DecarboN8

Place-based decarbonisation for transport

Room to Move: Impacts of road-space reallocation

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November 2021

Reference as:

Parkes, S., Weston, R., Gore, T. and Lawler, M. (2021) Room to Move: Impacts of road-space reallocation. DecarboN8. DOI: 10.7190/cresr.2021.0383487418

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UKRI Engineering and Physical Sciences Research Council

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

Room to Move: Impacts of road-space reallocation

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Acknowledgements

This project was supported by DecarboN8. DecarboN8 is funded by UK Research and Innovation, grant agreement EP/S032002/1. The authors would like to express their gratitude to DecarboN8 and the broader DecarboN8 Network for the support provided.

The study team also acknowledge the support of Lancashire County Council and Sheffield City Council in enabling this research to take place and for their efforts in promoting the surveys crucial to the data collection.

Finally, our sincere thanks to all those who took time to participate in the online surveys and contribute to this research.

Contents

Acknowledgements ..... **i**
Contents ..... **ii**
Executive Summary ..... **iii**
1. Introduction **1**
1.1. Objectives of the project 2
1.2. The case-study areas: Lancashire and Sheffield 2
1.3. Methodology 3
1.4. Report structure 6
2. The impacts of Covid-19 and the national lockdown on travel behaviour **7**
2.1. Working patterns 7
2.2. The number of trips being made 8
2.3. Alternative ways of travelling considered 8
2.4. Places normally travelled to 9
2.5. Specific journey purposes 11
2.6. Shifts to active travel 15
3. The role of temporary road-space reallocation measures **16**
3.1. The temporary measures introduced 16
3.2. Awareness of the measures 19
3.3. Views of the measures introduced 20
4. Longer-term behavioural impacts **23**
4.1. Wave Two – March 2021 23
4.2. Wave Three – July 2021 27
5. Conclusions **32**
5.1. Immediate impacts of the pandemic on behaviour 32
5.2. Impacts of the temporary road-space measures 33
5.3. The longer-term picture 33
6. References **34**

Executive Summary

The Covid-19 pandemic and associated national lockdowns rapidly reduced personal mobility and led to a rethinking of travel behaviours, at least for the short-term. Whilst on-going uncertainty makes longer-term planning difficult, this project looks back to establish the impacts of the pandemic on two contrasting local authorities in the North of England: Lancashire and Sheffield. Through a three-wave longitudinal panel study, this project has examined changes in travel behaviour emerging from the pandemic, the role and effect of temporary road-space reallocation measures and begins to explore what the resulting longer-term impacts are.

The first national lockdown led to a significant shift in behaviours amongst the sample. Across both case-study areas, whilst the overall number of trips for commuting and shopping declined, the use of private transport (cars/vans) and active modes (including walking/cycling) increased. **The overall changes in behaviour were more pronounced in Sheffield, particularly in relation to increasing use of active travel only, or in using active travel as part of combinations of modes**.

In the short-term, across all journey purposes, there were signs of sustainment of the widespread changes made to the usual destinations travelled to. **Of those who made changes to any of their usual destinations, half had sustained these changes as they emerged from the first lockdown, indicating that the lifting of restrictions did not lead to a rapid shift back to pre-pandemic habits**.

Whilst private transport saw an increase in use, active modes also experienced greater interest, including from those who didn't utilise these modes pre-pandemic. **Those not using active modes for certain journeys before the pandemic subsequently tried and sustained, in the short-term at least, shifts to these low carbon modes.** This was particularly relevant for those walking for shopping or leisure journeys.

Proximity to the temporary measures meant that many people did not make use of them, despite awareness of them being high across both case-study areas. 70% of the sample across both case-study areas were aware of the measures but only 32% used one. **Those that did use them rated them overwhelmingly positively with measures that removed traffic those that were most highly regarded.**

In the longer-term, the **private car is still the most popular mode** for all journey purposes, although it is still to return to pre-pandemic levels for some journeys. **Active travel has become more popular for leisure,** whilst **public transport use is still well below pre-pandemic levels**. However, **there has been a small increase in the numbers using public transport** recently. Looking ahead the picture remains unclear, particularly with regards to longer-term trends in working practices and whether the recent popularity of walking and cycling will continue.

1 Introduction

On 23 March 2020, the mounting crisis stemming from the Covid-19 pandemic led to the introduction of a national 'lockdown' in England that rapidly restricted the movements of substantial portions of the population. This 'stay at home' order meant that those that could were required to work from their homes. It also caused the 'furloughing' of large numbers of the working population who were unable to work, for example, those employed in shops or restaurants that were forced to close temporarily.

The pandemic and the associated national lockdown led to a substantial disruption to movements and a rapid limiting of distances travelled, and the number of journeys made. In the two weeks prior to the 23 March lockdown and for the subsequent two months whilst restrictions were at their strictest, human mobility in the UK was dramatically reduced (Hadjidemetriou et al., 2020). Social distancing requirements also drastically reduced demand for public transport and the population were encouraged to travel by active modes, such as walking and cycling (DfT, 2020a). Throughout this period (March-May 2020), driving, public transit, and walking were 60%, 80% and 60% less than corresponding 2019 levels (Hadjidemetriou et al., 2020*).*

In response to the pandemic, local authorities in England pursued programmes of rapid road-space reallocation. This was supported and enabled through statutory guidance published by the UK government along with several temporary legislative changes giving increased powers to local authorities (DfT, 2020b). Financial support was also provided through the Emergency Active Travel Fund (EATF), which was a repurposing of existing promised spending on cycling and buses (DfT, 2020a).

The EATF, delivered in two 'Tranche's', provided a total of £217.5 million to local authorities in England to deliver temporary interventions that would help create space for social distancing and facilitate higher levels of active travel, particularly where infrastructure was lacking (DfT, 2020c). With the need for social distancing, the entrenched imbalances in space provided for walking, cycling and other active modes compared to that provided for motor vehicles was highlighted (Nurse and Dunning, 2020) and local authorities were forced to act to address this, at least in the short-term.

Local authorities responded rapidly at the onset of the pandemic to reallocate road space. Indeed, as Dunning and Nurse (2020) observed, the ability to quickly repurpose existing infrastructure was notable and demonstrable of the scale of change that can be achieved in the short-term, if required. It is beyond the scope of this project to examine in significant detail broader local government responses to the pandemic with regards to active travel. However, a detailed account has been produced separately by the project team (Gore et al., 2021).

1.1. Objectives of the project

This report presents results from a study into the impacts of the pandemic on travel behaviour in two contrasting local authorities in England: Lancashire County Council (LCC) and Sheffield City Council (SCC). We examine the broader travel behaviour changes observed, what impact the temporary road-space measures had, and what the longer-term picture might look like for these two locations.

The motivation to focus on two specific local authorities was driven by a recognition that different places face different challenges and conditions. What works in one place might not work as well in another.

We seek to explore this by focusing specifically on these two contrasting locations and offer a critical evaluation of diverse urban areas in varying states of preparedness for a rapid uptake in active travel. Sheffield – as part of the wider city region – had already undertaken considerable work prior to the pandemic to encourage higher levels of active travel and in Lancashire it has been almost a decade since the introduction of 20mph zones in residential areas across the county. Although LCC operate as the transport authority, there are complex administrative arrangements between the local town and city councils that must be navigated to deliver transport interventions.

The objectives of the project are summarised below:

1. Examine the impact of the pandemic and associated first national lockdown on travel behaviour in the two case-study areas?

2. Evaluate the impact of the road-space reallocation on behaviour: have they encouraged an additional shift towards active travel and is this temporary or permanent?

3. Understand longer-term impacts on behaviour: have work patterns changed, are people travelling less, to different destinations?

1.2. The case-study areas: Lancashire and Sheffield

A key difference between the two case-study areas is the geographic scale over which their boundaries fall. Lancashire, a county council, is home to 1.23 million inhabitants spread over 2,894 sq. km. The population is located across several urban settlements, including the administrative centres of Preston and Lancaster, and several former mill towns such as Blackburn and Burnley, but also a large rural area. In contrast, Sheffield, a city council, operates over a much tighter boundary with a higher density of population across one urban area; 1601 people per sq. km. compared to 424 people per sq. km. in Lancashire.

Table 1: Characteristics of the case-study areas

Lancashire	Sheffield

• 1,227,076 inhabitants over 2,894 sq. km. (pop. density of 424 people per sq. km.)
• Travel times to large (5000+) employment centres
  ○ 33 mins by PT/Walking
  ○ 31 mins by Cycle
  ○ 17 mins by Car
	• 589,214 inhabitants over 368 sq. km. (pop. Density of 1601 people per sq. km.)
	• Travel times to large (5000+) employment centres
	  ○ 24 mins by PT/Walking
	  ○ 20 mins by Cycle
	  14 mins by Car

Source: ONS Population density for local authorities in the UK, mid-2001 to mid-2020 (2021) and DfT Journey Time Statistics (2019).

Existing travel patterns

The differing spatial characteristics and existing transport networks is evident when comparisons are made between the travel to work patterns in each case-study area. The 2011 census has been relied upon here as it offers a comparable set of data between these two contrasting areas, which are outlined in Table 2.

The mode share of several travel modes are similar between these two areas, including: walking, cycling, rail, and also working from home. Where these areas diverge are on light rail/tram (Sheffield has the 'Supertram'), buses and car use (specifically as main driver). Sheffield has a mode share of 33% for car as driver but Lancashire sees a mode share of 42%.

Table 2: Travel to work patterns

	Lancashire	Sheffield
Work mainly at or from home	3%	2%
Underground, metro, light rail, tram	0%	2%
Train	1%	1%
Bus, minibus or coach	4%	8%
Taxi	0%	0%
Motorcycle, scooter or moped	0%	0%
Driving a car or van	42%	33%
Passenger in a car or van	4%	3%
Bicycle	1%	1%
On foot	7%	7%
Other method of travel to work	0%	0%
Not in employment	36%	41%

Source: Census, 2011.

1.3. Methodology

The nature of conducting data collection under the conditions of the Covid-19 pandemic meant that the research team needed to be flexible and adaptive to changing conditions. It was ultimately decided to conduct the data collection solely

online and remotely. It was determined that the risks to researchers and participants to Covid-19 would be too high if data collection was undertaken face-to-face. This was in line with practices across different research institutions at the time.

Survey design

The final research design employed a three-wave panel study approach to capture travel behaviour over a longer-term period. This was necessary, in particular, to meet the 3rd objective of the project, which focused on the longitudinal dimension.

Wave 1

With the project being conceived and funded after the first national lockdown had begun, it was impossible to collect a pre-pandemic baseline without asking respondents to answer retrospectively. Therefore, the first survey wave captured travel behaviour data for three distinct periods: pre-lockdown, during lockdown, and post-lockdown. This allowed us to determine whether travel behaviour change had been due to the Covid-19 pandemic in general, the road-space reallocation programme, or other third factors.

This first survey wave, which formed the primary survey for this project in terms of length and number of questions, examined factors such as mode choice, number of trips, attitudes towards the temporary measure introduced, and factors inhibiting changes in behaviour. It also captured a broad range of socio-demographic questions, including whether the respondent had shifted to working from home or had been furloughed, given the implications of daily travel that this would bring.

Waves 2-3

Waves 2-3 were designed to be shorter follow-up surveys aimed at capturing the longer-term behavioural picture whilst minimising sample attrition. As this was part of a panel study approach, only those from the original wave one sample (who had agreed to be contacted for follow-up surveys) were approached to complete these subsequent waves.

Sampling and distribution

Each survey wave was deployed online using Qualtrics. An ideal survey distribution method would have been to take a postal approach (with an online response option), with stratified random sampling undertaken across all postcode districts of both Lancashire and Sheffield. Owing to resource limitations, alongside health and safety concerns due to the pandemic, the online approach was deemed most suitable given these difficult constraints.

The sampling therefore needed to rely upon convenience sampling. Promotion of the first survey was undertaken by the project team, supported by our respective academic institutions and the local authority partners on the project, who circulated the survey across their extensive resident mailing list recipients and their social media channels. This approach, whilst necessitated, meant that there was increased risk of self-selection bias amongst the sample, which is an acknowledged limitation to the methodology.

The distribution of the survey invitation via local authority mailing lists helped to promote the survey widely. However, there are limitations in relying upon an online-only approach, such as underrepresenting those without access to the internet. Waves 2-3 involved surveying those who had already responded to the first survey wave so did not require further promotion.

A total of 1,555 responses were received to the Wave One survey. This data was processed and cleaned with partial responses removed owing to them not meeting the lower threshold of data required to examine their behavioural response before, during and after the first national lockdown. This left a total of 1,084 valid responses remaining. The follow-up survey waves were shorter in length to limit attrition, however, this brevity also meant that there were only a small number of partial responses reported in Waves 2-3. Table 3 outlines the survey waves and the resulting sample achieved.

