LANCASHIRE
COMBINED COUNTY AUTHORITY

LOCAL TRANSPORT PLAN

Lancashire Local Transport Plan

Delivering a stronger, fairer, sustainable future

Green Paper | June 2025

Cover page

The Green Paper collated the key evidence for the development of the Lancashire Local Transport Plan (LTP), outlining Lancashire's social, economic and environmental landscape in the context of transport. This provided the foundations for understanding the key issues and opportunities relevant to the LTP and informed the development of objectives and themes for the LTP, which are outlined in our Core Strategy. This paper was originally produced in February 2024, and **the challenges and opportunities identified in this document and its evidence base remain highly relevant and pertinent**.

However, there have been several changes between the development of this document in 2023/2024 and the publishing of the Draft Core Strategy in Summer 2025. The Green Paper was produced prior to the launch of the Lancashire Combined County Authority (CCA) in February 2025. As such, it was developed by a joint working group of the three upper tier authorities in Lancashire: Blackburn with Darwen Borough Council, Blackpool Council and Lancashire County Council. At the time of development, these authorities held the Local Transport Authority role: in April 2026, this role will be transferred to the CCA. Further upcoming organisational change is anticipated as part of Local Government Reorganisation, with proposals due for submission in November 2025.

Related changes in terminology and formatting are detailed in Table 1, below. Furthermore, although the Green Paper formed the primary evidence base for our Local Transport Plan, several other sources were since used to inform the Core Strategy. These are listed in the 'Additional Sources' section, below.

As well as structural changes, there have also been changes in broader priorities. However, the three big themes of supporting economic growth, fairer opportunities among our communities, and environmental resilience remain at the heart of the Core Strategy.

Table 1 – Terminology and formatting updates

Terminology in Green Paper	Terminology in Local Transport Plan	Reason
Lancashire Joint Local Transport Plan (JLTP/ JLTP4)	Lancashire Local Transport Plan (LTP)	The LTP is now owned by the CCA, rather than joint ownership of the three upper-tier authorities.
References to data and studies in either Blackburn with Darwen, Blackpool or the Lancashire County only	N/A	Some data before CCA formation was only collected / available at an upper tier / unitary authority level.
Colours, logos and branding to reflect the three upper tier / unitary authorities	Lancashire CCA logos & branding	Formation of the CCA.
Greater Lancashire, Lancashire-14 area	Lancashire, sub-region	Formation of the CCA.

Terminology in Green Paper	Terminology in Local Transport Plan	Reason
Greater Lancashire Plan	Lancashire Proposal for a CCA	This was superseded by the Proposal to Government for a CCA. Some elements of the Greater Lancashire Plan work have been picked up in other plans including the Growth Plan.
	Lancashire Growth Plan	The Growth Plan is a new document and sets out the vision and ambition for the economy. As such, it informs a number of other plans being developed including transport and skills.
	Lancashire Infrastructure Strategy	This is an emerging document referred to in the Growth Plan.
Lancashire 2050	N/A	This is a legacy document that informed the Proposal for a LCCA to Government (2024).
References to Lancashire being the second largest economy of the North West after Greater Manchester	References to Lancashire being the third largest economy of the North West after Greater Manchester and Liverpool City Region	Green Paper was produced prior to the latest statistical release of the dataset.

Additional Sources

- STEAM annual tourism figures, 2023
- DfT, Road traffic statistics by local authority (annual average daily flow on major roads), 2023
- Ofcom, Fixed Coverage (number of premises unable to receive 30Mbit/s), July 2024
- Blackpool Bus Service Improvement Plan
- Lancashire and Blackburn with Darwen Bus Service Improvement Plan
- Rail Advent, Yorkshire Dales tourist train passenger numbers
- Transport for the North, Freight and Logistics Strategy
- Office of Rail and Road, Estimates of station usage

Executive Summary

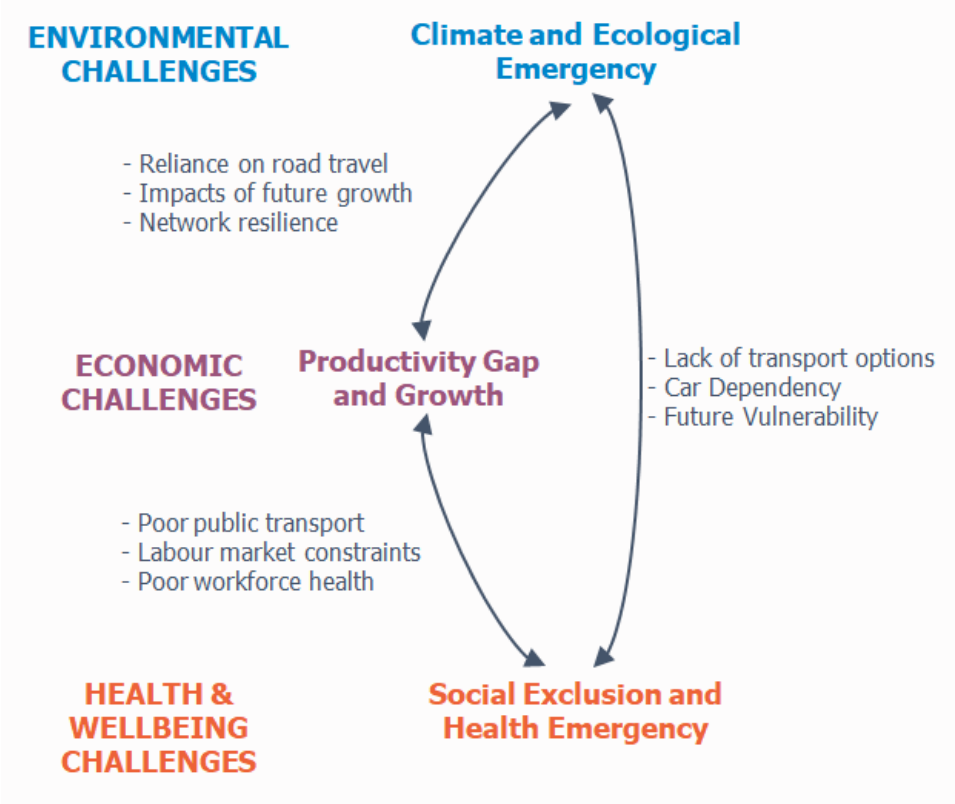
This Green Paper is the first step in this process. It draws together findings from a comprehensive evidence review and sets out the big challenges that we should address in the JLTP. The next steps in the process, following this Green Paper, will be to develop our objectives, prepare a JLTP Core Strategy, and develop tailored plans to respond to the needs of the different parts of our area.

Together, the Lancashire Independent Economic Review studies provide detailed evidence on the big challenges that we face in Lancashire. These can be grouped into three 'big themes':

- A large-scale productivity gap between our economy and the national average, equivalent to almost £10 billion per annum, due to a wide range of factors including our population structure, business performance, a skills deficit, ill-health, housing, low levels of innovation, and transport connectivity.
- Major social challenges including significant health inequalities and social exclusion, with inter-related causes from poor early years outcomes, education, poor quality work, low incomes, and poor housing, which are concentrated in many of our towns across Lancashire.
- The need to rapidly reduce greenhouse gases and other pollutants, and support wider environmental recovery across Lancashire, particularly through decarbonising transport and dramatically improving energy efficiency across our area's aging housing stock.

These challenges are interconnected, with causes including poor public transport options in many areas, impacts of future development growth on the transport network, and potential resilience challenges resulting from a changing climate. Figure 6-1 summarises these interconnected challenges.

Figure 1-1: Our interconnected challenges call for an integrated approach



There are clear interactions between social exclusion and the productivity gap in our economy, resulting from poor transport connections that constrain our labour markets and hamper business growth. There are also strong linkages between the environmental emergency and social exclusion, due to the problems caused by car dependency and lack of transport options for many people. The changing weather will also have increasing impacts on the performance of our economy, as extreme weather events impact on the availability and reliability of transport networks.

In developing the new Joint Local Transport Plan (JLTP), through understanding the interactions between these challenges, we can develop policies that will support multiple policy objectives. Examples of this approach include:

- Through improving public transport, we can improve accessibility to help tackle social exclusion, improve business connectivity, and reduce car dependency, which will play a key role in reducing transport carbon emissions.
- By enabling more people to walk and cycle across Lancashire, we can help to get people more active, which will improve physical and mental health, help people re-enter the workforce, with a healthier workforce also helping to improve productivity across the economy.
- In tackling issues relating to the resilience of the transport network, we can proactively respond to the implications of more extreme weather, and support the connectivity needs of our future economy.

Greater Lancashire JLTP4 Green Paper

Final Report | 2024

Table of Contents

1 Introduction

1.1 Background

The Local Transport Authorities in Greater Lancashire are working together to develop a new Joint Local Transport Plan ('JLTP4') for the sub-region. This includes the area covered by:

- Lancashire County Council (which extends over 12 districts and boroughs)
- Blackburn with Darwen Borough Council
- Blackpool Council

The population of our area is more than 1.5 million, with almost 670,000 jobs and an economy of more than £34 billion. We have the second largest economy of the North West after Greater Manchester, we are a major part of the Northern Powerhouse, and we are home to nationally important economic assets. We are home to the world's fourth largest aerospace cluster and the UK's second largest manufacturing hub.

We have an enviable natural environment, with Areas of Outstanding Natural Beauty in the Forest of Bowland and Arnside and Silverdale, and we lie close to the Yorkshire Dales and Lake District. We are one of the UK's most important visitor destinations, with millions of visitors every year to Blackpool, Morecambe, and our beautiful countryside. And we are proud to be Lancastrian: with our strong heritage, pride, and distinctive sense of place.

However, we face significant challenges as we look ahead to 2050. We need to plan for our future economy, building on our unique selling points and tackling our productivity gap through embedding innovation and upskilling our workforce. We have significant inequalities across Lancashire in relation to deprivation and exclusion. Further, there are parts of Lancashire with poor health outcomes, low levels of educational achievement, high levels of worklessness, and low incomes. Addressing these inequalities is a priority. We must also tackle the urgent and pressing climate and ecological emergencies, which will require concerted action across all parts of our economy and society.

Transport is fundamental to our lives in Lancashire and will be fundamental to our future success. But poor transport connections are holding back our economic potential by constraining our labour markets and access to customers and supply chains. Transport is the largest source of carbon emissions, and many people are highly car-dependent due to a lack of effective alternatives. In addition, high traffic flows are having detrimental impacts on many of our urban communities, creating severance, noise, and pollution, with collisions impacting on our most vulnerable residents.

Through our recent Lancashire Independent Economic Review, we have built a powerful evidence base on the big challenges facing our area over the next three decades[1]. Building on our Lancashire 2050 Vision[2], we are using this evidence to develop our new strategic framework for Lancashire, Lancashire 2050.

We have big ambitions. We have a proposed Devolution Deal for Lancashire[3], based on a proposal for a Combined County Authority (CCA) model of local government. This aims to give Lancashire a stronger voice on the regional and national stage, ensuring that we do not miss out on vital funding and other opportunities. It would not require any changes to the established county, borough, or district councils across the area. It would also not require an elected mayor, as the CCA would be made up of existing elected councillors, and would not require an extra charge on council tax.

The proposal for the Deal includes a commitment to work with transport providers inside and outside Lancashire to create a better-connected infrastructure that links opportunity to need and delivers travel choices that are safe, inclusive, affordable, and low carbon.

We believe that now is the right time to develop a new Local Transport Plan (LTP) for Greater Lancashire. This will respond to our big challenges, set a clear vision of where we want to be, and develop a coherent programme to deliver the change that we need. Partners in Lancashire are working together to develop a bold new LTP to deliver a bright future for our area.

