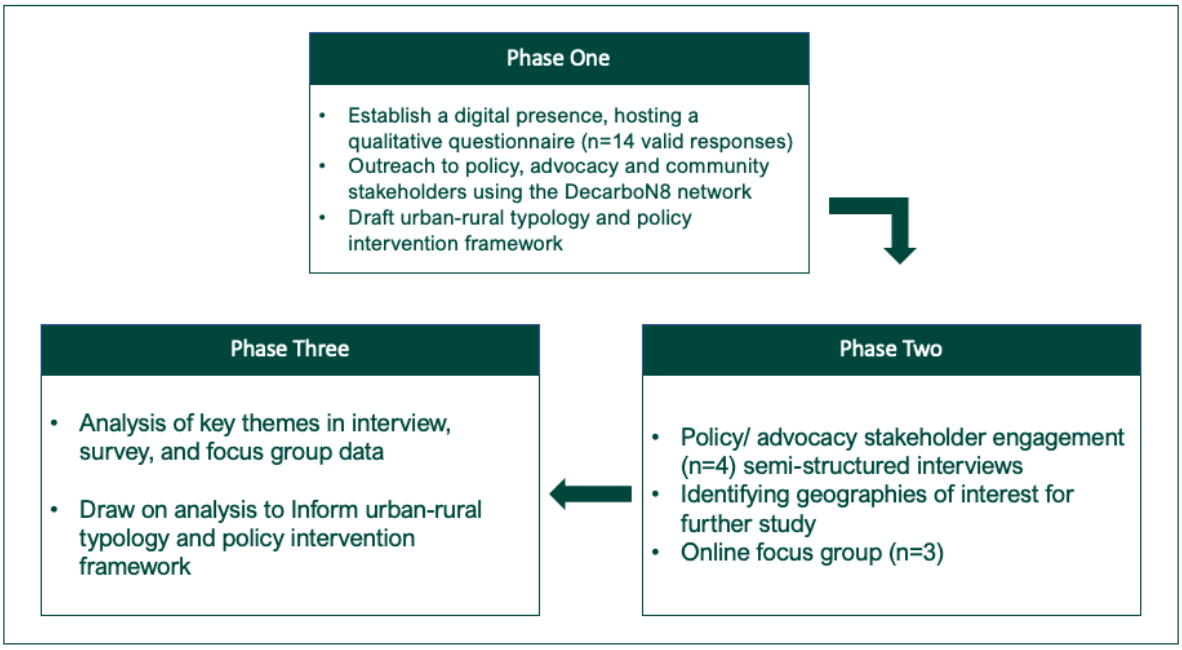
- A virtual focus group with participants drawn from the online survey.

The project website was established at olderwiserdrivers.wordpress.com. As well as information about the background to the project, information sheets relating to the specific research tools were posted and also a weblink to the qualitative survey, which was conducted using QuestionPro. Survey participants were members of the public recruited by snowballing though DecarboN8 stakeholder networks, sending our survey link via newsletters, email contacts or tweets. This approach was chosen to create a purposive sample of people with an existing interest in / experience of the decarbonisation of personal travel in order to maximise the richness of the data generated from a necessarily small number of interviews. Selection criteria for participants in this aspect of the study were:

- Residence in North West England, North East England, or Yorkshire and the Humber;
- Having obtained a driving licence during or before 1990; and

- Having experience of reducing the number of cars in the household, levels of car use, having stopped driving, and/or having switched to electric or hybrid vehicles.

**Figure 1: Research design outline**




**Phase Two** of the research centred on the main data collection. One-to-one online interviews were conducted with representatives from four stakeholder organisations identified in Phase One in order to gauge regional understandings on geographic differences in transport need across the North of England, critical factors in modal selection and shift, and assess the range of perspectives on existing and potential travel demand management policies in the DecarboN8 area. These key informants had particular knowledge and expertise in policy and practice as shown in Table 1. We have chosen to give pseudonyms to all those who participated in the research to maintain anonymity.