Table 3: Survey responses

Survey wave	Deployment	Responses	Combined	Lancashire	Sheffield
One	Sep-Oct 2020	*Total*	1555	787 (51%)	768 (49%)
		Valid	1084	548 (51%)	536 (49%)
Two	Mar 2021	*Total*	357	109 (31%)	248 (69%)
		Valid	351	109 (31%)	242 (69%)
Three	Jul 2021	*Total*	251	67 (27%)	184 (73%)
		Valid	250	67 (27%)	183 (73%)

As the table highlights, there was a notable drop off in Wave Two from the original sample. Respondents were asked for permission to contact them for follow-up, which reduced the pool of possible follow-up respondents. In Sheffield, for example, the Wave Two survey was only able to be sent to 321 respondents who had responded positively to this request. However, a response of 248 completed surveys for this wave in Sheffield indicates a response rate of 77%, which is extremely positive.

Sample characteristics and limitations

With the use of convenience sampling and online only surveying - owing to resource limitations and the pandemic - there was a risk that the sample would underrepresent certain groups in each local authority area. Table 4 outlines key characteristics for the sample and highlights some areas of note. Specifically, the high numbers of female respondents in Lancashire and high numbers of older and/or retired respondents in Sheffield. Both local authority samples also overrepresents those of White ethnicity.

Table 4: Characteristics of each local authority sample

	Lancashire	Sheffield
Gender		
Female	70.6%	56.1%
Male	27.8%	40.6%
Non-binary	0.4%	0.6%
Prefer not to say	1.2%	2.8%
Age		
18-24	3.1%	1.3%
25-34	15.3%	12.4%
35-44	20.9%	16.4%
45-54	34.8%	24.2%
55-64	22.8%	20.7%
65-74	2.9%	20.7%
75+	0.2%	4.2%

	Lancashire	Sheffield
Employment Status		
Full-time	73.3%	47.3%
Part-time	16.4%	18.3%
Unemployed	2.0%	4.5%
Student	2.0%	0.8%
Unable to work	1.0%	2.1%
Retired	5.3%	27.0%
Ethnicity		
Arab	0.2%	0.2%
Asian/Asian British	1.4%	0.9%
Black/Black British	0.0%	0.9%
Mixed	1.0%	1.5%
Other	0.4%	0.0%
White	96.9%	96.5%

Efforts were made during the survey distribution phase to widely promote the survey given concerns around representation. The project team directly targeted community groups and charities operating in more deprived wards of the local authority or wards with higher levels of BAME residents to reach those at greater risk of underrepresentation. Ultimately, there are limitations to the sample owing to the approach that needed to be taken, including self-selection bias and underrepresentation of certain groups and the project team acknowledge these.

These constraints meant that the analyses in this report faced some limitations, namely that the sample cannot be claimed to be representative of the wider Sheffield and Lancashire populations. This also meant we were unable to provide further analysis of travel behaviour and views of the temporary measures by the socio-economic characteristics of respondents, which would have added a further level of insight. Nevertheless, this report still provides valuable and timely insights into the impacts of the pandemic and associated road-space reallocation measures.

1.4. Report structure

The remainder of this report is structured around the three broad aims of the project. Chapter 2 explores the impacts of Covid-19 on travel behaviour in the two case-study areas. Chapter 3 outlines the measures that were introduced in Lancashire and Sheffield and how these were engaged with by residents. Chapter 4 examines the longer-term picture in the two areas and whether impacts on behaviour were sustained. The final chapter presents the conclusions from this project.

2 The impacts of Covid-19 and the national lockdown on travel behaviour

This chapter outlines the changes in travel behaviour observed in Lancashire and Sheffield in response to the pandemic, focusing primarily on the period immediately before and then during the first national lockdown (beginning 23 March 2020). It also examines travel behaviour as these two locations emerged from this first lockdown. The longer-term behavioural impacts, related to the second and third national lockdowns, are covered in Chapter 4.

2.1. Working patterns

One of the immediate impacts felt because of the national lockdown imposed on 23 March was the shift to home working for vast numbers of the working population. In addition, large numbers of workers who were unable to continue working due to closure of premises (e.g., non-essential shop workers or those in hospitality) were placed on temporary leave or 'furlough'.

Table 5 shows that across the sample 47% were working from home at the time of the Wave One survey (September/October 2020) but only a small proportion were furloughed. This was the point in the pandemic where much of the country had 'reopened' during late summer. Sheffield then entered 'Tier 3' restrictions towards the end of October which closed restaurants and bars and those who could work from home were again asked to do so. Most responses were received in September or early October so the impacts of newly imposed restrictions on the data were minimal.

Across the two case-study areas, Sheffield had a lower proportion working from home (38%), although this likely to be linked to the higher numbers of retired respondents in this local authority. Similar proportions of respondents were travelling to their workplace, or elsewhere as part of their employment in each case-study area.

Table 5: Working circumstances at Wave One

	Lancashire	Sheffield	Total
Furloughed	1%	1%	1%
Working from home	56%	38%	47%
Travelling to workplace/elsewhere for work	33%	29%	31%
Not in any type of employment	10%	32%	21%

Further examination of the changing circumstances for these groups showed that for those travelling to their workplace or elsewhere for work in September/October 2020, 41% (Lancashire) and 33% (Sheffield) were furloughed or working from home at the height of the first lockdown and had since returned to their workplace. Furthermore, nine out of ten respondents who were still working from home had done so since the start of the pandemic. This means that in total, just under a fifth of respondents in each case-study area had continued to travel to a workplace as normal throughout the first lockdown showing the scale of disruption to travel in these two areas.

2.2. The number of trips being made

The reduction in mobility seen during the first lockdown inevitably reduced the number of trips being made by the sample. Respondents were asked to detail the number of one-way trips they would ordinarily make prior to the lockdown for different journey purposes, and then the trips they had made during it.

As Table 6 shows, the average number of trips made for commuting and shopping decreased, highlighting the impact of the immediate 'stay at home' order and subsequent restrictions in place throughout Spring 2020. Leisure trips increased however, and the indication is that this was a result of more localised trips, including those made by active modes (something explored further in Section 2.6).

Table 6: Changes to average number of trips because of the first lockdown

Average trips (one-way) per week	Commute	Shopping	Leisure
Pre-lockdown	7.9	3.4	3.8
During lockdown	6.0	2.7	5.1
Post-lockdown	6.4	3.1	4.1

Note: Data from both Lancashire and Sheffield are included in this table.

The story after the first lockdown is one of a return towards pre-lockdown levels. The average number of commute and shopping trips had increased after the restrictions were lifted, although had not returned completely to pre-lockdown levels. The number of leisure trips dropped post-lockdown perhaps indicating a shift away from daily local excursions towards longer, less frequent leisure trips.

2.3. Alternative ways of travelling considered

An initial indicator of the impact of the pandemic on travel behaviour is in the alternative modes that were considered or used by the sample. In Lancashire, half of respondents reported considering or using alternative modes for at least some of their journeys. In Sheffield this figure was slightly higher (57%).

Table 7: Consideration or use of alternative modes

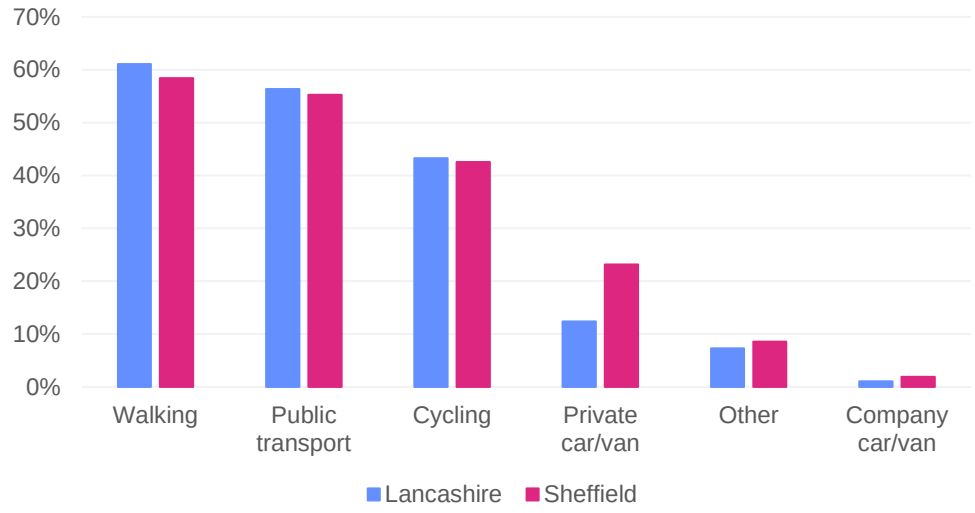
	Lancashire	Sheffield	Total
Considered or used alternative ways of travelling	50%	57%	54%

The extent to which different modes were included in this consideration or use of alternatives, is outlined in Figure 1. This shows that walking and cycling were common alternatives considered. Notably, there was also a high proportion of this group who considered or used public transport, which contradicts expectations. Whilst this

question asked whether respondents had considered or used the alternatives, it is expected that many of those reporting public transport had *considered* rather than *used* the mode. This is based on the analysis in Section 2.5, which highlights the dramatic decrease in public transport use across the sample during lockdown.

Consideration (or use) of private car/van is notably higher in Sheffield. This is likely a reflection of a shift away from public transport and existing lower levels of car/van use in this case-study area.

Figure 1: Alternative modes used or considered



2.4. Places normally travelled to

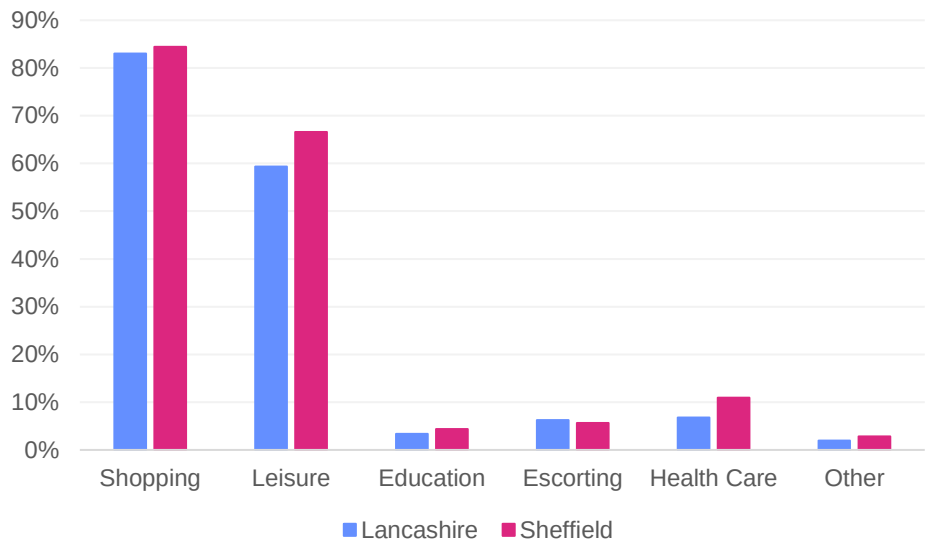
Section 2.2 demonstrated how the number of trips for core journey purposes changed as a result of the pandemic but then started to return to pre-lockdown levels. Alongside changes in the number of trips being made, it was also anticipated that there would be changes in usual destinations for such journeys. Indeed, in total, 70% of the sample had changed their normal destinations for shopping, leisure, or other journey purposes. In Sheffield, this was 75% of respondents and in Lancashire a slightly lower figure of 65%.

	Lancashire	Sheffield	Total
Changed where they would normally shop, go for leisure etc.	65%	75%	70%

Shopping and leisure trips were those that were subject to the higher levels of change. In both case-study areas shopping trips saw the highest levels of change to usual destinations. In Sheffield, 84% changed made changes to their usual shopping destinations specifically. In Lancashire this figure was 83%.

Usual destinations for leisure trips were more likely to change in Sheffield. 67% of those changing usual destinations did so for their leisure trips; in contrast this figure was 58% in Lancashire.

Figure 2: Changes to usual destinations



Post-lockdown habits are also very important to consider. For those who made changes to any of their usual destinations, half had sustained these changes as they emerged from the first lockdown. This is an indication that, for a significant proportion of the sample, the lifting of restrictions did not lead to a rapid shift back to pre-pandemic levels.

In Lancashire, 22% had returned to their pre-lockdown habits, although this was slightly lower in Sheffield (14%). The remainder of those that had changed during the first lockdown had neither maintained the changes nor reverted to their pre-lockdown habits. Instead, they found new destinations, highlighting the churn in behaviours evident during this period.