The three Local Transport Authorities (Blackburn with Darwen, Blackpool, and Lancashire County Council) developed separate LTPs in 2011[4,5,6]. The world has significantly changed over the last 12 years, with changes in the economy, heightened awareness of our climate emergency, and rapid changes in transport technologies. We are also working together ever more closely across Lancashire to address our shared challenges and the opportunities that lie ahead. We are therefore working together, jointly across our three councils, to develop a new Joint LTP (JLTP) for Greater Lancashire, which will be integrated with our Greater Lancashire Plan.

This Green Paper is the first step in this process. It draws together findings from a comprehensive evidence review and sets out the big challenges that we should address in the JLTP. The next steps in the process, following this Green Paper, will be to develop our objectives, prepare a JLTP Core Strategy, and develop tailored plans to respond to the needs of the different parts of our area.

1.2 Structure of this Green Paper

The rest of this Green Paper is structured as follows. We invite you to read our evidence, explore the issues and engage with us as we develop our new JLTP for Greater Lancashire.

- Chapter 2 provides an overview of the inter-related economic, social, and environmental challenges facing our area, and identifies the critical role of transport – in terms of how our area works, and the problems that we will need to address in this Green Paper.
- Chapter 3 considers the issues facing our economy in more detail. It explores why effective connectivity is important for our competitiveness, discusses key challenges (now and in the future), and highlights how poor connectivity is likely to hold back our potential.
- Chapter 4 discusses the issues facing people in Lancashire. It explores our wide-ranging health and wellbeing challenges, in terms of inter-related issues of social exclusion and poor health in many areas and identifies how the transport system must change to improve wellbeing.
- Chapter 5 explores the environment, both the climate emergency and wider environmental factors. It demonstrates why we need to rapidly reduce carbon emissions from transport, then explores the root causes of the challenges, and identifies how the transport system must change to reduce environmental impacts.
- Chapter 6 summarises the challenges identified in in Chapters 3 to 5.

2 Our big challenges

2.1 Background

In Lancashire, we are fortunate to have a strong evidence base on the big issues that we must address if we are to thrive in future. Foremost is our recent Lancashire Independent Economic Review, which undertook extensive work during 2021 and 2022[7]. It responded to the economic shocks and social changes following the COVID-19 pandemic, and explored how Lancashire could evolve over the next three decades.

The extensive reports included an initial audit, in March 2021, which identified critical challenges that required further exploration. Following this, a series of deep dives were undertaken in 2021 and 2022 examining:

- The future of manufacturing, in recognition of the importance of a wide range of manufacturing activities across our economy.
- Health, wealth, and wellbeing, in response to the major challenges of poor health and wellbeing amongst many of our residents, and the implications for our economy.
- Economic geography and the future of our towns, recognising the diverse geography, economic connections, and differences in the characteristics of towns across our area.
- Infrastructure strategy, in response to the challenges in decarbonisation of our transport system and housing, improving our competitiveness, and working with our economic geography.

The work of the commission concluded with 'A new prosperity', launched in December 2021[8], which was followed by a further Internationalisation Strategy in October 2022[9].

A further suite of reports was also commissioned to explore the environmental challenges and opportunities for the region, including an initial State of the Environment, review of renewable technologies, climate resilience study, and exploration of net zero pathway options.

In addition, we have extensive evidence from other sources including local masterplans, strategies, and work from bodies such as Transport for the North.

2.2 Our three big themes

Together, these studies provide detailed evidence on the big challenges that we face in Lancashire. These can be grouped into three 'big themes':

- A large-scale productivity gap between our economy and the national average, equivalent to almost £10 billion per annum, due to a wide range of factors including our population structure, business performance, a skills deficit, ill-health, housing, low levels of innovation, and transport connectivity.
- Major social challenges including significant health inequalities and social exclusion, with inter-related causes from poor early years outcomes, education, poor quality work, low incomes, and poor housing, which are concentrated in many of our towns across Lancashire.
- The need to rapidly reduce greenhouse gases and other pollutants, and support wider environmental recovery across Lancashire, particularly through decarbonising transport and dramatically improving energy efficiency across our area's aging housing stock.

These big themes are underpinned by the importance of place in Lancashire. Our area is not uniform: each part of Lancashire is unique, with distinct characteristics, strongly shaped by our physical geography, transport networks and proximity to other areas. Lancaster interacts strongly with the South Lakes, West Lancashire looks to Liverpool City Region, whilst Rossendale has very strong relationships with Bury and Rochdale. Our total population is over 1.5 million, but in practice our people live and work in distinct towns and economic corridors.

It is important to consider these three big themes through a place-based perspective, because the nature and scale of these challenges differ across Lancashire. Some areas have relatively dynamic local economies and have attracted highly skilled people to live, study and work. Other areas are struggling with multiple challenges, with poor housing, poor quality of place and a weak business base. Many of our more rural areas tend to attract higher-income residents, many of whom commute long distances to towns in Lancashire and beyond. Each place in Lancashire is unique.

Our three big themes are not mutually exclusive; they are strongly inter-related, for example:

- A high proportion of the productivity gap in our economy is due to people issues. There are fewer people with degree-level qualifications in Lancashire than the national average. High levels of ill-health means that many people are not work-ready; our social challenges are an economic issue.
- Poor quality housing creates health problems and is contributing to climate change. Cold and damp housing exacerbates health conditions. Poor insulation means that heat is wasted, increasing costs of living and carbon emissions from heating. This is both a social and environmental challenge.
- Run-down places reduce local pride and act as a barrier to attracting new people. Well-maintained and attractive communities are important in building pride of place, and in attracting new talent to an area and preventing talent leaving. The opposite applies in deprived areas. This is both a social and economic challenge for many parts of Lancashire.
- Our wealthier residents tend to generate more carbon emissions than our least wealthy. This tends to be due to higher consumption and more car travel, particularly where people live in suburban and rural areas. These causes are both geographic (distance and lack of alternatives) and social (increased propensity to drive large vehicles), so this is both an environmental and social challenge.

2.3 Our three big themes: why transport matters

Transport shortcomings are a major contributor to all three big themes, although not the only one or necessarily the most significant. Poor connectivity is holding back our economy, poor transport choices create social isolation, whilst many people are forced into owning and using cars. Traffic has negative impacts on local communities.

- Poor transport connectivity is holding-back the economic potential of our area. Issues with our transport system are constraining the operation of labour markets, access to markets and supply chains. Although we have a comprehensive motorway network, there is widespread congestion on our roads, and the rail network and local bus services are not providing the travel choices needed to effectively connect our sub-region. Chapter 3 of this Green Paper explores these issues in detail.

- A lack of good transport choices mean that many people are isolated and unable to access services. Continued cutbacks in bus services, and other issues such as antisocial behaviour in public spaces, mean that many people are unable, or feel unable, to access shops and services.
- Poor transport choices also mean that many people's only option is to use a car. Car ownership is expensive and increases the cost-of-living pressures for many people. High car dependency, amongst other factors, results in high volumes of traffic in our towns and cities, due to the lack of viable alternatives, which increases congestion, pollution, severance, and risk of collisions. This often impacts the most vulnerable people in more deprived neighbourhoods. Chapter 4 explores the social impacts of poor transport options.
- High car dependency is one of the root causes of the high carbon emissions from transport. This is a challenge for all types of journeys but particularly for longer and more complex journeys, and in more rural areas where there are more limited travel choices. Chapter 5 explores the environmental implications of high car dependency.

These are critical issues facing Lancashire at present and will become more pressing over the next two to three decades. We explore these issues in more detail in the following chapters of this Green Paper.

3 Our economic challenges

3.1 Introduction

The Lancashire Independent Economic Review[10] was commissioned to inform development of the Greater Lancashire Plan. As noted in Chapter 2, this comprised a series of reports to provide detailed evidence on the big challenges facing our economy.

Although there are some strengths in our economy, we face a challenge of a lack of good jobs. Many companies are relatively weak, disconnected from high value supply chains, with relatively low wages, contributing to low spending power, economic insecurity for many people, and an unhealthy workforce.

Our transport system is poor in places and, as such, is one of several underlying causes of these challenges, and this chapter explores these issues in more detail.

- Section 3.2 introduces the fundamental challenge facing our economy – poor productivity – and the underlying inter-related causes, which include transport connectivity.
- Section 3.3 explains our 'economic geography', i.e. 'how Lancashire works', the key connections across our economy, which reveals that we are far less connected than we might expect.
- Section 3.4 explains why transport matters, in terms of connecting people to jobs, connecting businesses to supply chains and markets, and in helping to unlock our future potential.

Key points – economic challenges

- GVA per capita in Lancashire is 20% below the English average.
- Our economic potential is constrained by our economy not functioning as a whole, but as four north-south sub-economies.
- Poor east-west transport connectivity contributes to the lack of interaction between sub-economies.
- Highly performing national transport corridors are important for our economic success.
- Integrated, place-based planning is needed to unlock local jobs and housing growth.

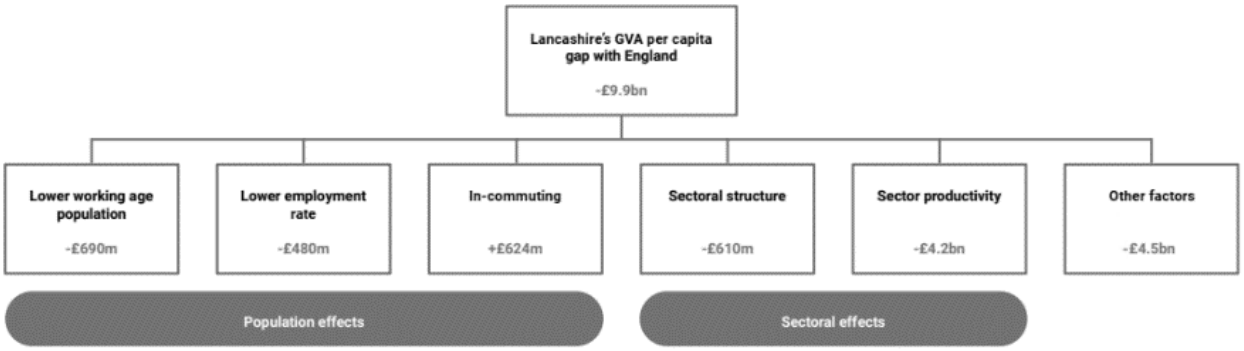
3.2 Our productivity challenge

Productivity matters because it is fundamental to the overall competitiveness of our economy, and translates into higher wages, more spending power, and more prosperity for our residents. However, productivity in our economy is lower than the national average and has fallen behind over the last decade.

The total size (or output) of our economy can be expressed in terms of Gross Value Added (GVA), and our productivity is expressed in terms of the GVA per worker or per capita (i.e., population).

In 2018, GVA per capita in Lancashire was £22,800 compared to £29,400 in England; in other words, Lancashire's economy was 20% less productive than the English average. If GVA per capita had matched the English average, Lancashire would have contributed an additional £9.9 billion to the national economy. Figure 3-1 presents the breakdown on Lancashire's productivity gap.