**Table 1: Stakeholder Interviewees**

| **Stakeholder Field** | **Pseudonym** |
|---|---|
| Active travel | Alex |
| (Environmental) advocacy | Jamie |
| Planning | Cai |
| Sustainability | Elliot |

Following this, drawing on responses to the online qualitative survey, a virtual focus group was conducted with three interested community members who met the purposive sample criteria (a fourth respondent had to drop out at short notice). Small group discussion was selected as a means of sharing experiences and generate creative conversation about age- and place-sensitive decarbonisation options and share thoughts and experiences of changing car use and the most effective ways of encouraging the take-up of more sustainable transport options. As well as offering insight into changing transport needs and provision, targeting a sample of long-established drivers, all of whom have been driving for over thirty years, includes respondents from the 'baby boom' generations (those born 1946-1955), who can act as an 'extreme case', as the first generations born into automobility (Burlando et al, 2020; Coughlin, 2009). In order to better understand more socially acceptable transitions towards lower carbon transport options, the sample focussed on people who had experience of moving to more environmentally friendly driving behaviours (Table 2).

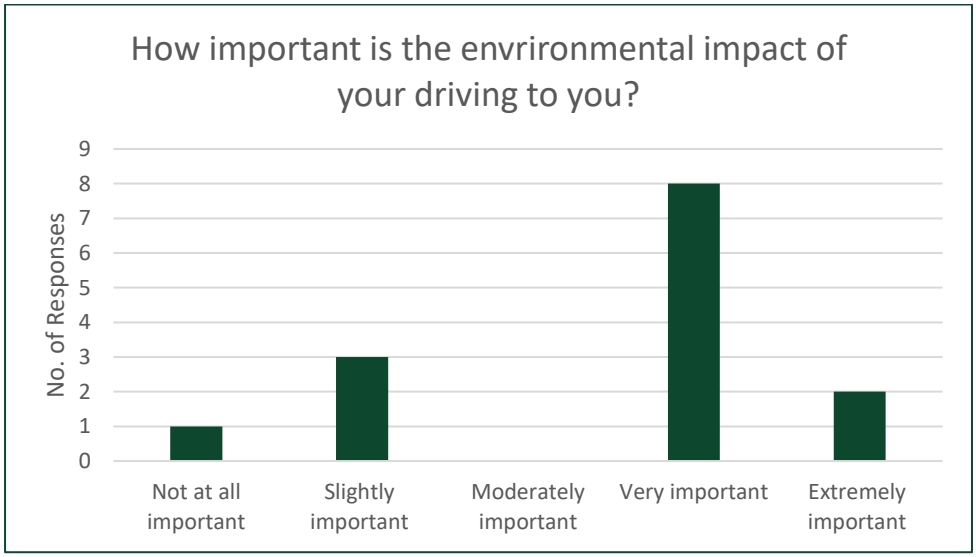
**Table 2: Qualitative Survey Respondents/ Small Group Interviewees**

| **DecarboN8 Area** | **Urban-Rural Classification** | **Importance of environmental impact of your driving to you** | **Pseudonym** |
|---|---|---|---|
| North West | Urban major conurbation | Very | Sam* |
| North West | Urban major conurbation | Extremely | Cameron* |
| North West | Urban major conurbation | Very | Robin* |
| North West | Urban major conurbation | Very | Jack |
| North West | Urban major conurbation | Very | Tom |
| North West | Urban major conurbation | Very | Emily |
| North West | Urban major conurbation | Very | Molly |
| Yorkshire & Humberside | Rural town and fringe | Slightly | Max |
| Yorkshire & Humberside | Rural village and dispersed | Not at all | Arthur |
| Yorkshire & Humberside | Urban city and town | Very | Leo |
| Yorkshire & Humberside | Urban city and town | Slightly | Joe |
| Yorkshire & Humberside | Urban minor conurbation | Slightly | Oliver |
| Yorkshire & Humberside | Urban minor conurbation | Extremely | William |
| North East | Urban major conurbation | Very | George |