Figure 3: Post-lockdown habits of those changing destinations

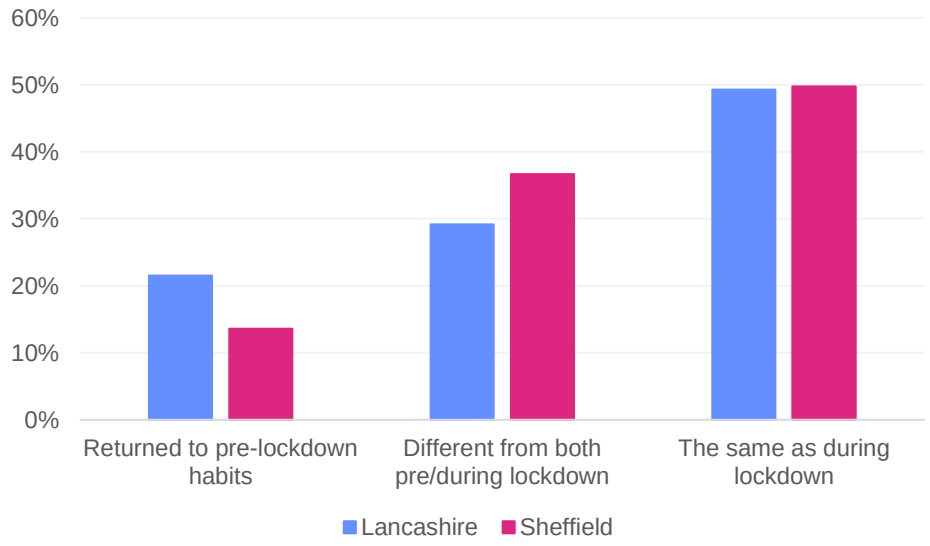
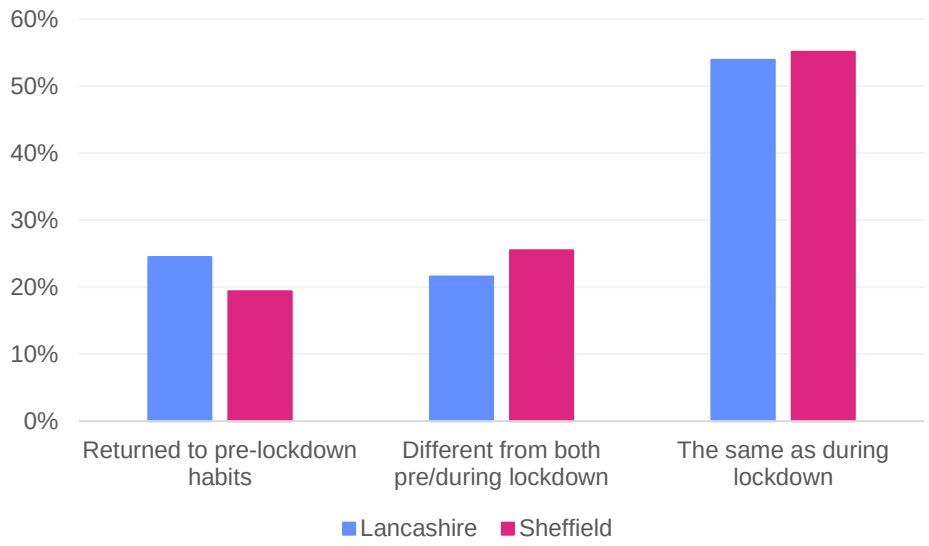


Figure 3 highlighted the post-lockdown habits of those that changed any of their usual destinations. Figure 4 focuses solely on those changing their *shopping* destinations. This highlights that for these respondents specifically, the sustainment of lockdown behaviours was greater. Over half had continued to shop at their new destinations; 54% in Lancashire and 55% in Sheffield. Correspondingly, a lower proportion had moved on to try new shopping destinations after lockdown restrictions were lifted. Notably, a higher proportion had returned to their pre-lockdown habits when compared those who changed destination regardless of purpose (Figure 3). For Lancashire this was 25% (against 22% across all those changing) and in Sheffield this was 19% (compared to 14%).

Figure 4: Post-lockdown shopping habits for those that changed during



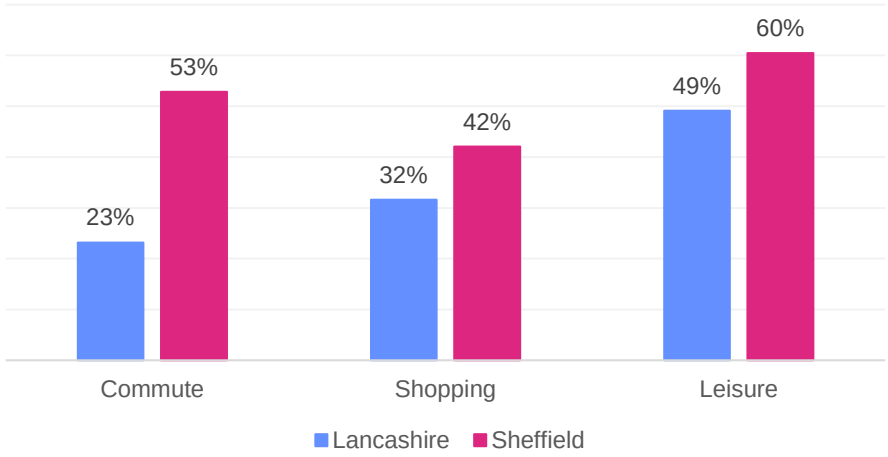
2.5. Specific journey purposes

The preceding sections of this chapter have outlined the broader impacts on general travel patterns in the two case-study areas because of the first lockdown. This section moves on to explore in more detail how the travel behaviour of respondents changed during this period.

During Wave One, respondents were asked to outline how they typically travelled for a range of journey purposes prior to the first national lockdown. Figure 5 shows the proportion for each journey purpose who – during lockdown - changed the combination of modes they would typically use before the pandemic. This figure shows that, overall, there was a more pronounced shift in behaviours in Sheffield compared to Lancashire. This applies across the three core journey purposes included in the analysis: commuting, shopping, and leisure.

For those making changes to their commute the analysis does not include those making a complete shift to working from home because of the pandemic, so therefore highlights that for those who continued to travel to a workplace or elsewhere for work there was a substantial churn in behaviours. In Sheffield this is particularly notable and is likely to reflect the greater reliance on public transport for commuting in this case-study area. The pandemic led to a rapid shift away from public transport use owing to the need for social distancing and this is evident here.

Figure 5: Proportion who made a change during lockdown, by journey purpose

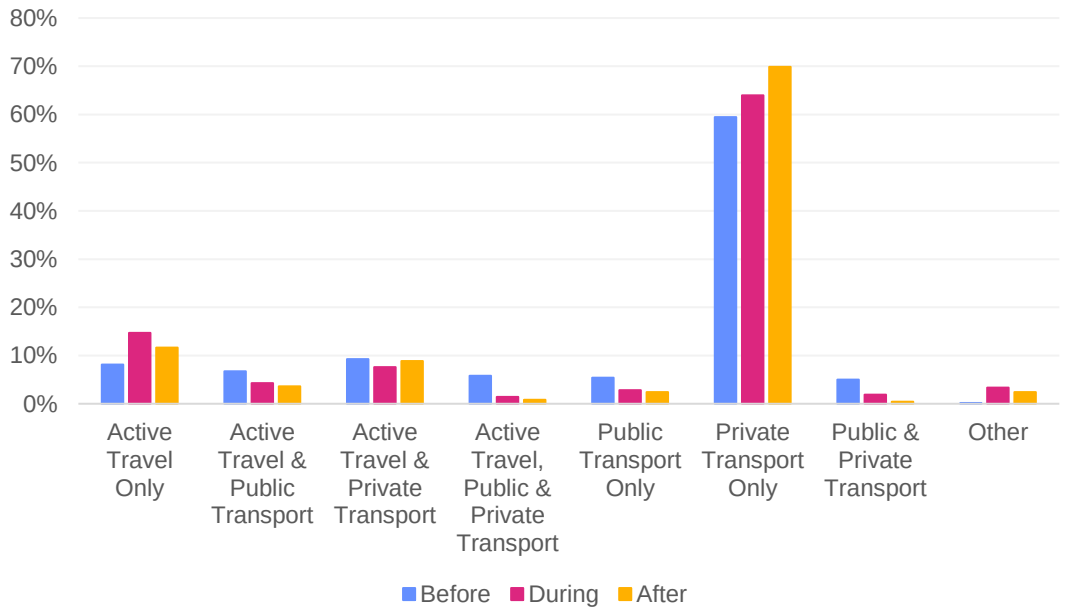


Recognising the fluidity and multi-modality of people's travel patterns, in this analysis respondents have been grouped by the collection of modes they reported using at each survey wave. The framing of the question posed to respondents, which asked about how they typically travelled for each different journey purpose, assumes that where combinations of modes are used this represents a multi-modal journey. For example, walking to a bus stop and then travelling by bus.

Commuting trips

Whilst a large proportion of the sample were either working from home or furloughed at the height of the first lockdown, many were still travelling for work, either to a workplace or elsewhere. The 'before' data shown here includes all those who reported making commute journeys prior to the pandemic, including those who subsequently worked from home or were furloughed. This therefore gives an indication of the mode share pre-pandemic. Figure 6 highlights the modes used during lockdown for those still travelling and then as the restrictions were lifted.

Figure 6: Travel patterns for commute journeys – Lancashire

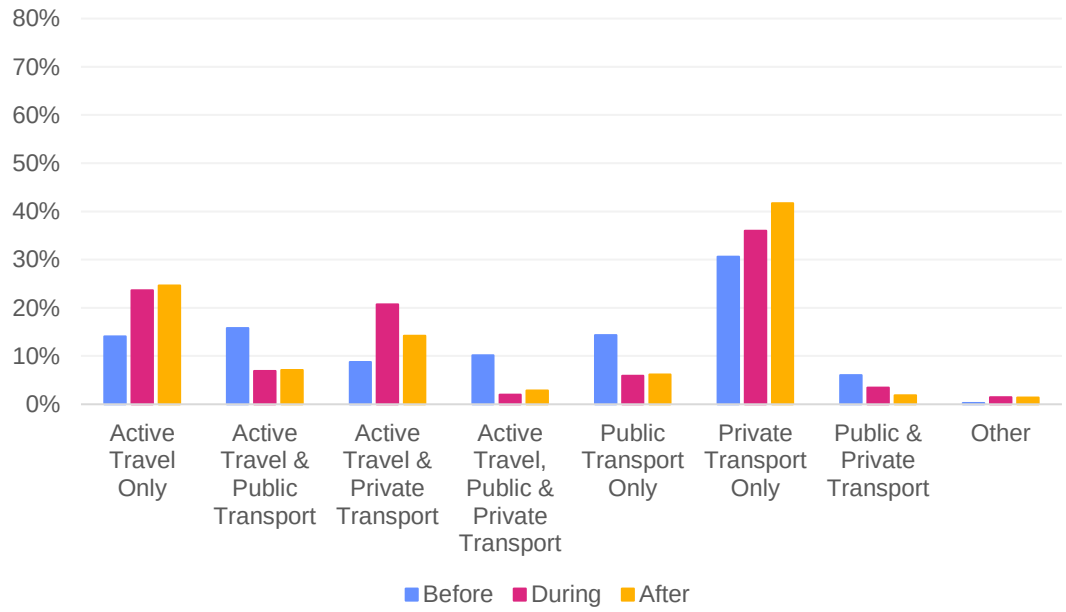


The key points to note from this figure is the large proportion of mode share for those using only private transport (cars/vans) for commute journeys. Prior to the pandemic, this was at 60% and climbed four percentage points during lockdown and a further six percentage points once restrictions began to be lifted. Those commuting by active travel only saw a slight increase during lockdown but subsequently dropped afterwards. Low levels of public transport saw decreases during lockdown, in line with expectations, and failed to recover after the first lockdown.

In Sheffield, there was substantially less reliance on solely private transport, reflecting the denser spatial structures and increased public transport provision. This did increase during the first lockdown and continued to increase once lockdown ended. The higher levels of public transport use pre-pandemic - including when paired with substantive use of active modes too – declined rapidly during lockdown and had failed to rebound post-lockdown, mirroring the experiences in Lancashire.

One notable divergence from the Lancashire experience is the more pronounced increase in solely using active travel for commuting or when used in combination with private transport (not necessarily as part of the same journey).