Figure 3-1: Breakdown of Lancashire's productivity gap[11]



Source: The Productivity Institute - numbers may not sum due to rounding

The size of the working age population and employment rate in Lancashire accounts for a relatively small component of the productivity gap (~£0.6 billion), as does the structure of our sectors (~£0.6 billion). The most important factor is productivity within the sectors of our economy (£4.2 billion), and other factors (£4.5 billion) that are not directly explained by population effects or sectoral effects. The causes of the £4.5 billion gap due to 'other factors' include:

- Skills. Higher-level skills are a critical component in raising productivity, but we have a significant skills deficit in Lancashire. Only 32% of our residents have a degree, lower than the 37% national average, and we have high proportions of residents with low or no qualifications.
- Health. We have a high proportion of residents suffering from poor health, and working people suffering ill health have lower wages and are more likely to lose their jobs. Poor health is estimated to contribute to almost 17% of our productivity gap (£1.7 billion) [12].
- Innovation. This lies at the heart of the process through which economies become more productive. Despite the presence of several R&D assets in our area, including four universities and facilities in the aerospace, nuclear, cleantech and cybersecurity sectors, R&D spend (both private and public sector) is lower than the national average[13].
- Infrastructure. Digital connectivity is critical in supporting the technologies of the future, and electricity, gas and water are essential requirements for several of our key sectors. Housing provides people with homes that are close to jobs, and quality of housing is a major factor in quality of life: in many parts of Lancashire, our housing stock is often poor quality, especially in the private rented sector.
- Transport. Transport plays a central role in determining which employment options that are accessible to people, in helping to match people with the right jobs and influences the size of labour pools available to employers. Although home working increased in some areas during the pandemic, this only applied to a minority of the population. Transport is also critical in enabling connections with markets, supply chains and innovation networks.

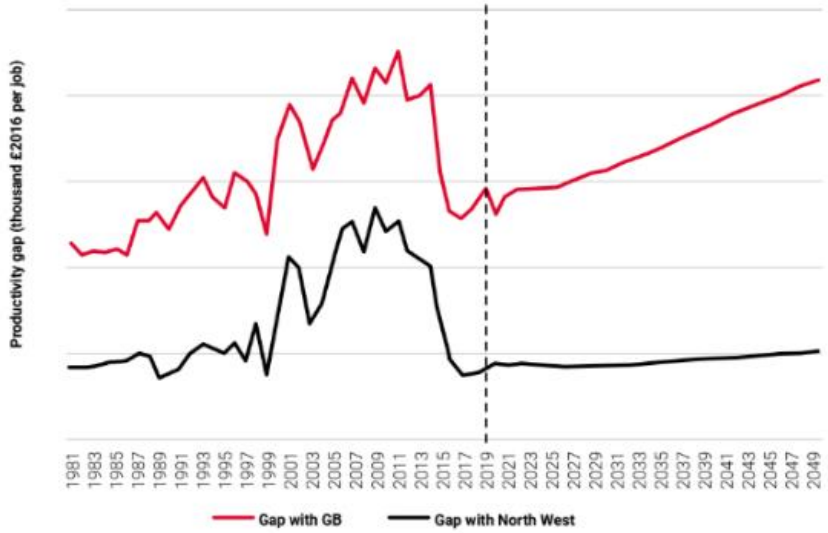
One of the key characteristics of our economy is our strong reliance on manufacturing, which contributes 19% of our output (almost double the 10% national average) and employs over 86,000 people (13% of our jobs). This includes a diverse mix of sectors, including the world's fourth largest aerospace cluster, food products and fabricated metal products. Manufacturing is one of our economic strengths, with high productivity, presence of industry leaders such as BAE Systems, innovation assets and strong supply chains, which extend across the UK and global footprints.

However, the economy of Lancashire is more diverse than just manufacturing. Tourism is important, especially in Blackpool and Morecambe, but also in our more rural areas: and generates jobs in hospitality and food and drink. There was strong growth in wholesale and retail between 2008 and 2018, which is the largest sector by employment, and the most common occupation was sales assistants and cashiers.

The 'foundational economy' is very important to Lancashire, including health and social care, with caring and personal services the second most common occupation. Teaching and educational professionals, and childcare and personal services, also form a large part of our workforce. There is a very low presence in our economy of knowledge-intensive business services, which has been an important driver of growth in many other areas. Productivity in this sector is also lower than average.

Figure 3-2 shows that we also face major potential challenges looking ahead over the next 20 years.

Figure 3-2: Historic and forecast productivity gaps between Lancashire and GB and the North West[14]



Without intervention, our productivity gap is forecast to increase. The LIER highlighted that we must enhance both productivity and employment in our manufacturing sector (alongside transformation to spearhead our net zero efforts) and build a more viable knowledge intensive services base.

There are, therefore, multiple causes to the productivity challenges in Lancashire. Amongst them is transport but before we can consider why transport matters to our economy, we must first better understand our economic geography.

3.3 Our economic geography

Our area has a population of more than 1.5 million, with almost 670,000 jobs and an economy worth more than £34 billion per annum. We have the second largest economy of the North West after Greater Manchester.

However, Lancashire covers a large geographic area. The distance from Ormskirk to Carnforth, or from Bacup to Fleetwood, is more than 50 miles. Each place has a different economy, with distinct specialisms and economic linkages to different places: Ormskirk has strong interactions with Liverpool City Region; Carnforth has strong interactions with the southern part of the Lakes and the Dales; Bacup looks towards Rochdale and Calderdale; whilst Fleetwood forms part of a connected Fylde Coast economic area.

Our towns and rural areas all have distinct roles as places to live and work, with different types of business, and interactions with other areas. We explored the roles of our different places, and economic interactions across Lancashire, in an Economic Geography Deep Dive[15] as part of the LIER.

The Deep Dive used mobile phone data, from 2019 and 2020, to analyse movement in Lancashire, by trip purpose, direction, mode of travel, and time of travel. It was used to identify changes in movement patterns since the 2011 Census, and to identify changes in working patterns that took place during the lockdowns in 2020. It was also used to identify economic clusters and corridors in Lancashire.

The first step was in understanding how connections to and from different parts of Lancashire have changed over the last decade.

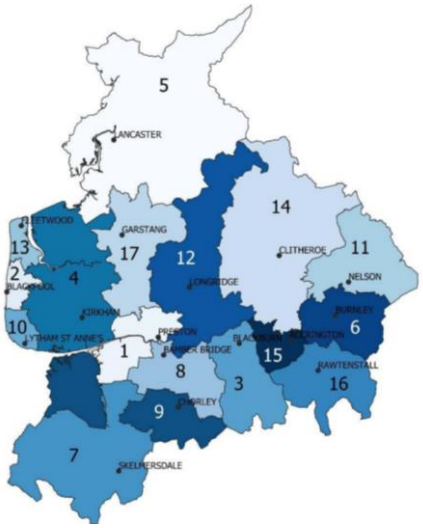
- The Fylde Coast remains deeply interconnected. There are very strong economic interactions between Blackpool, Fylde and Wyre, and more limited economic connectivity from Fylde and Wyre to Lancaster and Preston (although the latter has declined in the last decade).
- Economic ties with Greater Manchester strengthened during the last decade. From Chorley, there were increases in movements to Wigan and Bolton. From Blackburn with Darwen, there were increases to Bolton, and from Rossendale there were increases to Bury and Bolton.
- Interactions with Yorkshire have increased. From Burnley, there has been an increase in journeys to Calderdale; and from Pendle and Ribble Valley there have been increases in trips to Craven, despite poor transport links between Lancashire and Yorkshire.
- There are increasing linkages to other places outside the county. From West Lancashire, connections strengthened to Wigan, St Helens and Knowsley. From Lancaster, there were greater linkages to South Lakeland. From South Ribble, there was an increase in journeys to Wigan and Bolton, as well as other parts of Lancashire, with a *reduction* in travel to Preston.

Preston is Lancashire's largest economy in terms of output (£4.5 billion in 2018). It is in the top five commuting destinations for 10 out of 14 districts and unitary authorities in our area. However, it has become slightly less important as a work destination over the last decade. This indicates that our economy has not centralised around the largest employment centre: rather, our economy is highly polycentric with several important economic centres.

The COVID-19 pandemic resulted in significant changes in commuting patterns. Analyses indicated that the largest reduction of in-commuting (between June 2019 and June 2020) was in Preston, of around 14,000, equivalent to 57% of total losses[16]. There were also reductions in commuting in Blackburn, Lancaster, Nelson, Skelmersdale, and Burnley. In contrast, the shift to homeworking meant that there were significant increases in daytime activity in places such as Fulwood, Bamber Bridge, Darwen, and Chorley.

The second step was to identify clusters of economic activity across Lancashire, based on strength of connections between residential areas and workplaces. Figure 3-3 shows these clusters.

Figure 3-3: Economic clusters in Lancashire[17]



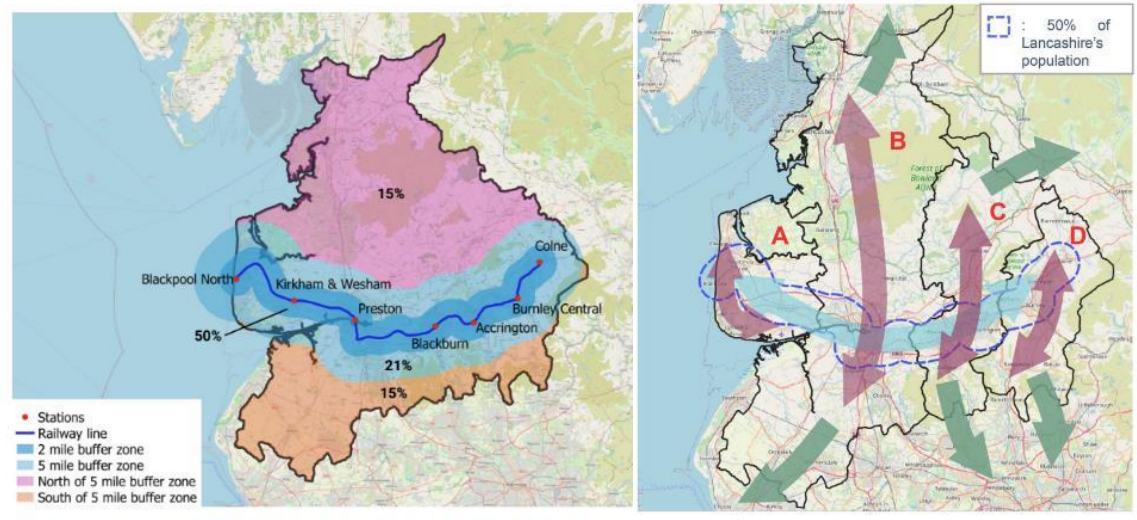
Cluster	Largest settlement	Constituent neighbourhoods	Trips received (June 2019)
1	Preston	21	956,495
2	Blackpool	15	872,903
3	Blackburn	18	749,907
4	Kirkham	9	670,659
5	Lancaster	18	610,620
6	Burnley	13	528,847
7	Skelmersdale	14	494,379
8	Bamber Bridge	14	445,818
9	Chorley	11	364,385
10	Lytham St Anne's	7	353,611
11	Nelson	12	331,502
12	Longridge	5	329,915
13	Fleetwood	9	306,632
14	Clitheroe	7	233,580
15	Accrington	7	221,118
16	Rawtenstall	8	220,748
17	Garstang	3	155,440

(Note: cluster 9 is a non-contiguous area, as a result of boundary definitions).

The above shows that most trips in Lancashire tend to be fairly short, based around a local centre, again highlighting that our economy is polycentric. The largest economic cluster in terms of inward trips is Preston, followed by Blackpool and Blackburn. Kirkham is the fourth largest, which includes the BAE base at Warton. Preston is the only district in Lancashire where there are more jobs than people of working age (aged 16 to 64) (see Table A3 in Appendix A).

The next step was to identify the primary destinations of trips from each cluster, and then identify corridors based on the strength of links between clusters. The left-hand map in Figure 3-4 shows the population distribution in Lancashire: more than 50% of our residents live within two miles of the railway line from Blackpool North to Colne, and 70% within five miles. Only 15% of Lancashire's population lies to the north, and only 15% to the south.

Figure 3-4: Economic corridors in Lancashire[18]



Source: Metro Dynamics analysis of ONS mid-year population estimates. Percentages do not sum to 100% due to rounding.