*Small group interviewee

The survey collected socio-demographic data, including age band, postcode area, duration of licence holding, gender, ethnicity and disability. One question was designed to act as an **indicator of environmental attitudes**, offering Likert scale responses to the question "How important is the environmental impact of your driving to you?" Responses to this ranged from *extremely* to *not at all* (see Figure 2). The main part of the survey offered free text boxes, with prompts to encourage a discursive response. Promoting the survey through DecarboN8 networks, as an appropriate means of connecting with the purposive sample, generated valid responses from fourteen men and two women, all of whom identified as white. Two of the respondents considered themselves as having a disability of impaired mobility. All were aged between 46 and 75 years old (two were 46-55; eight were 56-65; four were 66-75).

**Figure 1: Driving and importance of environmental impact**




As might be anticipated when targeting people who have made a shift to more environmentally friendly driving behaviours, the majority of respondents, including the three people who later participated in a group interview, were *very* or *extremely* concerned with the environmental impact of their driving, but this was not universally the case across all fourteen respondents. Four of the qualitative survey respondents were willing to participate in a small group interview, although one had to withdraw at short notice. The three people from the group interview live in neighbourhoods in and around the Manchester City Council area and reported different driving behaviours from each other (Table 3).

**Table 3: Small group interviewees**

| | Distance to Manchester City Centre (km) | Driving behaviour |
|---|---|---|
| Cameron | <5 | Stopped driving for environmental reasons three years ago; no longer drives. |
| Robin | 6-10 | Full driving licence and motorcycle licence but does not own a car. Occasionally hires a vehicle and sometimes drives for work. Occasionally drives partner's car. |
| Sam | 10-15 | Sold his diesel van, which was for work purposes, and bought an electric car. Drives three or four times a week, sharing driving with wife and daughter. |

**Phase Three** of the project was the analysis phase, bringing together the data generated to synthesise some key themes emerging from the qualitative investigation. Participant reflections on experiences of modal shift towards lower carbon options are used to support the development of a place-sensitive urban-rural classification and a typology of potential policy interventions, focused on societal readiness for different environmental, economic and social interventions.

## 4: Experiences of changing behaviour for decarbonisation

This section reviews the personal accounts we heard about adapting to more sustainable travel behaviour, followed by a discussion of the concepts of *need*, *want* and *convenience* as key themes emerging from participant experiences of driving and decarbonisation. It draws, primarily, on the qualitative data generated by the older, experienced drivers who participated in the online survey and subsequent focus group, supplemented by insights from interviews with the professional stakeholders. The purposive sample offers insights into societal readiness for change, through the exploration of the attitudes, beliefs and values of people with experience of, or specialist knowledge about, reducing the carbon impact of personal transport (Bryman, 2008). Rather than aiming for statistical representation, these personal accounts are of particular significance in that they are situated within distinctive geographic and social contexts (Snape and Spencer, 2003) and, so, are valuable in terms of the insights they offer and questions they raise about the possible trajectories of decarbonisation and car use reduction in the communities that make up the North of England.

***Decarbonising Travel: Some personal experiences***

The purposive sample of fourteen adults who first held a driving licence during or before 1990, was asked *have you ever taken steps to become more environmentally friendly as a driver?* Experiences ranged through ceasing ownership, changing type of vehicle, to become more multi-modal (Box 1).