Figure 7: Travel patterns for commute journeys - Sheffield

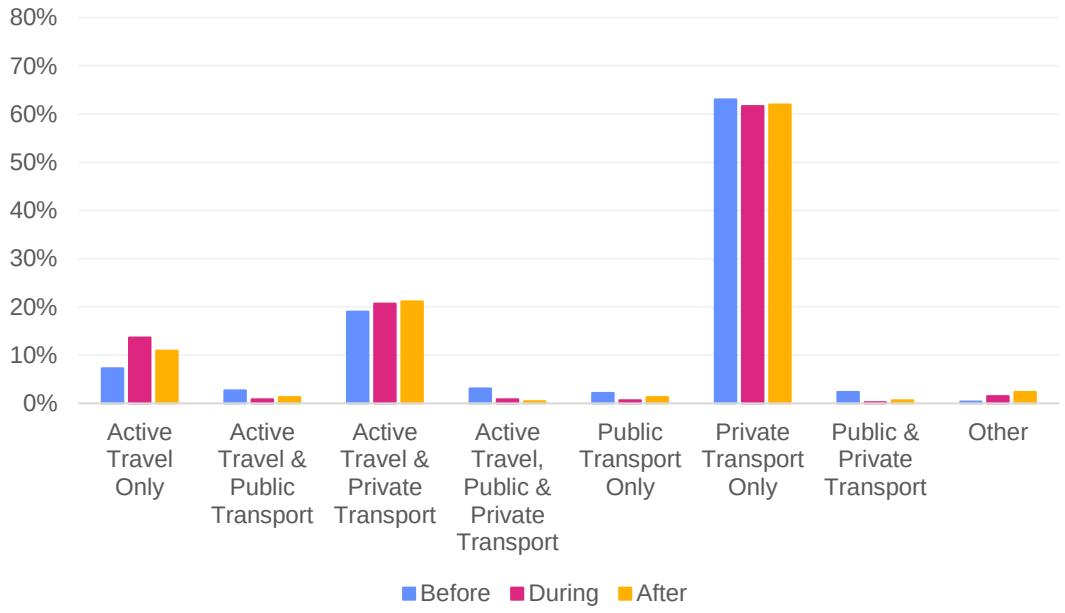


Shopping trips

It has already been outlined, in Section 2.4, that shopping trips were the most common destination to be altered during the pandemic. Figure 5 also indicated that in Lancashire 32% and in Sheffield 42% changed how they travelled for shopping trips. It is therefore interesting to consider the extent to which these factors impacted on the mode share.

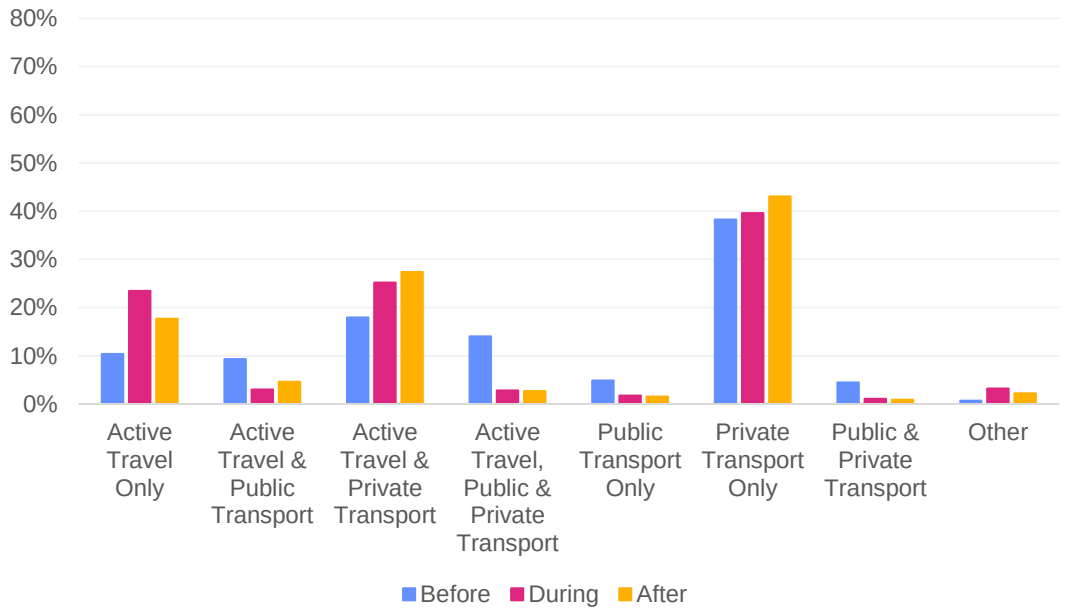
Figure 8 shows that, similarly, to commute journeys, solely using private transport for shopping trips was by far the most common travel behaviour. It also shows that there was little change in the overall mode share for private transport only, except for a marginal decline during lockdown. Notably, there were increases in those using active travel only and those using combinations of active modes and private transport.

Figure 8: Travel patterns for shopping journeys – Lancashire



In Sheffield, there were much more pronounced changes to shopping journeys, as with commute journeys. Those using solely active travel modes for their shopping trips increased from 10% to 23% during lockdown. Similarly, there were increases for those using combinations of active modes and private transport. This is something which has sustained after lockdown suggesting some longevity in those using active modes at least some of the time for shopping trips. It is likely these trips have been at the expense of public transport, rather than private transport.

Figure 9: Travel patterns for shopping journeys – Sheffield



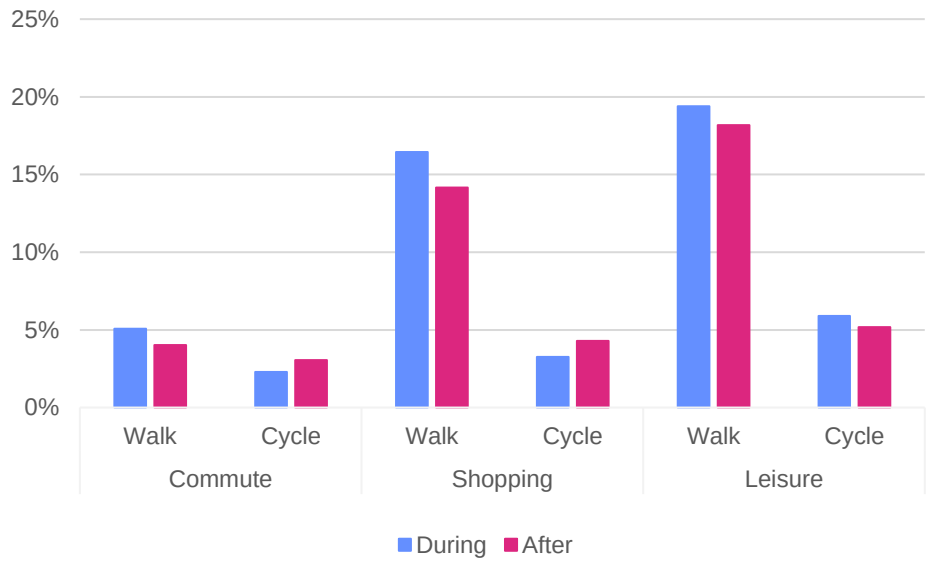
2.6. Shifts to active travel

With the urgent need to decarbonise the transport system, it is pertinent to look at the extent to which those not previously travelling by active modes switched to these low-carbon options.

Figure 10 includes those who were not using these modes at all pre-pandemic and highlights those that had then started using them during lockdown. This indicates that for shopping and leisure trips there was a particular uptake of walking for those that had not previously walked to these destinations. Whilst there was some drop-off post-lockdown, there was considerable sustainment of this in the shorter-term.

Cycling also saw increases in use, although to a much smaller degree than for walking. There was also further marginal uptake of cycling post-lockdown, which would align with the temporary measures being deployed more substantively in the case-study areas.

Figure 10: Uptake of active modes by journey purpose across both case-study areas



3 The role of temporary road-space reallocation measures

3.1. The temporary measures introduced

In response to the pandemic, LCC and SCC each implemented several road-space reallocation measures to facilitate social distancing and increase levels of active travel. The adaptations address road-space capacity issues for non-vehicle users along key commuter routes and at primary shopping locations.

Funding to support the measures

To support local authorities to implement these road-space reallocation measures, the UK government introduced the EATF. This fund repurposed funding previously allocated for active travel and buses into two tranches of funding that would be rapidly deployed. Both LCC and SCC successfully applied for funding from EATF to deliver projects.

Tranche 1, awarded in the summer of 2020 was to support temporary interventions, and was valued in total at £42.1 million. LCC secured £782,087 from Tranche 1 and SCC £630,000. Tranche 2 was a more sizable fund (£175.4 million in total). LCC was awarded £2.8 million from this second tranche and SCC £2.4 million[1]. The funding made available is summarised in Table 8.

Table 8: Emergency Active Travel Fund final allocations (total)

Area	Tranche 1 allocation	Tranche 2 allocation	Total allocation
Lancashire	£782,087	£2,801,000	£3,583,087
Sheffield	£630,000	£2,380,000	£3,010,000
England	£42,102,451	£175,360,750	£217,463,201

Source: Department for Transport, 2020; Sheffield City Council, 2021

[1] SCC received their Tranche 2 allocation through a central funding pot managed by the South Yorkshire Mayoral Combined Authority. This funding was merged with additional funding so these figures are estimated based on the proportion of SCC's allocation from this total funding pot.

Table 9: Emergency Active Travel Fund final allocations (per capita)

Area	Tranche 1 per capita	Tranche 2 per capita	Total per capita
Lancashire	£0.64	£2.29	£2.92
Sheffield	£1.07	£4.04	£5.11
England	£0.75	£3.11	£3.85

LCC and SCC are contrasting local authorities. LCC, has a larger population but a lower density per sq. km, distributed across several small towns and cities and a large rural area. On the other hand, SCCs population is lower but also more densely located around one urban centre. In terms of spend per capita, for Lancashire, overall, the spend was £2.93 per person. The majority of this spend was through the more substantive Tranche 2.

SCC received a combined £3.0 million through the EATF. Per capita this equates to £5.11, substantially more than the allocation in Lancashire and above the national average. It is impossible to say exactly how SCC (and South Yorkshire) were able to levy this additional funding per capita. However, with their ambitious active travel plans already well developed, they may have been better placed to respond more effectively to these funding opportunities. Indeed, the funding from Tranche 2 is for permanent measures to be implemented as we emerge from the pandemic.

With the measures introduced largely designed to be temporary, and with the evolving context associated with the pandemic, a number of the measures introduced at the time have now been removed or are at threat of being removed. Our study was only able to focus on those measures that were active at the time the first survey wave was deployed. These measures are summarised below:

Lancashire

- Temporary cycle/active lanes
- Footpath widening
- Restricted through traffic
- Pedestrianisation / Road closures

Initial focus in Lancashire was on key commuter corridors in Preston, Lancaster and Burnley, plus other district centres, such as Ormskirk. Although a number of schemes were introduced, they have now largely been removed. Two permanent schemes are being funded under Tranche II; the Penwortham to Preston Cycle Superhighway (the Liverpool Rd (South Ribble) - Temporary cycle lane listed below), and a Low Traffic Neighbourhood in the Sandylands district of Morecambe (not previously a temporary measure).

Table 10: Measures introduced in Lancashire

Measure	Details	Still in place?
Chapel St/Winckley Sq/Ribblesdale Pl (Preston)	Temporary cycle lane	No
Fylde Road (Preston)	Temporary cycle lane	No
Fishergate (Preston)	Road closed to vehicles	No
Fletcher Rd (Preston)	Restricted through traffic	No
Fishwick Parade (Preston)	Restricted through traffic	No
Frenchwood Av (Preston)	Restricted through traffic	No
A6 South Road/Penny St Bridge to Pointer Roundabout (Lancaster)	Temporary cycle lane	No
Dalton Sq (Lancaster)	Road closed to vehicles	Yes
Liverpool Rd (South Ribble)	Temporary cycle lane	Yes
Shady Ln/Nell Ln (South Ribble)	Restricted through traffic	No
St Helen's Rd (Moor St to Ruff Ln) (W Lancashire)	Temporary cycle lane	No
Ruff Ln/St. Helen's Rd (W Lancashire)	Road closed to vehicles	No
Moor St. (St. Helen's Rd to Railway Rd) (W. Lancashire)	Road closed to vehicles	No
Railway Rd - (W Lancashire)	Widened footway	No

Sheffield

The measures introduced in Sheffield directly in response to the pandemic included footpath widening, road pedestrianisation, road closures, rerouting bus routes, temporary cycle lanes, and a low-traffic neighbourhood. The majority of the measures were introduced in the city centre, although there were some examples at other popular shopping destinations where footfall warranted the provision of additional space for social distancing. Table 11 outlines the measures present in Sheffield at the time of the first survey wave being deployed.

Table 11: Measures introduced in Sheffield

Measure	Details	Still in place?
A61 Shalesmoor roundabout and Corporation Street junction - temporary cycle path	A temporary cycle lane introduced on a key route into and around the city centre.	No
Attercliffe Road temporary cycle path (Five Weirs Walk link)	Introduced to bypass an existing closure to the existing Five Weirs Walk route and allow continuity to the route.	Yes
Broomhill pedestrianisation and footpath widening	Removal of existing parking spaces outside a row of shops to enable footpath widening.	Yes
Division Street pedestrianisation	A shopping street in the city centre that was still open to traffic pre-pandemic. Closure of only a portion of the road.	Yes
Kelham Island low - traffic neighbourhood	Filters introduced at certain points to restrict car access through the neighbourhood.	Yes
Pinstone Street closure and footpath widening	Rerouting of buses and closure of road to provide more space on link between two key shopping streets in the city. Currently under consideration to be removed.	Yes
Upper Charles Street closure	Adjacent to the Pinstone Street closure and provides additional cycle and pedestrian routes.	Yes

3.2. Awareness of the measures

The deployment of the temporary measures was rapid and during a period of intense disruption across society. An advantage of temporary measures with minimal construction costs or time is that they can be quickly deployed, although can be as quickly taken away.