Despite this concentration of population on this central east-west axis through Lancashire, it does not currently form a single economic corridor. The right-hand map in Figure 3-4 shows the economic corridors, with four distinct corridors (A, B, C and D), with cross-boundary connections to Westmorland, North Yorkshire, Greater Manchester, and Merseyside. They are:

- Corridor A: Fylde Coast. A tightly self-contained labour market including Blackpool, Fylde, and the western part of Wyre.
- Corridor B: Lancaster – Preston – Chorley – West Lancashire. Following the M6, A6 and West Coast Main Line and extending south-west towards Ormskirk and into Liverpool City Region.
- Corridor C: Ribble Valley – Clitheroe – Accrington – Blackburn – Darwen. Following the A680, A666 and north-south railway line, extending towards Bolton and Manchester.
- Corridor D: Colne – Burnley – Rawtenstall. Following the A682, part of the M65 and A56, extending towards Bury and Manchester.

Corridor A is clustered around the Fylde Coast, whilst Corridors B, C and D follow our major north-south transport routes. Table 3-1 draws together the data on numbers of trips in each economic cluster to identify the overall scale of importance of each corridor.

Table 3-1: Economic importance of corridors

Cluster	Total trips	Corridor A	Corridor B	Corridor C	Corridor D
Preston	960,000	-	960,000	-	-
Blackpool	873,000	873,000	-	-	-
Blackburn	750,000	-	-	750,000	-
Kirkham	671,000	671,000	-	-	-
Lancaster	611,000	-	611,000	-	-
Burnley	529,000	-	-	-	529,000
Skelmersdale	494,000	-	494,000	-	-
Bamber Bridge	446,000	-	446,000	-	-
Chorley	364,000	-	364,000	-	-
Lytham St Annes	354,000	354,000	-	-	-
Nelson	332,000	-	-	-	332,000
Longridge	330,000	-	330,000	-	-
Fleetwood	307,000	307,000	-	-	-
Clitheroe	234,000	-	-	234,000	-
Accrington	221,000	-	-	221,000	-
Rawtenstall	221,000	-	-	-	221,000
Garstang	155,000	-	155,000	-	-
Total	**7,852,000**	**2,205,000**	**3,360,000**	**1,205,000**	**1,082,000**

Note: figures rounded to nearest 1,000.

Corridor B, running from Lancaster, through Preston and Chorley, to Skelmersdale, attracted the most trips. Its primary economic hub is Preston, and it is the most important corridor in Lancashire. Corridor A, which is focused on the Fylde Coast, with Blackpool as the primary hub, is the second most important. Corridor C, running north-south through Blackburn, attracted much fewer trips, whilst Corridor D, running north-south through Burnley, attracted the fewest trips.

"Road links in this corridor tend to follow historic routes dictated by topography rather than travel demand. Main line rail links are likewise constrained by topography, with resulting low line speeds having a significant impact on journey times."

Lancashire Enterprise Partnership[19]

The main economic centres within the central east-west belt – Blackpool, Preston, Blackburn, and Burnley – act as separate hubs for the four different economic corridors in Lancashire. Lancaster (the main centre in the north) and Skelmersdale (the main centre in West Lancashire) form part of the primary north-south corridor.

We can therefore conclude that there is a major disconnect in our connectivity. Around 70% of our population is concentrated in the east-west corridor from the Fylde Coast through Preston to Pennine Lancashire. The distance from Blackpool to Preston is around 17 miles, Preston to Blackburn is only 10 miles, and Blackburn to Burnley is only 12 miles. Despite these short distances between major centres, there are limited economic interactions across this east-west corridor.

This evidence is supported by an economic study on East-West Connectivity through the Central Transpennine Corridor, undertaken in 2017 for Lancashire Economic Partnership and partners in North and West Yorkshire[20]. This study highlighted that many places in the corridor are characterized by stronger north-south linkages, and noted that poor east-west connectivity is restricting economic horizons, both travel to work and business-to-business connectivity. The study highlighted that improved road and rail connectivity (especially addressing missing links between Lancashire and Yorkshire) could support increased agglomeration (benefits of when firms and people are closer together) and employment effects (enabling more people to enter the labour market.

Our economic corridors are instead currently focused on north-south movements, which are strongly influenced by strategic road and rail links. The strongest influence is the M6, M61, West Coast Main Line, and rail corridors to Liverpool and Manchester, which form the backbone of our largest economic corridor. The Fylde Coast is largely self-contained, whilst the two much smaller corridors through Pennine Lancashire are influenced by the road and rail connections to Greater Manchester.

3.4 Why transport matters

We face significant economic challenges in Lancashire, resulting from low productivity in many of our businesses, low levels of R&D investment, low skills, and poor health in our population. Transport connectivity is also a key challenge. Despite more than 70% of our population (more than one million people) living in the central east-west belt, this is effectively divided into four distinct 'north-south' economies.

Effective transport connectivity matters to regional economies in several ways:

- Connecting people with jobs.
- Connecting businesses with markets and supply chains and supporting development of highly productive business clusters.
- Enabling the transformation of our economy to deliver new growth and create quality places.

3.4.1 Transport matters in connecting people with jobs

Most people do not live and work in the same place; they need to commute to work. Although there was an increase in homeworking during the pandemic, this only applied to a small proportion of workers as most people need to be physically present in the workplace. Commuting distances, times and costs must be practical and affordable meaning that most people spend less than one hour travelling in each direction to and from work.

Those in higher-paid jobs may be prepared to accept a longer commute (because the pay justifies the time and cost of travelling), whilst lower-paid (or part-time) jobs are more likely to only justify shorter commuting times (Table A-2 shows average weekly earnings by district). The availability and cost of different travel choices influences the shape of labour markets, which is a critical factor in the competitiveness of businesses, because they depend on access to workers with the right skills. The size of labour markets also determines the availability of jobs for residents in different places. Our poorer residents, who live on lower wages, can only afford to travel a short distance to work.

> *"We will be better-connected and accessible, with infrastructure that links opportunities to need, and travel choices that are safe, inclusive, affordable and low carbon."*
>
> Lancashire 2050[21]

Figure 3-3 showed that there are 17 economic clusters across Lancashire, with distinct local commuting areas. The largest clusters are in Preston, Blackpool, and Blackburn, which include urban areas with dense concentrations of businesses and large numbers of residents. In these locations there are a wide range of transport options, including walking, cycling and bus, as well as car, to meet travel needs.

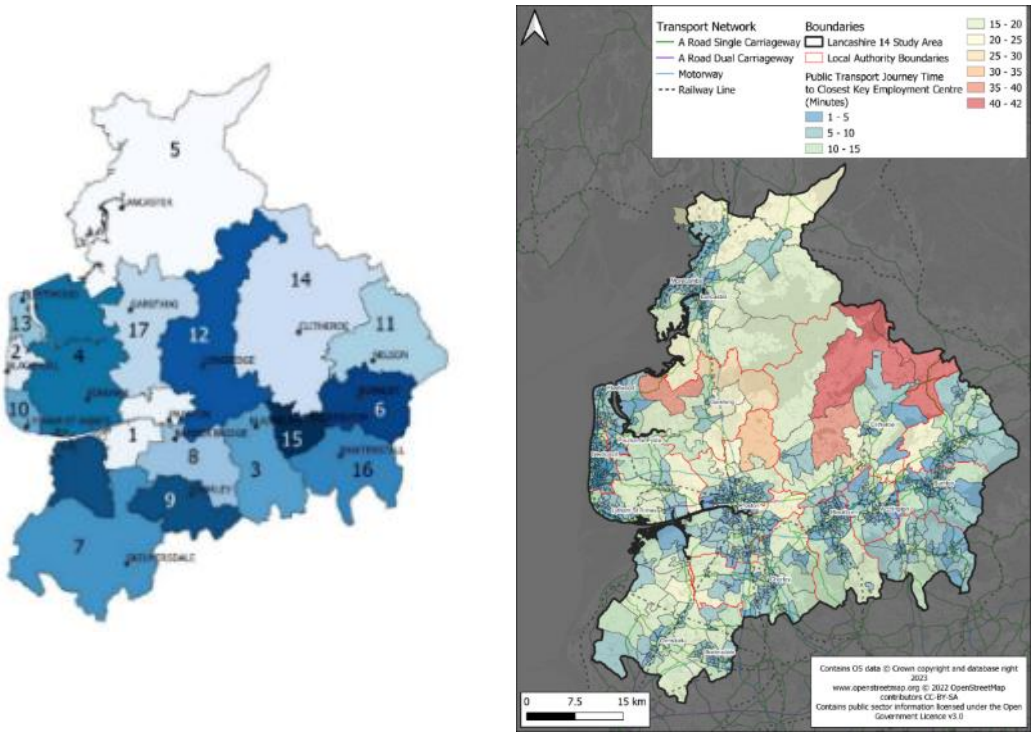
The fourth largest cluster is Kirkham, which includes a large area across the Fylde Coast, which means that many people are reliant on travel by car, due to a lack of public transport options for many of the journeys in the local catchment area. The fifth cluster, Lancaster, includes the city itself (with a range of travel options), Morecambe, and a deep rural area extending to the county boundary, within which many people are also reliant on travel by car. In the case of Burnley, whilst many people in the town travel to work on foot or by bus, there is high car-dependency from the surrounding rural areas.

> *"Rural communities tend to have limited access to local services via active travel or by public transport and are therefore more reliant on the private car to access everyday activities, with distance travelled by car per person significantly higher than in urban areas."*
>
> Transport for the North[22]

The local economic clusters (shown in Figure 3-3), which reflect local commuting patterns, are focused within local areas of Lancashire and cross-boundary connections to parts of Liverpool City Region, Greater Manchester, and North and West Yorkshire.

Journey times to work strongly influence the shape of our economic clusters. Figure 3-5 compares the accessibility of the 17 economic clusters by public transport.

Figure 3-5: Economic clusters and journey times by public transport to key centres



The shapes of the economic clusters reflect patterns of commuting to the main employment centre in each cluster. The shapes of these clusters (in the left-hand map) are correlated with the commuting times to economic centres (in the map to the right). There is a clear distinction between Preston and Blackburn: the public transport networks of the two places operate independently (with a significant public transport gap between the two centres).

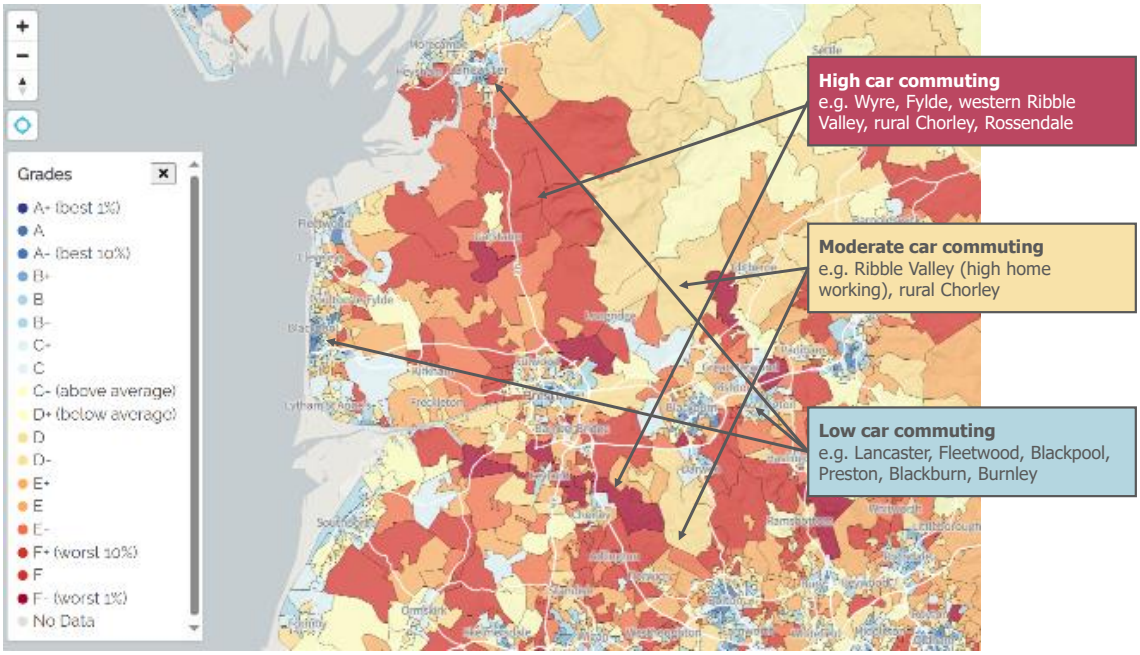
Fleetwood, Blackpool, and Lytham St Annes operate as distinct economic centres, despite the reasonable public transport network across the Fylde Coast. This appears to be due to people's travel horizons, willingness to travel, and matching between skills and employer needs. Kirkham functions independently from both the Urban Fylde Coast and Preston. West Lancashire also operates independently from the rest of the county.