***Box 1: Steps taken to become a more environmentally friendly driver***

- Complete driving cessation
- Hiring a vehicle when needed instead of owning a car
- Sharing a car within the household
- Changing to hybrid or battery electric vehicle (BEV)
- Changing to a smaller engine/lower emissions ICE vehicle;
- Changing fuel type (to bio-fuel and to diesel)
- Replacing a car less frequently
- Shifting mode to public transport for some journeys
- Walking more and/or cycling, especially for shorter trips

There were two principal types of responses from our participants to questions about how they had sought to change their own travel behaviour: some answers focussed on changes in *vehicle use* (including cessation, sharing and higher levels of multi-modality) and those with a response centred changing the *vehicle type* used for car trips. Two respondents rated the environmental impact of their driving as *extremely important* to them. Cameron, living in a *major conurbation*[1], stopped driving three years ago for environmental reasons and prior to that made adaptations that involved change of fuel type, such as shifting to biofuel William, living in a minor conurbation, needs a car for work, making around ten trips per week, dependent upon his schedule. However, he shares domestic driving responsibilities and

[1] We have used the ONS' 2011 Rural-Urban Classification of local authorities. See https://www.gov.uk/government/collections/rural-urban-classification

describes a shift away from car use over the last twenty years, when he began cycling more, as well as buying smaller and more environmentally friendly cars.

In contrast, Arthur rated the environmental impact of his car use as *not at all important,* while Oliver, Joe and Max selected *slightly important.* Arthur, living in a predominantly rural area (*village/ dispersed*), has driven a BEV for five years. Oliver, based in a *minor conurbation* has shifted from two vehicles to one. Currently, he drives a hybrid car and plans to move to a fully electric vehicle soon. Joe, living in a *city/ town* area, has sold his car and now shares one with his partner. The vehicle they share is newer and smaller, with lower emissions. Max lives in a rural *town/ fringe* area, which has *very good* accessibility and *good* environmental quality. His adaptation is more walking instead of car journeys.

The remaining respondents rated the environmental impact of their driving as *very important* and all live in *major conurbation* areas, with the exception of Leo, who is in a *city/ town*. The *poor* accessibility there is contrasted by *very good* environmental quality. Leo has used several strategies for reducing the environmental impact of his driving, from replacing his car less frequently to substituting walking, cycling and public transport for driving. Within the *major conurbations,* accessibility indicators for respondents in this group range from *poor*, in the case of Sam, to *very good,* for Emily, Tom, Robin and Molly. Living in an area with *very good* environmental quality, Sam's adaptations have centred around vehicle fuel requirements, using bio-fuel when that was available. Jack has a disability, affecting his personal mobility. In an area of *fair* accessibility and *poor* environmental quality he has integrated more public transport journeys to limit the environmental impact of his car use. George, in an area with *good* accessibility and *fair* environmental quality went ten years without driving. Of the respondents living in areas with *very good* accessibility, Emily Tom and Robin live in areas with *poor* environmental quality, while Molly is based in an area rated *fair*. Emily has been unable to drive since an operation which has compromised her sight and balance. When a driver, she would walk to local amenities where possible. Tom and Robin will cycle as well as walk. Tom takes an average of two or three car trips a week. Robin has a car and motorcycle licence and will occasionally hire a vehicle if required. Molly currently drives a hybrid car, generally taking ten or more trips a week, but she walks for local journeys and has previously aimed to reduce the environmental impact of her driving by choosing a diesel rather than petrol vehicle.

***Societal Readiness: need, want and convenience***

Reflecting on the need to decarbonise transport, one of the professional stakeholders noted that 'the modelling seems to suggest, most places need to do everything' (Cai, Planning). Disaggregating levels of need in transport use can offer a less overwhelming and more realistic starting position. Qualitative research with established drivers highlights the breadth of decarbonisation experiences, offering some comfort, as a backdrop to planning a portfolio of policy interventions to support decarbonisation.

While all of the interviewees shared experiences of reducing the number of cars in their household, reducing levels of car use, stopping driving, or switching to electric or hybrid vehicles, they all have different stories, involving change over time. At any given point, only a tiny percentage of the population is mono-modal (Chatterton et al, 2015); considering driving, travel and transport through the lens of long experience demonstrates to an even greater extent the inadequacy of simplistic and reductive categorisations of people into 'drivers', 'cyclists', 'walkers' or 'public transport users.'