In the first survey wave respondents were asked about their awareness of the measures that were introduced in their area. Table 12 shows the results from this question and highlights how awareness of the measures themselves was high, particularly in Sheffield. 88% of Sheffield respondents were aware of at least some of the temporary road-space reallocation measures. In Lancashire, awareness was lower (70%) although still demonstrating a high level of awareness. A reason for the greater levels of awareness in Sheffield may be linked to the more compact nature of this case-study area relative to Lancashire with a greater likelihood of a respondent encountering one of the temporary measures.

In total, 79% of the sample were aware of at least one temporary measure. This figure is notably higher than another study from 2020 (Marsden et al., 2021) albeit focusing on other locations. The survey in that study was undertaken a few months earlier than in this project and awareness would arguably increase over time as more people travelled more widely.

Table 12: Awareness and use of the temporary measures

	Lancashire	Sheffield	Overall
Awareness of the temporary measures	70%	88%	79%
(If aware) did they use any of the measures?	21%	41%	32%

Whilst awareness of the measures was high, the actual use of them was quite low. As Table 12 also shows that, on average, only 32% of the respondents had used one or more temporary measure during their journey. Sheffield saw higher levels of engagement with the measures with two-fifths of respondents having used at least one (41%). In Lancashire this was only one-fifth of respondents (21%).

Proximity to the temporary measures was the key reason for not having used them. In total, 56% of those who did not use the measures did so because the measures did not serve their usual routes. As Table 13 shows, these figures were very similar in Lancashire and Sheffield; 55% and 56% respectively. The reduction in the number of trips being made, as outlined in Section 2.2, particularly for those who were working from home or furloughed, is one potential explanation as to why so many people were not served by the temporary measures.

Table 13: Reasons for not using the temporary measures

	Lancashire	Sheffield	Overall
Not on or near my usual route	55%	56%	56%
I do not regularly walk or cycle	32%	28%	30%
Other	13%	16%	14%

Table 13 also highlights how, of those remaining from the group who did not use the measures despite awareness of them, 30% did not regularly walk or cycle so therefore did not use the measure. This was slightly lower in Sheffield (28%) than in Lancashire (32%).

3.3. Views of the measures introduced

An objective of this project was to understand the impact of the measures on travel behaviour. Part of this is to understand the views of respondents using them. We know that overall, 79% of respondents were aware of the measures and from this nearly a third (32%) had used them.

Lancashire

Lancashire saw a more extensive roll-out of measures across the local authority, but this reflects the more dispersed nature of the case-study area. In total, survey respondents were asked to comment on 14 separate measures, which were spread across Preston, Lancaster, South Ribble, and West Lancashire. Of the total sample, reported use of the measures was low. The closure of Fishergate in Preston was the measure most utilise by the sample (6%), along with the temporary cycle lane on Liverpool Road in South Ribble (3%).

Those who had used the measures specifically were asked to rate them from 1 to 5 (1 = Excellent and 5 = Poor). The median scores presented in Table 14 shows that overall, the measures were regarded as being of good quality by those using them.

Table 14: Use and views of individual measures – Lancashire

Measure	Proportion of sample using the measure	Median rating
Chapel St/Winckley Sq/Ribblesdale Pl (Preston) - Temporary cycle lane	2%	Good
Fylde Road (Preston) -Temporary cycle lane	2%	Good
Fishergate (Preston) - Closed to vehicles	6%	Excellent
Fletcher Rd (Preston) - Restricted through traffic	1%	Good
Fishwick Parade (Preston) - Restricted through traffic	1%	Good
Frenchwood Av (Preston) - Restricted through traffic	1%	Good
A6 South Road/Penny St Bridge to Pointer Roundabout (Lancaster) - Temporary cycle lane	2%	Good
Dalton Sq (Lancaster) - Street closed to vehicles	1%	Good
Liverpool Rd (South Ribble) - Temporary cycle lane	3%	Good
Shady Ln/Nell Ln (South Ribble) - Restricted through traffic	1%	Good
St Helen's Rd (Moor St to Ruff Ln) (W Lancashire) - Temporary cycle lane	0%	Good
Ruff Ln/St. Helen's Rd (W Lancashire) - Closed to vehicles	0%	Good
Moor St. (St. Helen's Rd to Railway Rd) (W. Lancashire) - Closed to vehicles	1%	Good
Railway Rd - (W Lancashire) - footway widened	1%	Good

Note: Respondents were asked to rate the measure as either: Excellent, Good, Average, Fair, Poor. Owing to the low proportions using each measures the median scores are calculated from a Base of below n=100.

Sheffield

In Sheffield, there were a smaller number of measures introduced and these were used by a larger proportion of the Sheffield sample. The most used measure (23%) was the Division Street pedestrianisation. This is a popular shopping street but also home to several bars and cafes. The removal of traffic from a portion of the road was utilised by local businesses for outdoor dining tables. Pinstone Street was an equally common measure utilised. This is unsurprising as it is in a very central location and links several key shopping areas. Both these measures had a median score of “Excellent” by those using them.

Those measures utilised less were out of the core city centre and therefore likely to have experienced lower footfall. An exception is the Upper Charles Street closure, although this is adjacent to Pinstone Street and therefore users of this measures could have conflated it with the Pinstone Street closure in their responses.

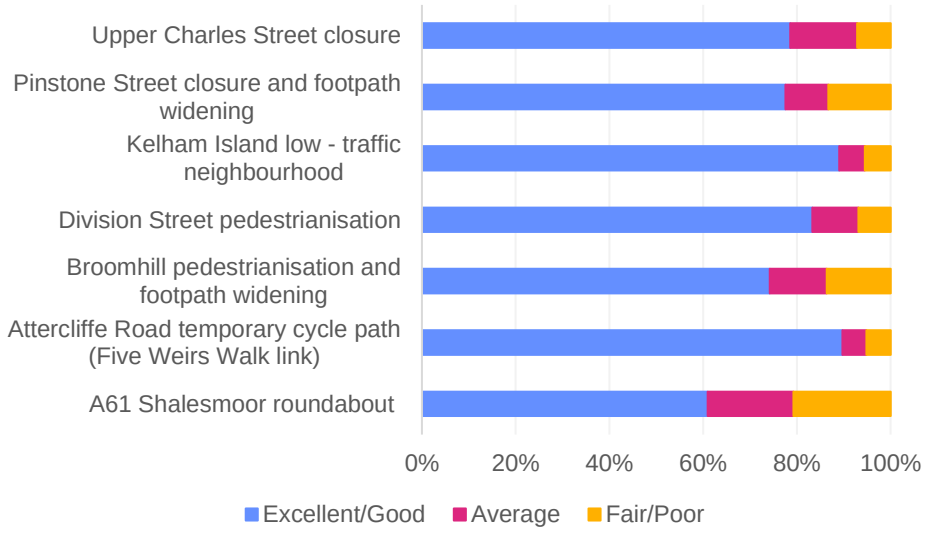
Table 15: Use and views of individual measures – Sheffield

Measure	Proportion of sample using the measure	Median rating
A61 Shalesmoor roundabout and Corporation Street junction - temporary cycle path	18%	Excellent
Attercliffe Road temporary cycle path (Five Weirs Walk link)	10%	Good
Broomhill pedestrianisation and footpath widening	15%	Good
Division Street pedestrianisation	23%	Excellent
Kelham Island low - traffic neighbourhood	15%	Excellent
Pinstone Street closure and footpath widening	23%	Excellent
Upper Charles Street closure	8%	Good

Note: Respondents were asked to rate the measure as either: Excellent, Good, Average, Fair, Poor.

Figure 11 visualises the ratings given to the measures by those who used them. This reiterates how the overarching view was one of positivity, with a majority rating each measure as either “Excellent” or “Good”. Notably, the A61 Shalesmoor roundabout, which received by far the most visible, and negative, coverage in the local press[2], received the highest proportion of negative ratings amongst those who had used it.

Figure 11: Views of measures – Sheffield



[2] https://www.thestar.co.uk/news/politics/council/politicians-criticise-silly-sheffield-cycle-lane-after-an-ambulance-gets-stuck-2908406

4 Longer-term behavioural impacts

This section looks at the responses to the two follow-up surveys in March and July 2021. These were shorter than the first survey, focused mainly on changes to travel habits since the previous survey.

4.1. Wave Two – March 2021

A total of 351 responses were received to the second wave, 109 from the Lancashire panel and 242 from Sheffield. The software used to collect the survey responses matched the respondents from each of the waves, this enabled a direct comparison amongst the participants over time.

Table 16 shows the employment status of the panel members responding to the second survey following the end of the first lockdown. The figures are similar to those for the wave one sample, with the exception of working from home/travelling to work for Lancashire, which has seen around a 6% shift to working from home within the sample.

Table 16: Employment status – wave two

	Lancashire	Sheffield
Furloughed	0.9%	1.7%
Working from home	63.3%	36.8%
Travelling to workplace/elsewhere for work	26.6%	27.3%
Not in employment	9.2%	34.3%

In the second survey they were asked “Have any of your circumstances changes since we last heard from you? (for example, no longer furloughed or working from home, changed employment status or workplaces, moved house)”. In Lancashire 16.5% said yes, whilst in Sheffield the figure was slightly lower at 15.3%. The changes were largely around changes in employment, either in the need to travel to a workplace or employer.

Those that responded yes to the previous question were also asked “Has this changed the way you travel?”. The response was similar for both of the study areas with 10.7% responding ‘Yes’ in Sheffield and 10.1% in Lancashire.

Figures 12 and 13 below show the modes used for commuting in the two survey areas (based on the 351 panel members who responded to the second survey). In both areas public transport was still not showing any signs of recovery in use, whereas active modes are still more popular than during lockdown, although have not yet returned to pre-lockdown levels. This is likely to be due to the significant numbers still working from home. Private vehicle use is still the most common mode of travel although still well below pre-lockdown levels.

Analysis in this section focusses on three trip purposes, commuting, shopping and leisure, as these offer some interesting insights into travel behaviour during the pandemic. Highlighting some differences between discretionary and non-discretionary journeys.

Figure 12: Lancashire – Commuting modes (Waves 1-2)

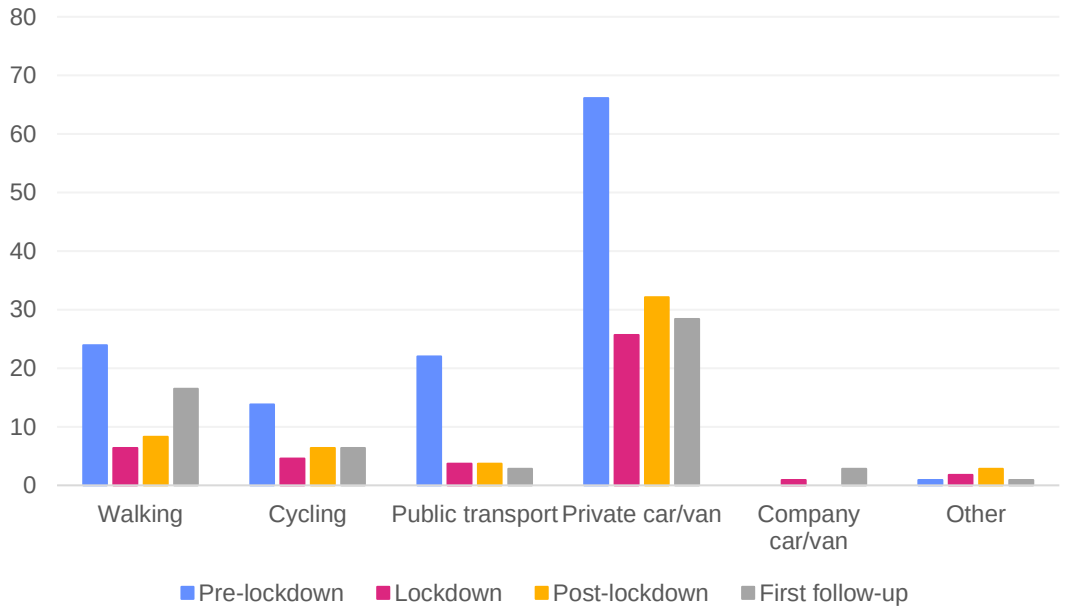
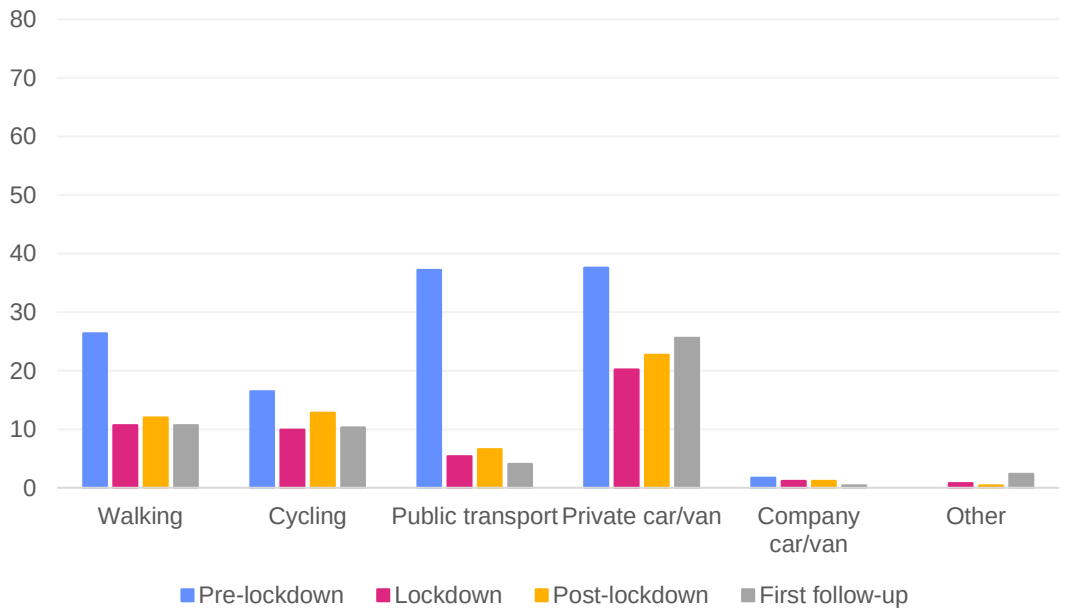