Within Urban Pennine Lancashire, despite apparently short journey times between places, the main urban centres still operate separately from each other in economic terms. This suggests that public transport accessibility is only one reason for this independence and that there appear to be other barriers to labour market mobility in these areas.

The maps also show the severe accessibility challenges faced in rural areas, with long journey times to centres. These are influenced by topography and a sparse public transport network, which also strongly influence the geography of the economic clusters. This clearly influences the travel choices made by our residents. Public transport is much more viable in our urban areas, where journey times are shorter, and more services are available. Much fewer people use public transport in our rural areas.

The differences between urban and rural areas are also evident in patterns of commuting by car as shown in Figure 3-6. Table A-1 in Appendix A shows commuting mode of travel pre-COVID-19.

Figure 3-6: Commuting to work by car in Lancashire[23]



Areas in red show that car use in the rural areas is very high, reflecting longer distances to jobs and relative lack of alternative travel options. This includes some areas that are relatively 'deep rural' (such as south of Lancaster), although there is less car commuting in parts of the Forest of Bowland due to more homeworking (including farming). It also shows high levels of car dependency in some areas close to our major towns, including north of Preston and east of Chorley.

Areas in blue have the lowest levels of car commuting. These include large parts of Blackpool, Lancaster, Preston, Blackburn, and Burnley. This reflects a closer proximity to jobs and the availability of a wider range of travel options in the towns. However, this is not the full story. Many areas in our towns have relatively poor accessibility, causing some people to be cut-off from opportunities. This is explored in Chapter 4.

Poor quality, slow, unreliable transport links have the effect of shrinking labour markets and opportunities for people living in our area. Allied with the challenges of poor skills in many areas, this is a significant challenge for existing businesses, and acts as a barrier to business growth and in attracting new inward investors. Poor bus connections freeze-out many people from the labour market, whilst traffic congestion creates journey time reliability challenges during peak commuting periods.

3.4.2 Transport matters in connecting businesses to markets and supply chains

Different types of business have different types of customers and supply chains. For example, our aerospace sector has global customers, and its supply chain is based across the UK and worldwide. Our visitor economy draws in visitors from across the UK and worldwide.

Our Internationalisation Strategy[24] has a strong focus on increasing visitor spend from rapidly growing economies such as India and China. It sets out five pillars to enhance the global standing of our region, including increasing exports, Foreign Direct investment, capital investment, innovation, and the visitor economy. Effective international connectivity (both airports and ports) is critical in supporting our competitiveness – both in the movements of goods and in attracting business and leisure visitors.

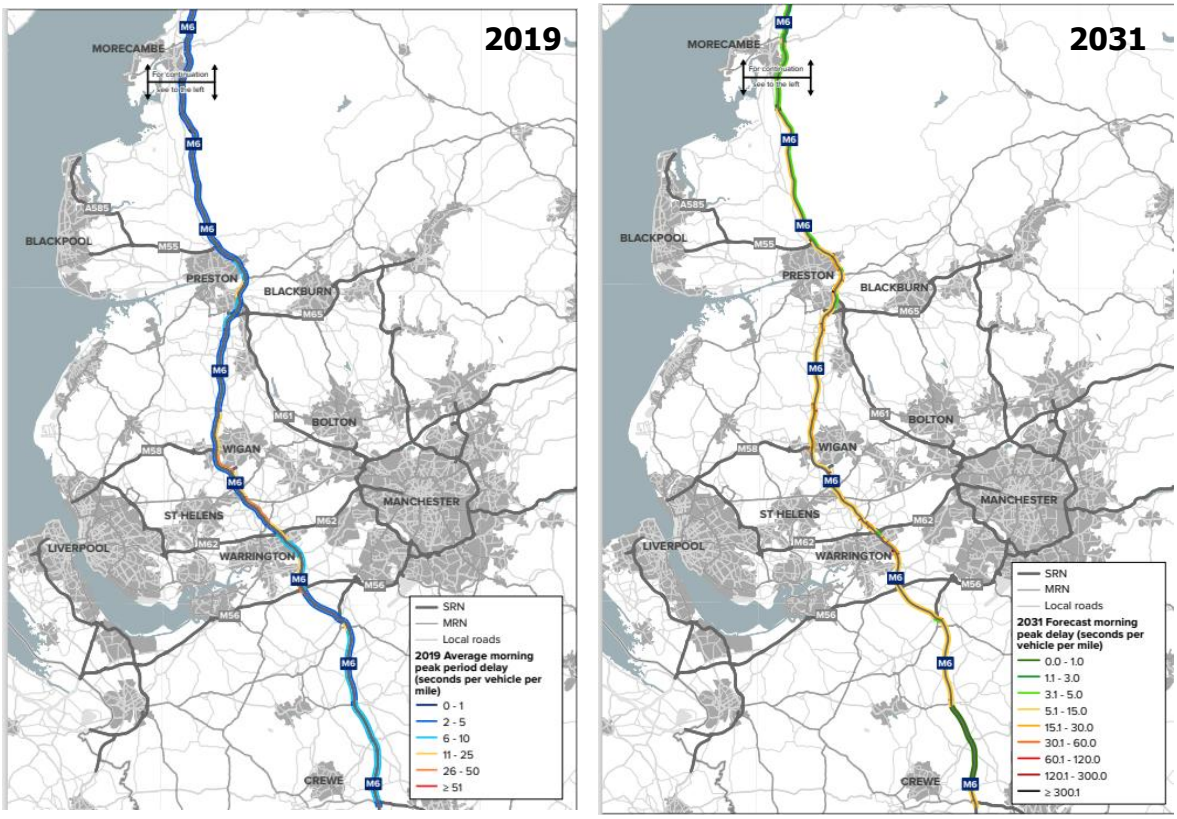
We export £8 billion per year, but the share of our goods which are exported (27%) is lower than the national average (30%), and we export significantly less than other comparable international regions. Our largest trading partners are the USA, Germany, France, and Ireland, and we have identified the potential to increase exports to India, Australia, Singapore, China, Canada, and Sweden. Our visitor economy is also important in raising our international profile: we attract overseas visitors from the USA, Australia, Germany, France, Ireland, and The Netherlands.

We are home to a sophisticated manufacturing ecosystem, with high levels of specialisation and complex supply chains. Many of our major manufacturing sectors source a relatively low proportion of inputs locally and are more connected into national supply chains[25]. On average, Lancashire sources a lower proportion of goods locally (32%) than the national average (36%).

There are some exceptions; the food and drink sector has a strong local supply chain within Lancashire for example. However, the larger specialised sectors source more goods from outside the region (in the case of aerospace, only 16% are sourced locally). For example, BAE Systems procures goods and services from across the UK. This dependence on UK supply chains means that we are particularly dependent on effective strategic road and rail connectivity.

Our economy is highly dependent on effective strategic connectivity along the M6 corridor. However, the performance of the M6 does not always meet those standards. Figure 3-7 shows patterns of traffic delay, during the morning peak, on the M6 through the North West, in 2019 and 2031.

Figure 3-7: Existing and forecast delays on the M6 in the North West[26]



Without intervention, there is the potential for delays to increase to over 15 seconds per mile between Knutsford and Preston in the future, equivalent to 10-20 minutes additional delay over the 40-mile length. The longer journey times (and worse journey time reliability) will add cost pressures and could further constrain the competitiveness of many of our businesses, which operate across national and international supply chains.

"Significant residential and economic development is planned along the M6 corridor. There were concerns raised over impact on congestion and junction usage."

National Highways[27]

We also face problems on other strategic roads in our area. Table A-4 in Appendix A shows that the average delay on our 'A' roads is 38 seconds per vehicle per mile. The South Pennines West Report[28] highlights issues on the M55, M61, M65, A56/M66, and A585, particularly long delays on the A585 connecting to Fleetwood (although this will shortly be improved), and future pressures on the motorway junctions around Preston and M65. This will create further pressures on the more peripheral parts of our economy on the Fylde Coast and in Pennine Lancashire.

We have a very strong visitor economy, attracting people visitors from across the UK and international markets and employing over 30,000 people[29]. The most recent STEAM visitor data for Lancashire[30] are from 2021 when the economy was still recovering from the COVID-19 pandemic. There were over 51 million visits in 2021 generating 19.4 million nights stayed by people staying here as part of a holiday or short break. This generated £3.5 billion in our economy through visitor expenditure, supporting over 43,000 Full Time Equivalent jobs.

Blackpool is our area's premier visitor destination. In 2021 it accounted for 37% of visitors, 41% of economic impact, and 47% of employment. Major regeneration programmes are taking place to revive the visitor offer of the town, together with improving the business tourism offer. Lytham St Annes, nearby, is targeting prestigious international golf markets. Major investment is also taking place in Morecambe, including Eden North, complementing the Morecambe Bay offer for the great outdoors, whilst Lancaster is focused on building its heritage offer.

Accessibility is also very important for our visitor economy. Our large number of day visits is enabled by easy access to large markets in towns and cities across the North. Blackpool can be reached by car on a summer Saturday from Manchester in under 90 minutes, and from Leeds in under two hours, and a little longer by rail.

Our economy is highly dependent on effective national and international connectivity. Our businesses rely on good road links for access to UK-based markets and supply chains, rail links to connect with customers, and access to international gateways. Manchester Airport is particularly important in providing connectivity to North America and Asia. Congestion and poor journey reliability on the motorway network creates additional cost pressures for businesses, and reliability issues on the rail network are a challenge in connecting to Manchester Airport and other cities across the North.

"In 2019/2020 only 55% of Northern Rail trains arrived on time and only 41% of Transpennine Express trains. The national average is 65%."