Research about travel behaviour change has focused on discrete points of transition in the life course (including relationship formation and breakdown, having children, 'empty nesting') as key to understanding how people's needs change over time. Amongst our respondents' experiences, Sam focused on the changes that happened when he had grandchildren to transport, and Molly also said that she would find it very hard to visit her son and grandson without the car. Oliver and Leo have family in other parts of country, who are challenging to reach without a car, and Arthur, in a rural environment, notes that a trip to school is over ten miles in each direction. But the actual life events that prompt significant change can also come in unexpected and unplanned ways: in Emily's case, illness forced a change when she had her licence revoked following neurosurgery for a "brain tumour, which has left me with poor sight hearing and balance issues, tinnitus and vertigo"; after a ten-year break, George has had to start driving again, to support his elderly parents, including for their shopping, appointments and driving his disabled mother around; and, at different times, William, Robin and Cameron have needed to drive for work. As might be expected, when asked about which car trips would be hardest trips would be most difficult to change, those involving family featured heavily.

In other cases, changes in car ownership and use have been more of a matter of proactive choice, as over the years people have sold cars, bought smaller ones, shared vehicles, and chosen different fossil fuels (for their perceived environmental benefit compared to standard petrol) or moved to cars designed with minimising environmental externalities, as they have become available. Respondents are thoughtful on this topic and far from uncritical, including issues with the availability of charging points and the distance vehicles could cover or 'range anxiety'. Although an enthusiast for electric cars as 'easy to adjust to… also a pleasure to drive', Sam points out that the vehicles still do environmental damage, as does Leo, challenging the energy it takes to make and run these cars. Molly, Sam, Emily and Cameron also talk about diesel cars, Cameron remarking that he drove one 'when it was thought to be better for the environment.'

The complexity of trying to be more environmentally friendly in travel behaviour sits at the tipping point of need and want. Respondents described challenges to their lifestyles brought about by compromises to mobility, such as always having to rely on others for certain trips and not always having access to a car. However, even within this purposive sample of people who have changed their behaviour, strong or weak interest in environmental impact did not determine behaviour as many other factors are in play. There are environmentally conscious people in urbanised areas who both need and want to use cars; conversely, there are people in rural areas with no strong environmental interest who have owned more environmentally friendly vehicles for some time or increase their walking trips, even when the shops are more than a couple of miles away. However, some cases suggest that positive experiences in changing travel behaviour can be the beginning of a trajectory towards further reducing car ownership and increasing active travel. Looking to the future, Emily comments that 'environment has to be considered, whether you like it or not' and she is not alone in reflecting on whether modal choice for different trips is about necessity, want or just convenience. As Max says, visits to town are the easiest trips to give up in good weather and the hardest to give up when the weather is bad.

## 5: Thinking about decarbonisation and modal shift in the North's places

This section primarily draws on more in-depth data from the group interview with Cameron, Robin and Sam, living in and around the Manchester area, and the one-to-one professional interviews. The core themes emerging in discussion about how the local places our respondents live and work in could become more sustainable relate to the impact of planning and land use, the quality of public transport, active travel options and the need to appreciate the diversity of the population and implications for behaviour change messaging.

***Planning and Land Use***

The role of urban planning in decarbonisation was a recurrent theme across all three strands of qualitative inquiry. When asked about the most effective ways of encouraging drivers to reduce their car use, Tom's response is:

> "planning policies which embrace the sustainability aim of reducing the need to travel."