Figure 13: Sheffield – Commuting modes (Waves 1-2)



Figures 14 and 15 show the picture for shopping trips. Walking and private car use are by far the most popular here, which suggest a pattern of weekly shopping with the car and 'top-up' shopping locally. As with commuting, public transport has not recovered and was lower than post-lockdown levels at the time of the second wave. Within this panel there also appears to be a core of cyclists who have kept the level of cycling similar throughout the pandemic.

Figure 14: Lancashire – Shopping modes (Waves 1-2)

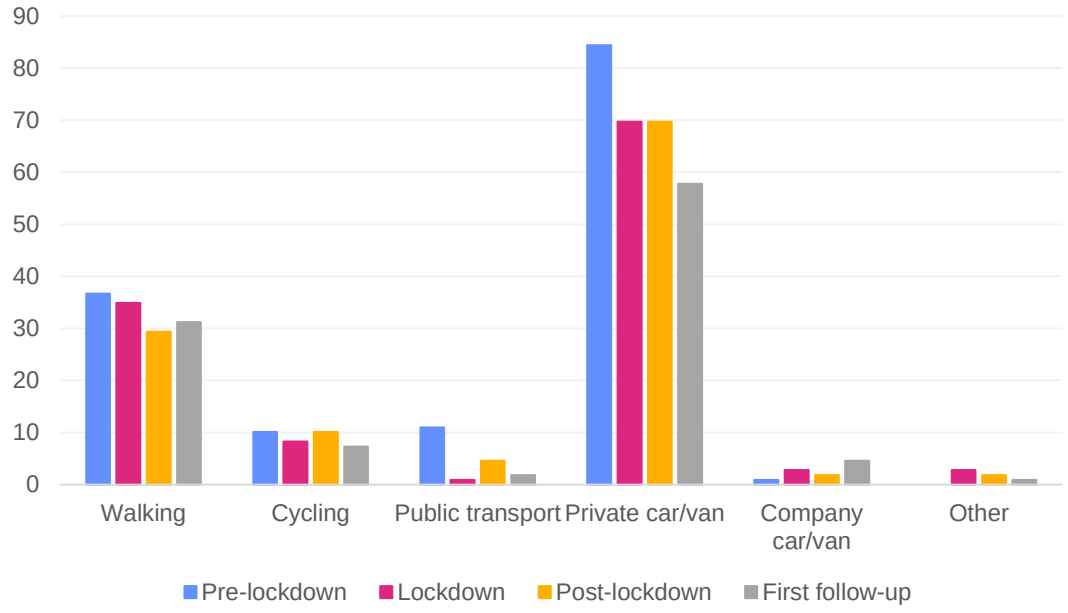
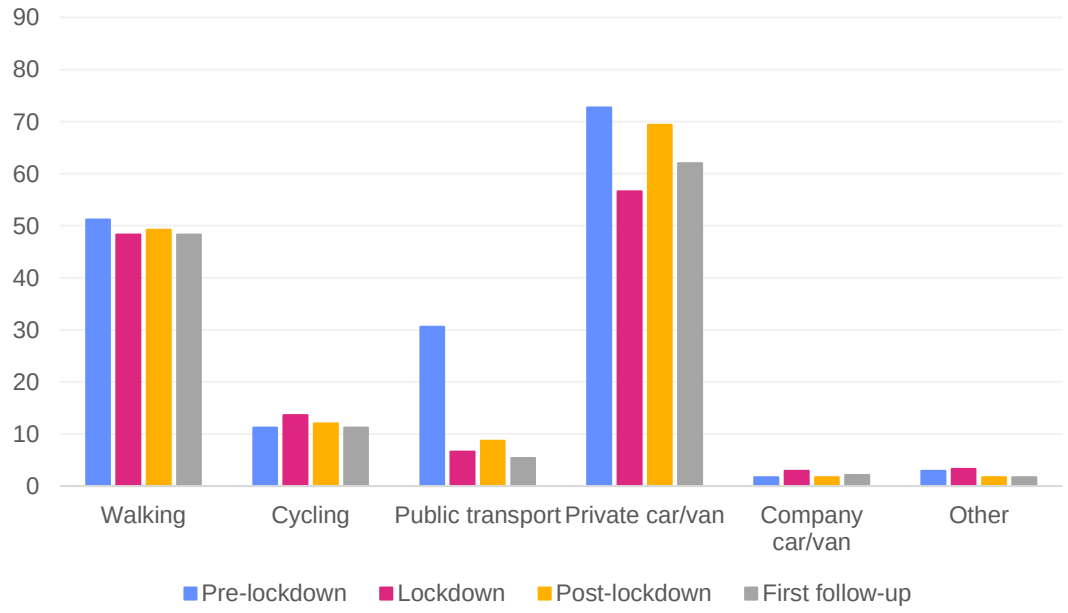


Figure 15: Sheffield – Shopping modes (Waves 1-2)



The much-publicised increases in walking and cycling for leisure during the first lockdown are not obvious from the respondents to the second survey. Although levels for both have remained at, or close to, pre-lockdown levels. As with commuting and shopping trips, it is public transport which has seen a significant fall in use with no sign of recovery. The used of motor vehicles was still well below pre-lockdown levels, falling

back again to around half of the post lockdown levels. Perhaps reflecting the lack of opportunity at this time for leisure activities further from home.

Figure 16: Lancashire – Leisure modes (Waves 1-2)

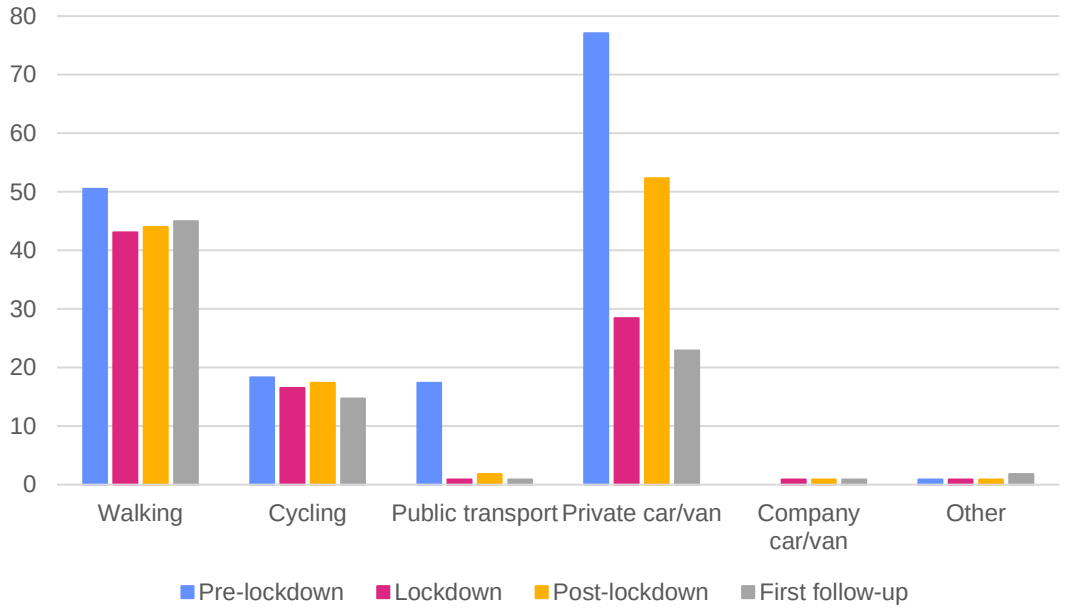


Figure 17: Sheffield - Leisure (Waves 1-2)

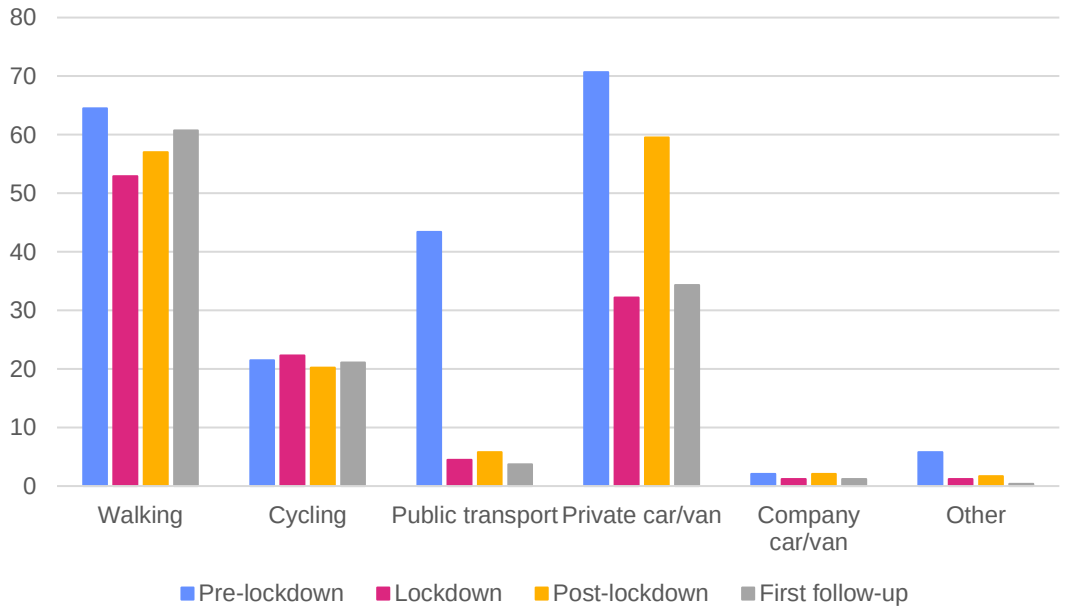


Table 17 show the average number of weekly trips for the three journey purposes. These are all lower than the post-lockdown figures; Lancashire having a slightly higher average number of commuting trips, whilst Sheffield has a higher number of shopping and leisure trips, reflecting the lower levels of employment in Sheffield panel.

Table 17: Average number of trips each week

	All	Lancashire	Sheffield
Commuting	2.32	3.11	2.01
Shopping	2.44	2.17	2.54
Leisure	3.41	3.28	3.46

As in the initial survey, panel members were asked “Have you used of considered other ways of travelling?”; 47.1% of Lancashire and 41.1% of Sheffield panel members said they had. Table 18 below shows the proportions of the different modes used or considered. Interestingly just over 9% used public transport, which is perhaps an indication of some return of confidence, although it may just indicate a lack of alternatives for the individuals.

Table 18: Alternative modes used or considered.

	Used	Considered using
Walking	29.3%	1.1%
Cycling	16.2%	3.1%
Public transport	9.1%	4.0%
Private car	17.1%	0.9%
Company car	0.3%	0.0%

4.2. Wave Three – July 2021

The 351 respondents to the second survey received an invitation to participate in the third and final survey during July 2021. As previously these were recorded so that each individuals responses could be matched through the three waves. A total of 233 responses were received, 67 from Lancashire and 166 from Sheffield.