Department for Transport[31]

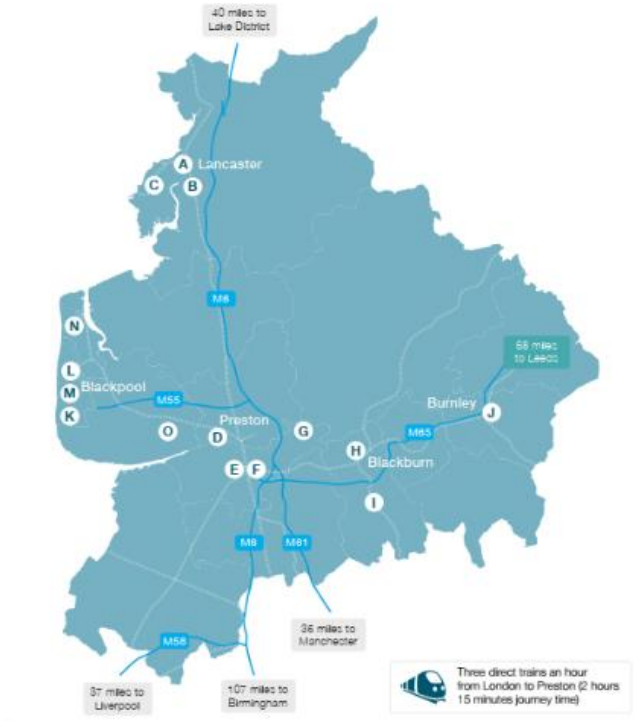
3.4.3 Transport matters in unlocking our potential for transformation

We have big ambitions to transform our economy over the next 20 years. This includes creating the conditions for supporting our existing businesses to grow and transform, attracting new businesses through new inward investment, and transforming our towns and cities to attract new talent.

If we fail to take positive action, our economy is at risk of stalling. Our forecasts show that total employment in Lancashire could fall, driven in part by technology transformation (and resultant job reductions) in manufacturing. Our strategy is to support growth in manufacturing and diversification into new sectors, including professional and business services, and supporting emerging opportunities including those in in cyber, digital and sci-tech. We are taking action to support this growth, through upskilling the labour market, attracting new talent, and provision of high-quality new employment space.

Lancashire's Inward Investment Prospectus[32] sets out how we are engaging with potential inward investors in the region, including our strategic investment locations. Figure 3-8 shows these locations.

Figure 3-8: Strategic Investment Locations in Lancashire[33]



A Eden Project Morecombe/Frontierland
B Lancaster Canal Quarter
C Heysham Gateway, Lancaster
D Transforming Preston/The Harris Quarter/Preston Station Quarter
E Farington Cricket Campus
F Lancashire Central
G Samlesbury Enterprise Zone
H Blackburn Business Innovation District
I A Dynamic New Darwen
J Burnley Town Centre and Canalside Masterplan / University of Central Lancashire Burnley Campus
K Blackpool Airport Enterprise Zone
L Talbot Gateway
M Blackpool Central
N Hillhouse Enterprise Zone
O Springfields

In addition, Lancashire has a network of strategic sites including four Enterprise Zone sites. These have the potential to sustain and grow the economy across a range of key existing and emerging sectors including advanced manufacturing and engineering, cyber, sci-tech, chemicals, and energy and nuclear.

All of these projects complement our existing economic assets and extend across all sectors of our economy. The investment in Eden North will transform the visitor offer in Morecambe, attracting up to 750,000 visitors per year. Lancaster's Canal Quarter will transform underused surface car parks and disused industrial buildings into a vibrant new area of the city centre, and Heysham Gateway will transform derelict land into a premier business destination.

Development in Preston includes regeneration of the Harris Quarter, transformation of the Station Quarter, and a new urban village at Stoneygate. Lancashire Central is a new strategic employment site, adjacent to the M6 and M65, with the potential to unlock 5,600 jobs, whilst the new Farington Cricket Campus will create a new home for Lancashire Cricket Club. Samlesbury Enterprise Zone, at the heart of Lancashire, is a world-leading hub of innovation and industrial R&D. It is home to BAE Systems, our Advanced Manufacturing Research Centre, and the National Cyber Force HQ, with capacity to support the rapidly growing cyber sector.

The Blackburn Innovation District includes a new Skills and Education Campus and cyber zone, with strong links to Samlesbury, new workspaces and improved public realm in the town centre, alongside health innovation investment at Royal Blackburn Hospital. Darwen's Town Deal focuses on repurposing of the market hall, wider town centre improvements, a new Perspex national manufacturing centre, sports village, and new walking trails into the surrounding hills. In Burnley, the University of Central Lancashire is progressing plans for a new campus to accommodate over 5,000 students by 2028 with a focus on medical sciences, which will integrate into a new town centre and Canalside Masterplan.

Talbot Gateway is creating a new Central Business District in the heart of Blackpool, creating new employment and mixed-use space, including a new Civil Service Hub and new Multiversity in partnership with Lancaster University and Blackpool and The Fylde College. Blackpool Central will be a new world-class leisure destination, focusing on families, attracting 600,000 additional visitors to the town. The Blackpool Airport Enterprise Zone benefits from connection to the North Atlantic Loop, an ultra-fast internet connection to New York. Hillhouse Enterprise Zone currently focuses on chemical and polymer manufacturing, whilst Springfields is one of the world's most advanced nuclear fuel generation facilities.

Local Plans, which are currently under preparation across Greater Lancashire, are also proposing further new strategic employment sites, for example new locations along the M65 corridor.

Our development programme is therefore focused on creating the space to enable businesses to grow, attract new investment, and create wider conditions to attract new talent, including regeneration of our town centres. Effective transport connections will be critical in ensuring that businesses can access skilled workers, connect with supply chains and markets, and drive innovation across clusters.

We are also delivering new homes to meet the needs of a growing population. Between 2012 and 2022, housing stock in Lancashire increased by almost 47,000, or 7%[34]. However, this was lower than the English average of 8.8%. The largest increases were in Ribble Valley (15%), Chorley (11%), and Fylde and Wyre (9%), reflecting the relative strengths of the housing markets in these areas. The lowest increases were in Hyndburn (4%), Rossendale, Pendle, Blackburn with Darwen, and Blackpool (5%), reflecting weaker housing markets.

Significant variations are also forecast in the growth of our population over the next two decades. Table 3-2 shows these variations, with the largest growth projected in Chorley and Fylde. Almost half of our forecast growth will be in the central north-south corridor, a quarter in the Fylde Coast, and a quarter in Pennine Lancashire. This additional population is expected to result in a 10% increase in traffic by 2050 (see Table A-5 in Appendix A).

Table 3-2: Population projections 2023-2043[35]

Local authority	2023	2043	Change	% change
Blackburn with Darwen	149,283	150,392	+1,109	+0.7%
Blackpool	138,984	141,552	+2,568	+1.8%
Burnley	90,211	94,036	+3,825	+4.2%
Chorley	123,033	137,600	+14,567	+11.8%
Fylde	83,556	92,524	+8,968	+10.7%
Hyndburn	81,707	84,265	+2,558	+3.1%
Lancaster	148,110	157,465	+9,355	+6.3%
Pendle	92,733	95,139	+2,406	+2.6%
Preston	143,580	149,015	+5,435	+3.8%
Ribble Valley	62,341	68,038	+5,697	+9.1%
Rossendale	73,248	79,811	+6,563	+9.0%
South Ribble	111,758	115,528	+3,770	+3.4%
West Lancashire	115,032	118,275	+3,243	+2.8%
Wyre	114,202	122,681	+8,479	+7.4%
Total	**1,527,778**	**1,606,321**	**+78,543**	**+5.1%**

Source: ONS 2018-based Sub-National Population Projections, sourced via Lancashire Insights

We need to provide the right homes in the right places to meet the needs of our growing population, whilst supporting regeneration in our more struggling areas. Effective transport connections will be needed to support these new homes. This includes additional capacity in the transport network to accommodate demand and mitigate impacts on local roads. It also means that new homes should be in places that are close to jobs and services, with a wide range of transport choices.

We have different challenges in planning for growth across Lancashire. For sites located in our town centres, we need to integrate transport infrastructure with quality place-making. In other locations, we must provide effective travel choices to maximise accessibility to labour markets and facilitate business-to-business connectivity. Planning for housing needs a tailored approach. In some areas, such as Chorley and Fylde, we need to plan for stronger housing demand take a strategic approach to capacity planning. In areas of weaker housing demand, such as Pendle and Hyndburn, there will be a greater focus on placemaking and regeneration of existing communities.

4 Our health and wellbeing challenges

4.1 Introduction

We have several health and wellbeing challenges including high levels of inequality, social exclusion, isolation, and poor health (both physical and mental) amongst many people. Our society is also ageing, and we will need to be able to respond to the effects of an older population.

There are high levels of social exclusion, worklessness, low incomes, economic insecurity, and poor health in many of our towns. There are also many challenges for many people living in our rural areas. These are closely linked to the economic challenges that we discussed in the last chapter.

Our transport system is one of the root causes of these challenges. Poor transport connections create barriers to accessing jobs, shops, education, training, and other services. Traffic has a range of impacts on people and communities, including pollution, noise, severance, and traffic collisions. High levels of physical inactivity are one of the main causes of high levels of obesity and ill health in many communities.

- Section 4.2 presents a deep dive into the health challenges facing our area, including the causes and effects of poor health, and demonstrates why this must be a priority for Lancashire.
- Section 4.3 explores the issues around transport-related social exclusion, drawing on insights from recent work from Transport for the North.
- Section 4.4 considers wider wellbeing issues, including safety and security for people using our transport system.

Key points – health & wellbeing challenges

- Economic challenges, including below-average productivity, are strongly related to health and wellbeing challenges.
- There are significant variations in health across Lancashire. The most severe issues are in our towns and cities.
- Poor transport connectivity hampers access to jobs and services and can lead to higher travel costs and car dependency.
- Transport is one of the root causes of health and wellbeing challenges.
- Emissions from our major roads affect air quality.
- Road collision rates per capita are higher than in comparable areas.

4.2 A deep dive into our health and wellbeing challenges

4.2.1 Introduction

Our social challenges are closely related with our economic challenges. The Lancashire Independent Economic Review included a deep dive on Health, Wealth, and Wellbeing[36] across our area, which provides compelling evidence on the challenges that we face. Figure B-1 in Appendix B shows where ill-health is most prevalent.

Improving the health of our residents will have significant economic benefits. Poor health accounts for almost 17% of our gap in productivity with the rest of England. Reducing the health gap with the rest of England would generate £1.4 billion for our economy every year and reduce demand on public services. By tackling our long-term health challenges, we can help people to lead more fruitful, purposeful lives, which will also support greater economic inclusion.

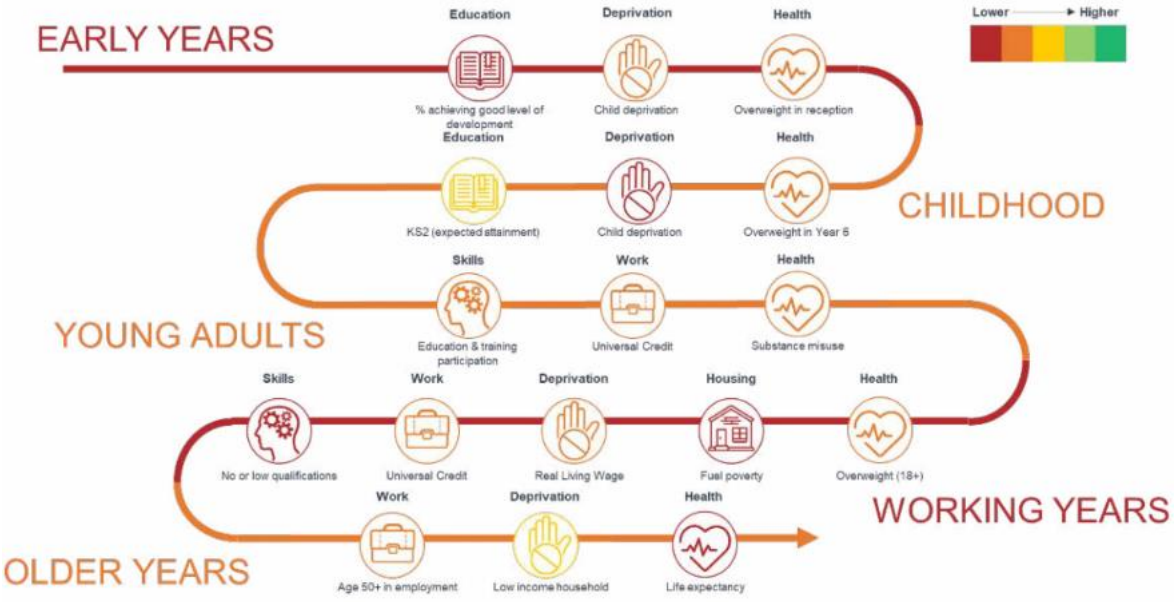
The Deep Dive Report explored health and wellbeing through different perspectives: looking at the challenges that people experience at different stages of their lives, exploring specific issues around health deprivation, and the social determinants of health.