Despite the rise of online retailing and home delivery, there clearly remains an appetite for shopping in person amongst some participants. Where shops were not nearby, qualitative survey respondents cited weekly shopping trips and visits to sports amenities as the most difficult thing to manage without a car: the gym is too far to cycle and the local pool closed years ago (Joe). Having things to carry, as well as getting to amenities, can also be an issue with shops, schools and sports facilities. Robin and Sam, respectively in the 6-10km and 10-15km bands from Manchester city centre, both compared local urban planning unfavourably with their experiences of other northern European countries. The availability of amenities locally, i.e. within easy walking or cycling distance, was viewed as critical, as was restricting out of town developments to comparison retailing of bulky goods, rather than everyday essentials. Joe, in Yorkshire, made the (often heard) suggestion to reduce the level of development of amenities on the ring road, and to ensure that housing developments are accompanied by essential services such as shops, bars, doctors' surgeries and so on. Cai (Planning) raised the complex and often contradictory issues surrounding individuals' commitment to reducing emissions and the potential exclusionary effects of no longer owning or regularly driving a car, and posed the question as to whether place accessibility by non-car

modes could become more of as a selling point for new residential developments. Similarly, Joe's advice to people who would like to reduce their car use or develop more sustainable driving habits is:

> "When buying/ renting your home, think if amenities you are likely to need are walkable/ cycle-able. I bought my house with condition that I could walk into the city centre - so close to work, shops, bars, etc."

***Public Transport Quality***

*"I think somehow it's endemic to this country that we look down upon cyclists and public transport users."*

(Robin)

We know from existing research that high quality, accessible and competitively priced public transport is a necessary adjunct of the shift to electric vehicles, given Net Zero will require a reduced vehicle fleet given the embedded carbon in the vehicles themselves. There is also a vast literature about the negative externalities of car dependence in domains such as social exclusion, local environmental pollution and so on. Our respondents provided evidence for the idea that improving the calibre of public transport can create a tipping point for changing modal choice. Leo, who describes himself as being *slightly* interested in the environmental impact of his car use, talks of places not being "realistically served" by public transport and will not use the car if destinations are "more conveniently served" by other options. Joe gives the example of sports facilities being difficult to reach other than by car, if going there early or late.

It is striking that the language of qualification is recurrent in discussions of public transport: Tom in Manchester is "lucky" to live in a city with "reasonable" public transport provision. Cameron, within the 0-5km band from the centre of Manchester describes himself as being "within five minutes of one of the busiest bus routes in Europe" and praises the reliability of the tram system. The frequency of the tram service is currently an issue but he believes this will improve. However, he claimed that the provision of public transport by multiple private providers in cities including Manchester has created unnecessary challenges in travelling, particularly by bus, although lack of coordinated timetabling between different modes is also

problematic. We were told that the lack of streamlined multi-modal ticketing has exacerbated these issues and the cost of public transport also undermines park and ride schemes as an option for families, making taking the car into the city a much cheaper option. Cameron is enthusiastic about the possibility of a simple ticketing arrangement, saying "I think people are more likely to take to public transport if they just have to tap in and tap out simply."

***Active Travel Options***

Despite being a relatively recent term, active travel is understood as walking and cycling by interviewees and problematised in terms of infrastructure and competition with the car. Throughout the interviews, the idea that walking is a feasible mode of transport for many trips was challenged by interviewees on behalf of themselves, less able people, older people and children. The tension between street parking and active modes was highlighted, especially with reference to children. Robin, 6-10km from Manchester city centre, comments that "the sheer incivility of parking, and also rat running through our local area, our actual little street" discourages both walking and cycling. Sam, 10-15km from the city centre, opines that no-one in government seems to take the issue of cycling and safety seriously, and speaks about very experienced cyclists being killed on the roads. Although until recently a lifelong cyclist, who was brought up in a 'cycling family', he now believes busier roads and falling driving standards make it too high of a risk:

> "Quite recently, after all the lock down, I found I was quite frightened because I, on a road I've never been for years, and a huge articulated lorry passed me. It must've been a foot away. And I thought, you know, I'm literally inches from death here. That has stopped me cycling. I'm done."
>
> (Sam)

Several participants noted that the legacy of years of developing car-dependent infrastructure created difficulties in encouraging modal shift. The lack of safe cycle lanes adds to concerns about the safety of cycling, discouraging travel by bike. Challenges with public transport and active travel reinforce the position of the car as the desirable and high-status option.