Table 19 show the employment status of this sub-sample following the end of the first lockdown. The balance of the sample has changed from both the first and second waves. In Sheffield there has been an almost 10% increase in the number of respondents not in employment, 6% fewer working from home and 4% fewer travelling to work. Lancashire by comparison is relatively stable compared to the second wave, with a 2% increase in those not in work.

Table 19: Employment status – wave three

	Lancashire	Sheffield
Furloughed	0.0%	1.8%
Working from home	62.7%	31.9%
Travelling to workplace/ elsewhere for work	25.4%	25.3%
Not in employment	11.9%	41.0%

Of the Lancashire panel members 9% indicated their circumstances had changed since the last survey, although none had made any changes to the way they travelled. Just over 11% of Sheffield panel members had changed circumstances, with just under 4% changing some of their travel habits.

The figures below show the use of different modes for the three journey purposes as before, but now for the five periods. Although there are still overall similarities between the two areas; importantly both have seen increased use of public transport, although this is still well below pre-pandemic levels, especially for Shefield which had a high baseline. Private car use appears to be growing faster in Lancashire, perhaps reflecting the more dispersed nature of the population. Cycling continues to grow in Sheffield and has almost returned to pre-pandemic levels (amongst the study sample).

Figure 18: Lancashire – Commuting modes (all waves)

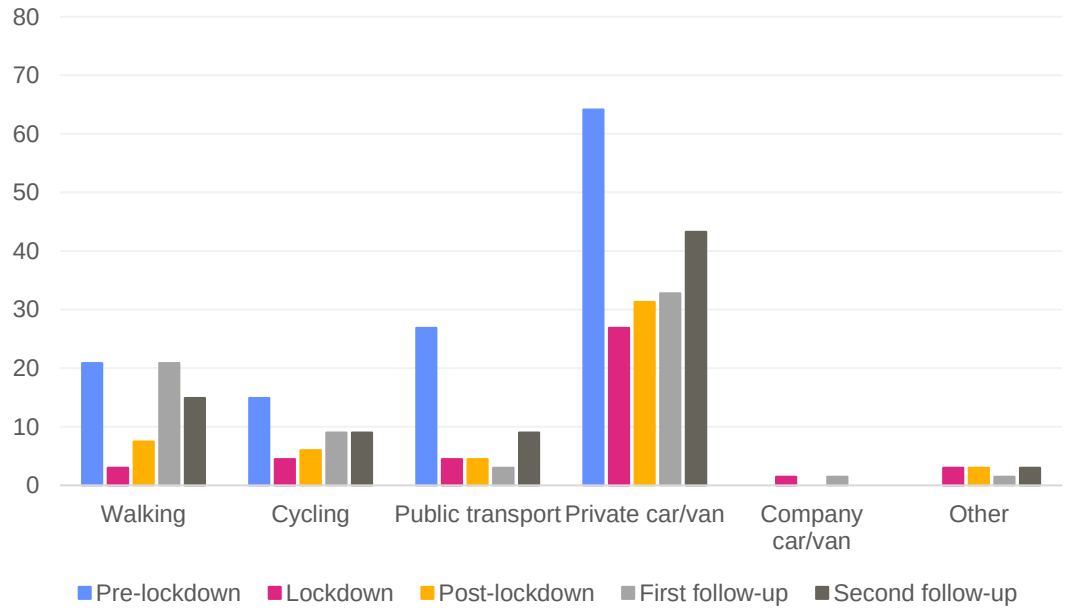
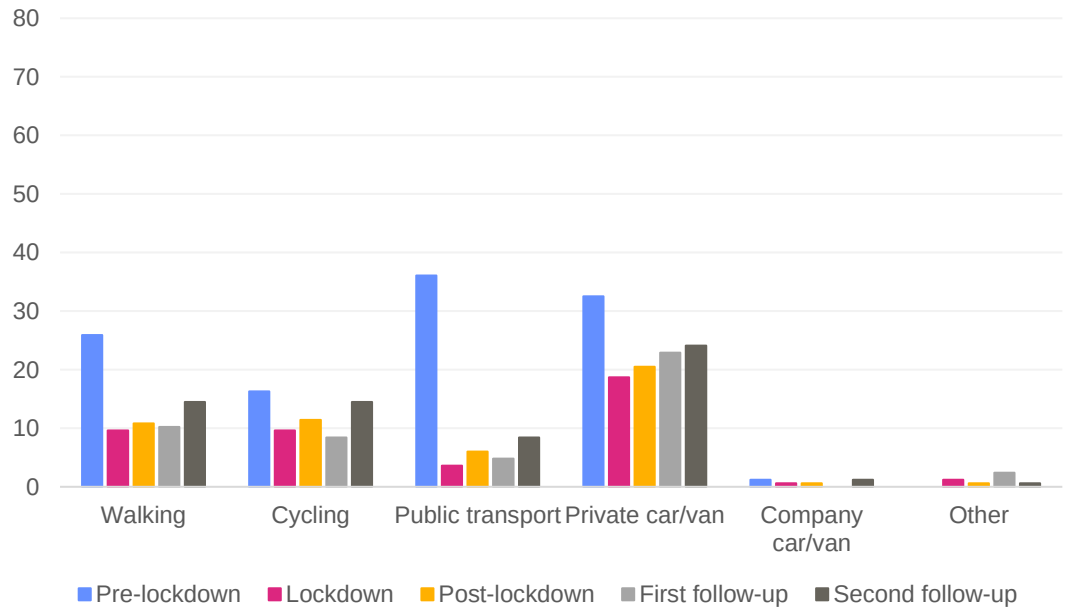


Figure 19: Sheffield – Commuting modes (all waves)



Figures 20 and 21 show a similar picture to the second wave, with walking and private car use dominating for shopping trips. In both areas private car use has almost returned to pre-pandemic levels. Cycling is still relatively stable, seeing modest changes between each on the survey periods. Amongst the sample public transport use has exceeded pre-pandemic levels in Lancashire, although this is from a very low

base. Whilst use in Sheffield is still around a third of pre-pandemic levels, but from an impressive 35% previously. Overall, the choice of mode for shopping trips has remained relatively stable throughout the different levels of restriction compared to the other journey purposes, with the exception of public transport in Sheffield.

Figure 20: Lancashire – Shopping modes (all waves)

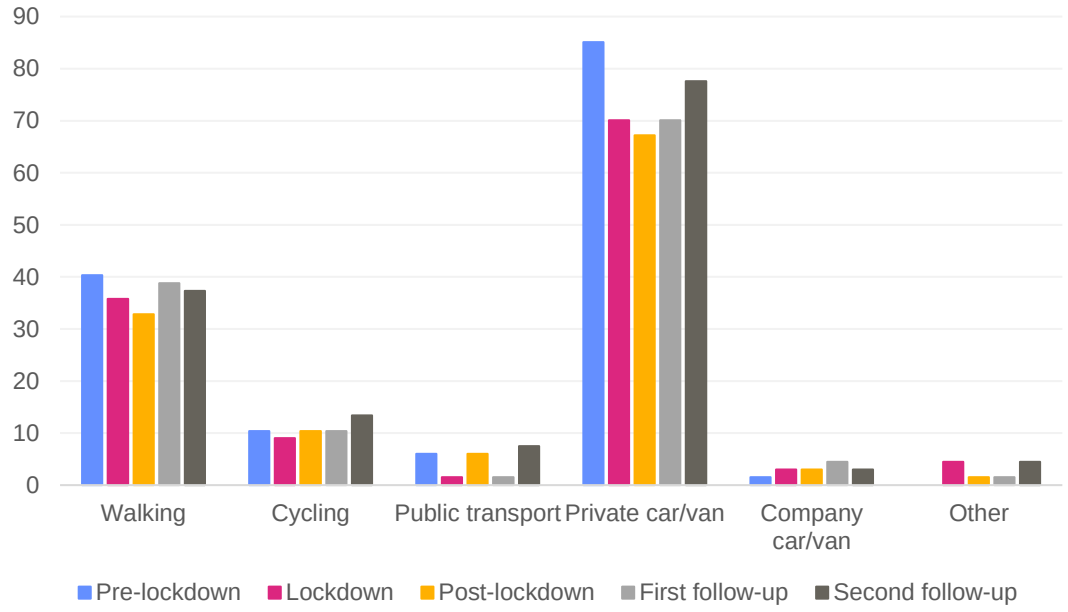
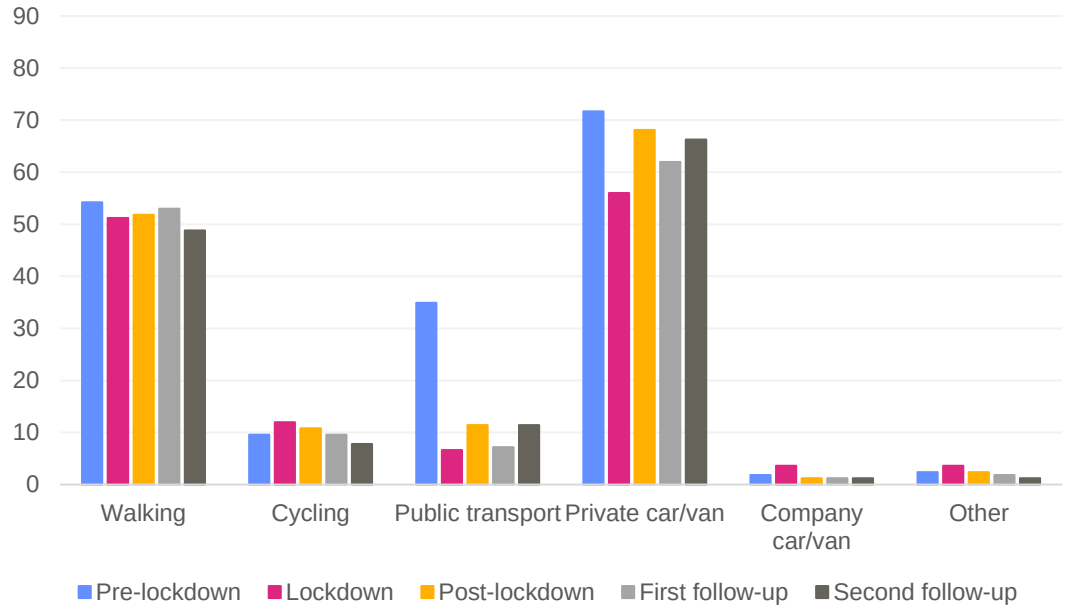


Figure 21: Sheffield – Shopping modes (all waves)



The levels of walking and cycling for leisure trips has remained relatively stable throughout the different levels of restrictions, probably reflecting its accessibility and its tendency to be a 'near to home' activity, more intrinsically part of the leisure activity. The use of private vehicles has tended to reflect the level of restrictions, with greater use when they were more limited and more limited use during lockdowns when venues were affected by the restrictions. Although public transport has seen the greatest reduction in use during the pandemic both areas have seen an increase in use during

the final period of the study. Whilst this is a positive sign, the levels remain under half of their pre-pandemic levels.