"In Lancashire-12, life expectancy at birth for males is significantly worse compared to England. Both Blackburn with Darwen and Blackpool are also significantly worse compared to England, with Blackpool having the lowest male life expectancy in the country. "

Lancashire Insights[37]

The lifecycle approach provides a high-level overview of where Lancashire and its different places perform well and where there are challenges. Figure 4-1 provides an overview of our performance.

Figure 4-1: Lifecycle analysis of social outcomes for people in Lancashire[38]



Note: assessments are versus all English local authorities. For each metric, the range was divided into five categories, split between the lowest (worst, red) and highest (best, green) categories.

There are particular challenges during early years (pre-school) and high levels of deprivation amongst many of our children. These problems continue through to substance misuse, low levels of training, and dependence on benefits for many young adults. This carries through into the working years, with low qualifications, dependence on benefits, low wages, fuel poverty, and poor health for many. This ultimately leads to poor health through adulthood and low life expectancy.

4.2.2 Patterns of health deprivation

There are major geographic variations in health, with the worst performance in Blackpool and Pennine Lancashire, moderate performance in Chorley and South Ribble, and comparatively better outcomes in Ribble Valley and Fylde. Table 4-1 summarises the overall performance of each district for each life stage. Education and skills are a major challenge, particularly in terms of school-readiness in Early Years and skills amongst the labour force, but poor health outcomes are a consistent theme.

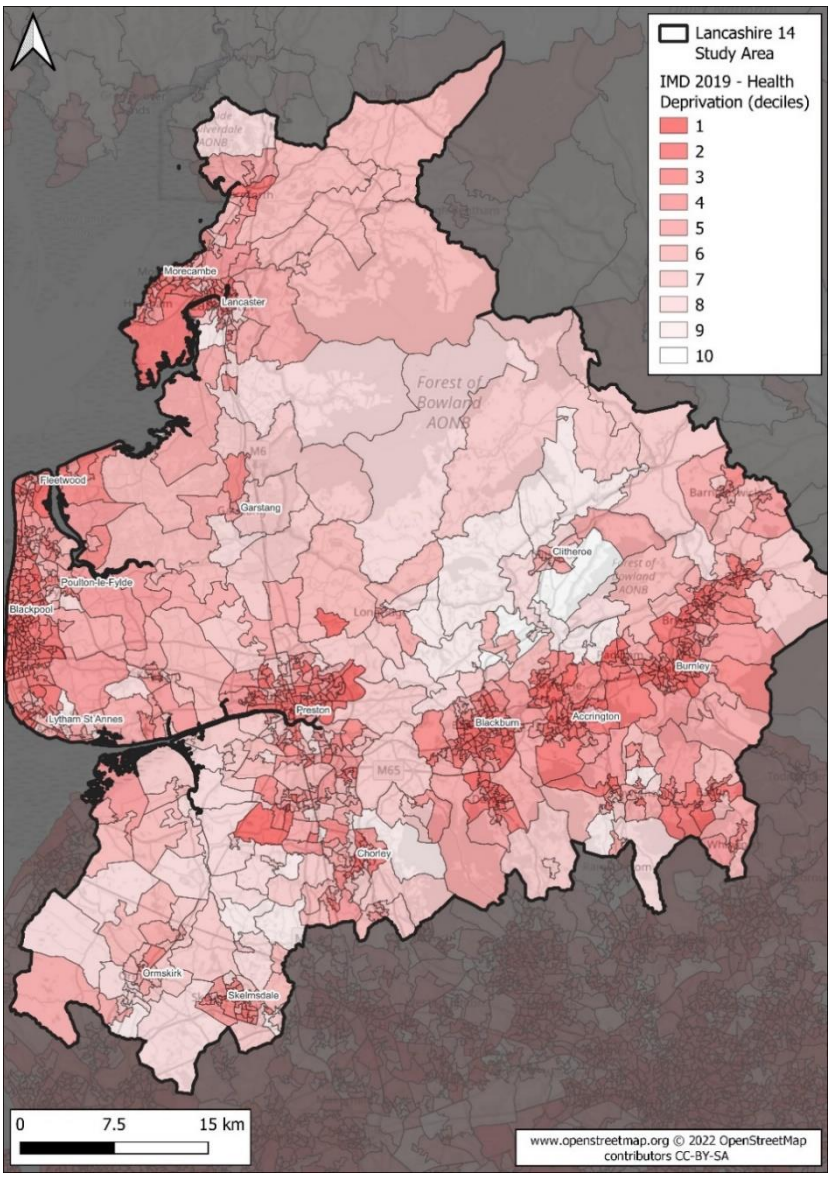
Table 4-1: Social outcomes across the lifecycle in Districts across Lancashire[39]

Local authority	Early years Overall	Early years Health	Childhood years Overall	Childhood years Health	Young adults Overall	Young adults Health	Working years Overall	Working years Health	Older years Overall	Older years Health
Blackburn with Darwen	VL	L	L	L	VL	L	VL	L	VL	VL
Blackpool	VL	VL	VL	VL	VL	VL	VL	L	VL	VL
Burnley	VL	VL	VL	L	L	M	VL	VL	L	VL
Chorley	M	M	G	M	M	M	M	M	G	M
Fylde	VG	G	G	VG	M	M	M	M	M	M
Hyndburn	L	G	VL	L	L	M	VL	VL	VL	VL
Lancaster	L	L	M	M	G	M	L	M	M	VL
Pendle	L	L	VL	L	L	M	VL	M	L	VL
Preston	L	M	L	M	M	M	L	L	L	VL
Ribble Valley	G	M	VG	VG	G	M	M	G	G	G
Rossendale	L	VL	M	VL	L	M	L	L	G	VL
South Ribble	M	M	M	M	M	M	M	L	M	M
West Lancashire	L	VL	L	L	G	M	L	L	L	M
Wyre	L	L	L	M	L	M	L	VL	M	L

VL = Very low, L = Low, M = Moderate, G = Good, VG = Very good

Figure 4-2 shows that health deprivation is a major challenge in Lancashire.

Figure 4-2: Health deprivation in Lancashire[40]



Over a quarter of our neighbourhoods are in the most deprived 10% in England for health (see Table B-1 in Appendix B). Our most deprived neighbourhoods are concentrated in the urban areas, including Blackpool, Fleetwood, Morecambe, Preston, Skelmersdale, Chorley, Blackburn, Darwen, Accrington, Burnley, and Nelson. This problem is most acute in Blackpool and Blackburn with Darwen, where nearly 50% of the population is within the top 10% most health deprived in England. Of England's most deprived neighbourhoods, 11 are in Blackpool and 2 are in Burnley[41].

However, many deprivation datasets often mask high deprivation and poor health in rural areas because the data are not able to identify pockets of deprivation amongst areas of rural affluence. Issues include social isolation, frailty amongst older people, and poor access to healthcare due to lack of transport.

4.2.3 Social, economic and environmental factors affecting health

A third aspect is the analysis of the wider social determinants of people's health. Social, economic, and environmental factors contribute to 60% of the overall health of a population[42]. The Marmot Review identified five social determinants of health:

- Early years. The lives of young children from birth to five years set the foundation for their whole lives. Socioeconomic factors affect young children's development, which impact school-readiness.
- Education. Educational attainment is impacted by socioeconomic factors, parental support and family networks, peers, nature of the school, and prior attainment.
- Work. Employment can reinforce inequalities, whether people are out of work or in low-paid work. Unemployment and poor quality, low-paid work can reduce mental and physical health.
- Income. Low incomes limit the ability of people to purchase goods and services to maintain good health. Poor health often reduces earning capacity.
- Communities. More deprived communities are likely to have characteristics that create health risks, including poor housing, higher crime, worse air quality, lack of green space and traffic dangers.

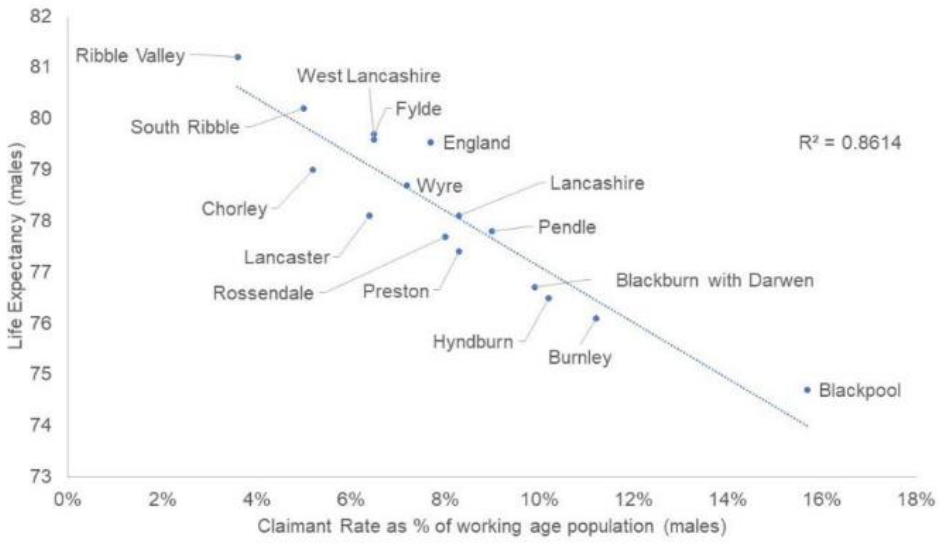
4.2.4 Early years and education

Despite generally high Ofsted ratings for Early Years provision, educational outcomes in Lancashire are relatively poor, particularly in Blackpool and Pennine Lancashire (see Tables B-5 and B-6 in Appendix B). Educational attainment across Lancashire is mixed, but poor in terms of proportions of residents with no qualifications. Across our districts, there is a strong correlation between health deprivation, GCSE attainment and median salaries. Blackpool, Burnley, Hyndburn, and Blackburn with Darwen perform badly on all these metrics, whilst Ribble Valley has the lowest health deprivation, highest GCSE scores, and highest salaries.

4.2.5 Work

In terms of work, over one in four jobs earn less than the Real Living Wage, the threshold to meet a minimum acceptable living standard. Again, the deepest challenges are faced in Blackpool, Blackburn with Darwen, and Burnley, although there is a mixed picture in other areas. Unemployment is particularly bad for people's health; Figure 4-3 shows a strong correlation between unemployment (measured through claimant count) and life expectancy.

Figure 4-3: Claimant count and life expectancy in Lancashire[43]



The high levels of unemployment in Blackpool (and much of Pennine Lancashire) are strongly correlated with low life expectancy, whilst Ribble Valley and South Ribble are at the opposite ends of the spectrum.

> *"In areas such as the City of Lancaster and the centre of Morecambe, life expectancy is around 9.9 years less for men and 8.8 years less for women than in the most affluent parts of the district."*
>
> Lancashire County Council[44]

Healthy life expectancy is also important, because advances in medicine mean that people are generally living longer, but sometimes in poorer health. Healthy life expectancy, for both men and women, is lower than 55 years in some parts of our urban areas, but higher than 70 years in the rural (and more prosperous) parts of Blackburn with Darwen, Ribble Valley, Fylde, and Lancaster. Healthy life expectancy for men varies by 24 years across Lancashire, from 47 years in Blackpool to 71 years in Fulwood, with 23 years living in poor health in Blackpool, and 11 years in poor health in Fulwood.