***Diversity, People and Place***

Our interviewees offered some nuanced insights into the particular circumstances of the places they were describing, and what this might mean for the implementation of macro-level policy initiatives in communities. For example, Robin noted that:

> "30%, 33% of the population of the households in Leeds at the last census, didn't have access to a car. And that goes up to sort of 57-58% in some of the inner city deprived areas. So, people are dependent on cars, but people who don't have cars are therefore very badly disadvantaged."

Age, ethnic origin, socioeconomic status, and other factors can be influential in transport behaviours. Several of our interviewees posed questions about whether the general invocation to adopt active travel modes was sufficiently targeted and well communicated for particular groups and places. Alex and Jamie wondered whether local cultural norms in certain White British and South Asian communities – particularly the association of the car with 'success' and 'status in society' – were important factors underpinning car use and disincentivising active travel.

However, our interviewees also actively acknowledged that generalising or stereotyping communities can be counterproductive. Like many urban areas, Manchester has a popular cultural understanding that opposite sides of the conurbation have different socio-economic structures and hence transport habits. But as Cai (Planning) put it, "if they're within rural communities in the south, everyone assumes they're 4x4 driving super-commuters, and if they're in the North it's assumed they're highly independent on their local bus that never comes. But it's obviously much [more] complicated".

Finally, with particular reference to older people, Alex noted that the purpose and outcomes of planned interventions need to be communicated carefully, especially if there was a perception that the disruption to local community live brought about by change would be difficult for older and more vulnerable citizens to either understand or cope with. Reflecting the literature about approval for active travel and other sustainable transport interventions being stronger *after* they had been completed than when in planning, he noted that although, like others, older people would not want to 'go back' to the situation before sustainable travel

measures were introduced, demonstrating awareness of older people's concerns *before* intervention was essential.

## 8: Conclusion

There is important potential for older people to lead a significant and sustained reduction in carbon consumption for their personal mobility needs and so send a powerful signal to the community at large about society's commitment to achieving carbon goals in a fair way. Although small, our seedcorn project demonstrates that there is awareness and understanding of these issues within the community of older drivers, and that these concerns are shared between those that have made more personal efforts to reduce their emissions, and those that are less concerned with individual action.

We heard evidence about older people's attitudes to a range of issues that are common in the sustainable transport and transitions debate, but perhaps less commonly highlighted as being of particular relevance to these groups, and what they would need to adjust their own travel habits.

Specific themes raised that represent challenges to policy makers developing plans for the transition of the transport and mobility system to Net Zero Carbon included:

- The need to plan for a whole-life transport system; that is one that gives people scope to adjust their travel habits as their personal circumstances change across the life course;

- Clarity in information and communication about why sustainable transport interventions are being implemented, what the differences they will bring are, and (crucially) how those older people directly affected by the changes introduced will be able to continue to meet their needs;

- The development of genuinely inclusive and accessible places that avoid the injustice of services only being accessible to those with access to a car.

The outcomes of our work are not without challenge to policy makers, however. The evidence we heard tended to focus much more on the provision of 'carrots' in terms of making alternatives to the car more attractive, rather than the 'sticks' of making car use less attractive. The issue of communication about why change is necessary, and what the roles and responsibilities of older people in bringing it about are crucial but as yet extremely underdeveloped.

This is a small pilot project with a limited number of participants. Nonetheless, the issues raised are clearly crucial for the wider social acceptance of the kind of radical change in transport that our decarbonisation commitments will require. Understanding how older people will be affected by these changes, how they can adapt and how they can signal their willingness to play a full part in achieving change remain key issues for wider research in larger projects. In particular, exploration of what the difference between the kinds of accessibility that people *need* as opposed to that that they might *want* or wish for is a crucial issue for the successful transition to low carbon mobility.

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