Figure 22: Lancashire – Leisure modes (all waves)

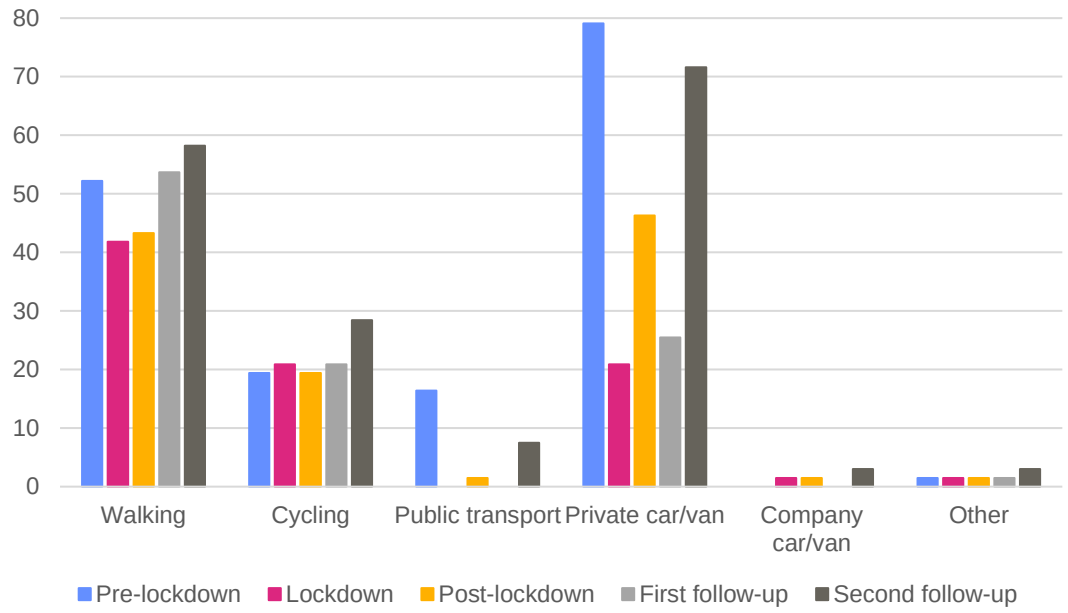
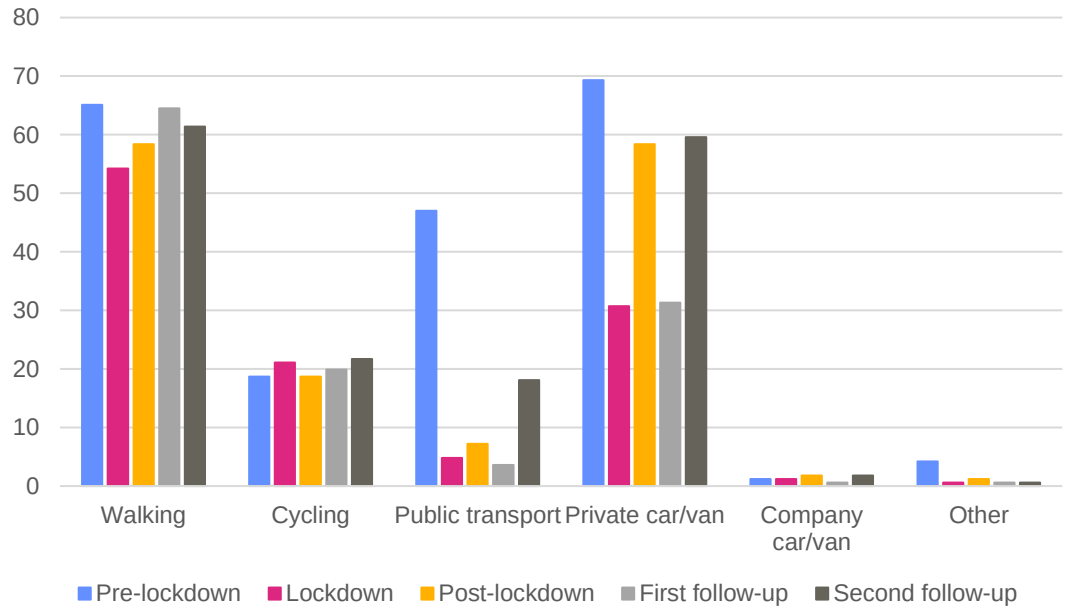


Figure 23: Sheffield – Leisure modes (all waves)



Changes to future travel

In the final survey, the panel members were asked about anticipated changes to their usual travel over the next three months (i.e., July 2021 onwards). Almost 40% of panel members anticipated making changes to their future travel choices, 46% in Lancashire and 36% in Sheffield. Most felt that it was the likelihood of a return to their workplace due to a relaxing of Covid restrictions, which would prompt the changes.

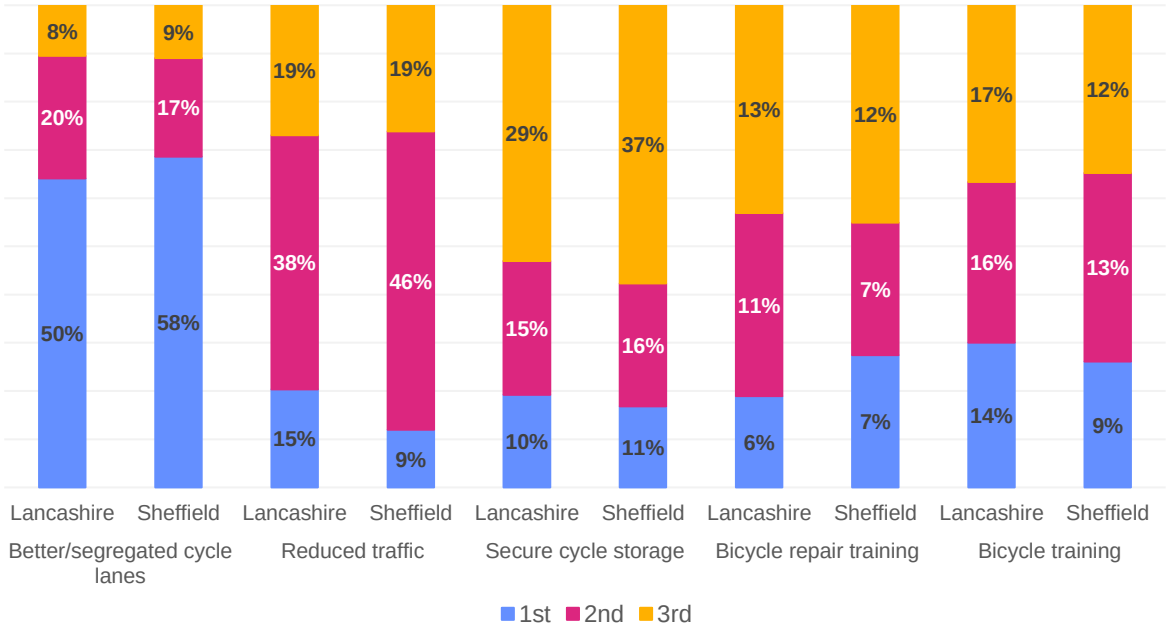
Potential measures to encourage walking and cycling

In the first survey respondents were asked questions about measure to support active travel. Almost three-quarters of respondents supported prioritise road space for pedestrians, 74% in Lancashire and 72% in Sheffield. Although it must be noted that this was asked during a period when social distancing was being imposed.

A second question on the types of measure that would encourage them to begin to, or increase, their levels of cycling. Figure 24 shows the prioritisation of different measures. Overwhelmingly, improved, or segregated cycle lanes were the 1st priority for respondents. In Lancashire, 50% of respondents ranked this as their priority and in Sheffield this figure was 58%.

Other measures were also prioritised, namely reducing traffic on the roads and secure cycle storage. The two local authorities largely followed the same trends, although the focus in Sheffield appears more centred on improved cycle lanes and reduced traffic specifically. In Lancashire, the needs were slightly more diverse, with measures such as bicycle training and maintenance reported as priorities for a larger proportion of the respondents than in Sheffield.

Figure 24: Preferences for measures to support more cycling



5

Conclusions

The Covid-19 pandemic has created a huge shift in the status quo that continues to remain in flux. The emergence from successive national lockdowns has seen a gradual drifting back towards some pre-pandemic habits for many; but others have continued with new habits picked up during lockdown, or even developed new habits post-lockdown. The continuing uncertainty created by the pandemic and the prospect of new variants leading to stricter restrictions being reimposed – albeit temporarily – means that longer-term planning remains difficult.

5.1. Immediate impacts of the pandemic on behaviour

In this project, the first national lockdown (instigated 23 March 2020) was the primary focus but the subsequent second and third lockdowns were also in scope. The evidence paints a picture of significant shifts to pre-pandemic behaviours. The number of commute and shopping trips being made across both case-study areas declined rapidly during the first lockdown but soon began to recover as restrictions were lifted. In contrast, those making leisure trips were making more of them during lockdown and doing so using more active modes.

There was a rapid increase in homeworking for a large proportion of the sample, in line with national trends. In total, only a fifth of commuters continued to travel how they did pre-pandemic, highlighting the substantial churn in behaviours. Both case-study areas saw comparable increases in using solely private transport for commute journeys, although Lancashire was starting from a much higher base given the more dispersed nature of the area. For Sheffield, one notable divergence from Lancashire is the more pronounced increase in solely using active travel for commuting or when used in combination with private transport. This suggests that whilst a complete shift to active modes is not necessarily a reality, some respondents were trying out these modes, whilst still relying on more carbon intensive modes at other times or as part of more substantive elements of the journey.

Large proportions of the samples for both case-study areas changed the destinations they would normally travel to for shopping, leisure etc. Shopping were the most likely journeys to be changed in both areas; 84% and 83% changed their usual shopping destinations in Sheffield and Lancashire, respectively. Over half of those who changed had continued to shop at their new destinations; 54% in Lancashire and 55% in Sheffield and only a quarter in Lancashire and a fifth in Sheffield had returned to shopping at their usual destinations.

Overall, across all journey purposes, for those who made changes to any of their usual destinations, half had sustained these changes as they emerged from the first lockdown. This is an indication that, for a significant proportion of the sample, the lifting of restrictions did not lead to a rapid shift back to pre-pandemic levels.

There was positive evidence that for those who didn't travel actively prior to the pandemic, they had subsequently tried and sustained, in the short-term at least, shifts to these low carbon modes. This was particularly relevant for those walking for shopping or leisure journeys. 16% of those not walking for shopping pre-pandemic had begun to do so during the first lockdown; this subsequently dropped to 14% post-lockdown. For leisure journeys this was 19% during the first lockdown, dropping one percentage point afterwards.

5.2. Impacts of the temporary road-space measures

Both case-study areas implemented a range of temporary road-space reallocation measures in response to the pandemic. Sheffield City Council were able to levy more funding per capita than in Lancashire, and more than the national average. Many of the temporary interventions remain in place, typically by being made semi-permanent using planters (e.g., for low-traffic neighbourhoods) or through the application of tarmac (e.g., to formalise widened pavements).

Awareness of the temporary road space measures implemented at the time of the first lockdown was high across the sample (79% were aware of them). Sheffield had higher levels of awareness, indicating that the higher population density meant more exposure to the measures. The actual use of the measures was relatively low, particularly in Lancashire. In Sheffield, 41% of the sample had used at least one temporary measure during the first lockdown, which compared to 21% in Lancashire.

Whilst those that used the measures rated them all generally highly in each case-study area, it was the measures that removed or restricted motor vehicles that saw the highest levels of support. The Pinstone Street closure and Division Street pedestrianisation in Sheffield, along with the closure of Fishergate in Preston (Lancashire) to vehicles, were those that were most likely to be rated as "Excellent" by users.

The proximity to the temporary measures was a key factor for many of those that did not use them. 56% of the sample were not served by a road space reallocation measure for any of their journeys during the first lockdown period. Some measures (e.g., those to aid social distancing) may not have been necessary in less populated areas where these journeys might have been made. However, measures such as segregated cycle lanes – which the sample reported as being key to enabling them to cycle more – may have been more impactful in these locations to generate higher levels of active travel.

5.3. The longer-term picture

The restrictions introduced as part of the measures to combat the Covid-19 pandemic have had significant short-term impacts on the travel choices made. Whilst the private car is still the most popular choice for all journey purposes, although it is still to return to pre-pandemic levels for some journeys. Active travel, walking and cycling, have become more popular for leisure as people were forced to seek opportunities nearer to home, offering an opportunity for regular exercise at the same time. Public transport has been the loser during the pandemic, in particular because of concerns over the ability to social distance. However, there has been a small increase in the numbers using public transport in the final survey, although it remains considerably below pre-pandemic levels.

The situation is still in flux, with, for example, the impacts of changes in work practices and the choice of leisure activities and destinations, likely to be experienced for some time yet.

References

DfT (2020a) £2 billion package to create new era for cycling and walking. Department for Transport. Available at: https://www.gov.uk/government/news/2-billion-package-to-create-new-era-for-cycling-and-walking.

DfT (2020b) Reallocating road space in response to COVID-19: statutory guidance for local authorities. Department for Transport. Available at: https://www.gov.uk/government/publications/reallocating-road-space-in-response-to-covid-19-statutory-guidance-for-local-authorities.

DfT (2020c) Active travel fund: final allocations. Department for Transport. Available at: https://www.gov.uk/government/publications/emergency-active-travel-fund-local-transport-authority-allocations/emergency-active-travel-fund-total-indicative-allocations.

Dunning, R. and Nurse, A. (2020) The surprising availability of cycling and walking infrastructure through COVID-19. *Town Planning Review*, 26th October 2020. Available at: https://livrepository.liverpool.ac.uk/3104975.

Gore, A., Bimpson, E., Dobson, J., and Parkes, S. (2021) Local Government Responses to the COVID-19 Pandemic in the UK: A Thematic Review. Centre for Regional Economic and Social Research, Sheffield Hallam University. DOI: 10.7190/cresr.2021.6172521344

Hadjidemetriou, G., Sasidharan, M., Kouyialis, G. and Parlikad, A. (2020) The impact of government measures and human mobility trend on COVID-19 related deaths in the UK. Transportation Research Interdisciplinary Perspectives, 6, pp.1-6. DOI: 10.1016/j.trip.2020.100167.

Marsden, G., Anable, J., Docherty, I. and Brown, L. (2021) At a crossroads – Travel adaptations during Covid-19 restrictions and where next? entre for Research into Energy Demand Solutions. Oxford, UK. ISBN: 978-1-913299-07-1.

Nurse, A. and Dunning, R. (2020) Is COVID-19 a turning point for active travel in cities? *Cities & Health*, pp. 1–3. DOI: 10.1080/23748834.2020.1788769.