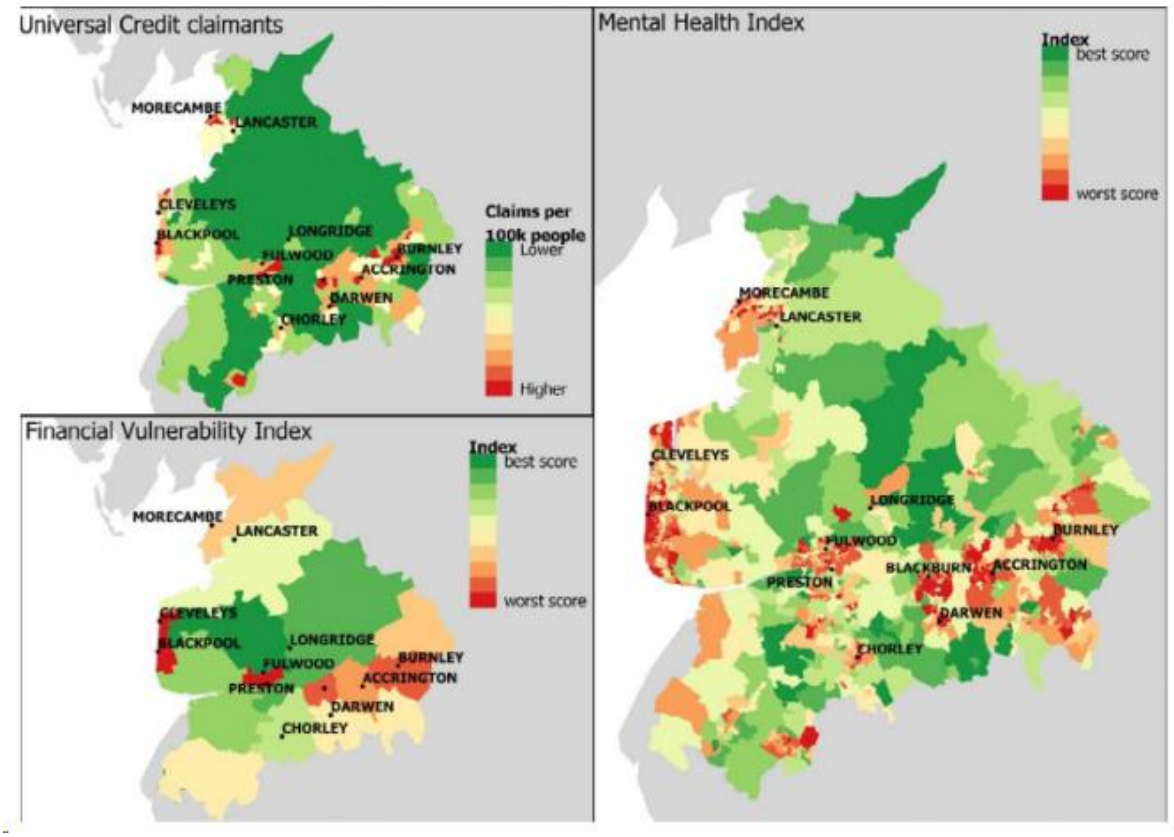
4.2.6 Income

In terms of incomes, we face major challenges with low-paid jobs. In most districts, we have high proportions of residents earning below the real living wage, low resident annual wages, and low workplace annual wages. The only exceptions, where resident and workplace wages are higher than average, are Fylde and Ribble Valley. It is no coincidence that these districts are home to BAE Systems and other high-value businesses.

Resident wages are significantly higher than workplace wages in Chorley, reflecting outward commuting to higher-paid jobs in places such as Manchester, whilst workplace wages are higher in Ribble Valley, reflecting inward commuting to higher-paid jobs in the district.

Figure 4-4 shows that people living in areas with low pay suffer higher levels of financial vulnerability and worse mental health. There are real financial challenges for people suffering poor mental health. This is a particular challenge on much of the Fylde Coast, Pennine Lancashire, parts of Preston, and localised parts of West Lancashire. Although these maps appear to show fewer challenges in our more rural areas, it is important not to forget the challenges faced by poorer people living in areas that are more prosperous.

Figure 4-4: Universal Credit, Financial Vulnerability and Mental Health[45]



4.2.7 Communities

Communities refers to housing quality, transport accessibility, and environmental factors, such as air pollution and access to Green Space. In general, Lancashire scores relatively well for environmental measures in the ONS Health Index and has lower than average levels of mortality due to air pollution. We explore specific issues relating to air pollution, noise, and other environmental factors later in this Green Paper.

Lancashire has high levels of housing affordability (house prices in relation to wages) but we have major challenges with the quality of our housing, including high numbers of households in fuel poverty. High levels of fuel poverty were strongly correlated with high numbers of deaths caused by COVID-19, and higher levels of fuel poverty are linked to concentrations of older housing.

Across much of our area, more than 40% of housing pre-dates 1945, and over 50% in Blackpool and Pennine Lancashire. There is clear evidence that poor quality, damp, and cold housing exacerbates health conditions and raises vulnerability to illness. We also have significant challenges with multi-occupancy housing in some areas, particularly in Blackpool.

'Quality of place' is therefore a critical challenge for many of our areas, particularly in relation to our housing, but there are wider factors that are impacting on our community wellbeing, which we explore further in this chapter. We also explore issues caused by poor transport accessibility later in this chapter.

4.2.8 Health performance summary

Table 4-2 draws together the analyses to provide an overall health scorecard for Lancashire. It shows that we face multi-dimensional health challenges across many parts of Lancashire, starting in early childhood, particularly in Blackpool, Blackburn with Darwen, and Burnley. There are correlations when we consider through people's lives, health deprivation, and the social determinants of health.

Table 4-2: Health performance across the lifecycle, health deprivation and social determinants (Early years[46])

Local authority	Lifecycle Early years	Lifecycle Working years	Health depriv-ation	Social determi-nants Early years	Social determi-nants Edu-cation	Social determi-nants Work	Social determi-nants Income	Social determi-nants Housing
Blackburn w/ Darwen	VL	VL	VL	VL	M	VL	VL	VL
Blackpool	VL	VL	VL	VL	VL	VL	VL	VL
Burnley	VL	VL	VL	VL	VL	VL	VL	M
Chorley	M	M	M	M	VG	M	VL	M
Fylde	VG	M	VG	M	M	VG	VG	VG
Hyndburn	L	VL	VL	VL	VL	VL	VL	M
Lancaster	L	L	VL	M	M	M	VL	VL
Pendle	L	VL	VL	VL	VL	VL	VL	VL
Preston	L	L	VL	VL	M	VL	M	VL
Ribble Valley	G	M	VG	VG	VG	VG	VG	VL
Rossendale	L	L	M	M	M	M	VL	VL
South Ribble	M	M	VG	M	M	M	M	M
West Lancashire	L	L	VG	M	M	M	VL	M
Wyre	L	L	M	M	M	M	VL	M

VL = Very low, L = Low, M = Moderate, G = Good, VG = Very good

The LIER recommended that improving people's health should be at the heart of our region's strategy. It highlighted how health and wealth are closely intertwined, which will require systems approach to future planning. It also highlighted the importance of working with communities to co-create healthy neighbourhoods. Good quality housing should be complemented by strong community infrastructure, with good connectivity, walkability, with access to services, green spaces, and good quality food.

We face multiple inter-related health challenges in many parts of Lancashire. These are closely related to our socio-economic challenges, including poverty, worklessness and poor housing. Our most severe health challenges are concentrated in our towns, where there tend to be more travel choices.

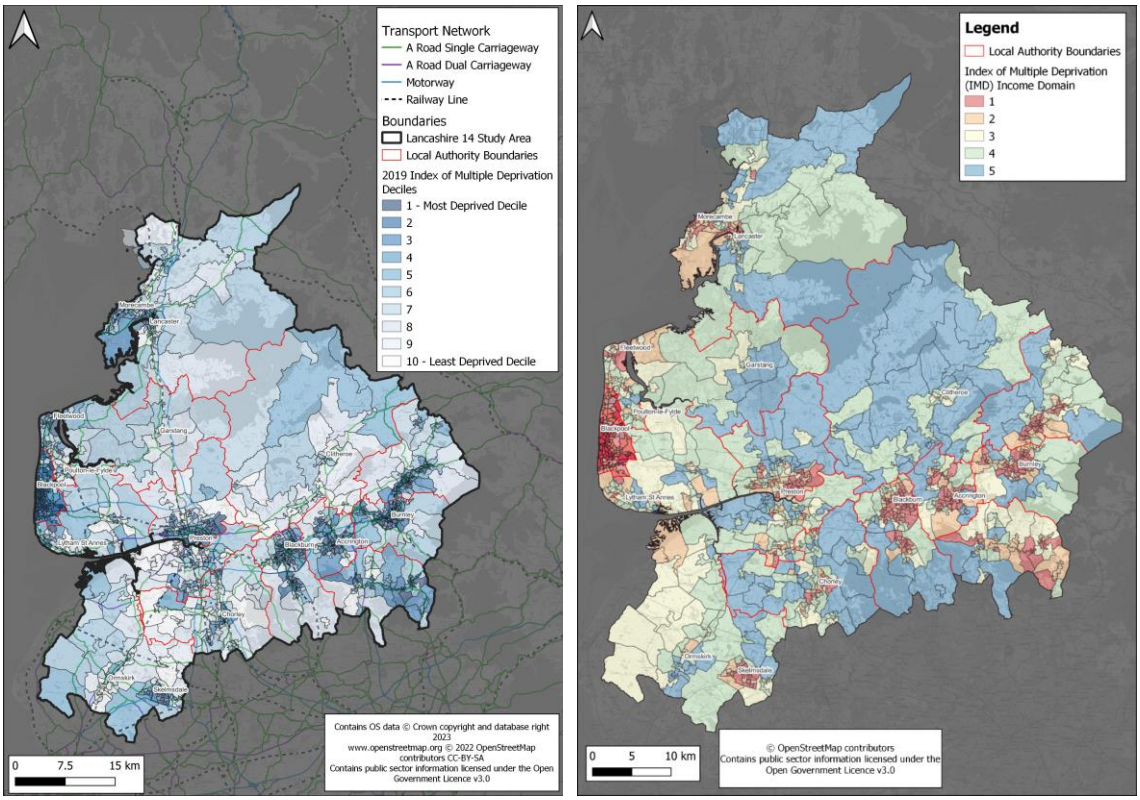
However, transport can directly affect health and wellbeing due to factors such as air quality, noise, and road safety. These are examined in Section 4.4. We are also aware that we have significant challenges with transport-related social exclusion which are discussed in the following section.

4.3 Transport-related social exclusion

Social exclusion is the term used to describe conditions in which people have no voice or stake in the society in which they live. Social exclusion is strongly correlated to people's social and economic circumstances, with causes including unemployment, poverty, ill health, substance misuse, poor education and skills, discrimination, relationship breakdowns, and poor housing[47].

Figure 4-5 shows the Index of Multiple Deprivation and Income-related deprivation in Lancashire. The maps show that deprivation is strongly linked with incomes and therefore poverty. Figure 4-6 shows the proportions of over 16s with no qualifications, and proportions with advanced qualifications. Lack of qualifications and skills is also a major problem: people with no or low workplace skills struggle to enter the workforce, or are stuck in low-paid jobs, which are frequently precarious.

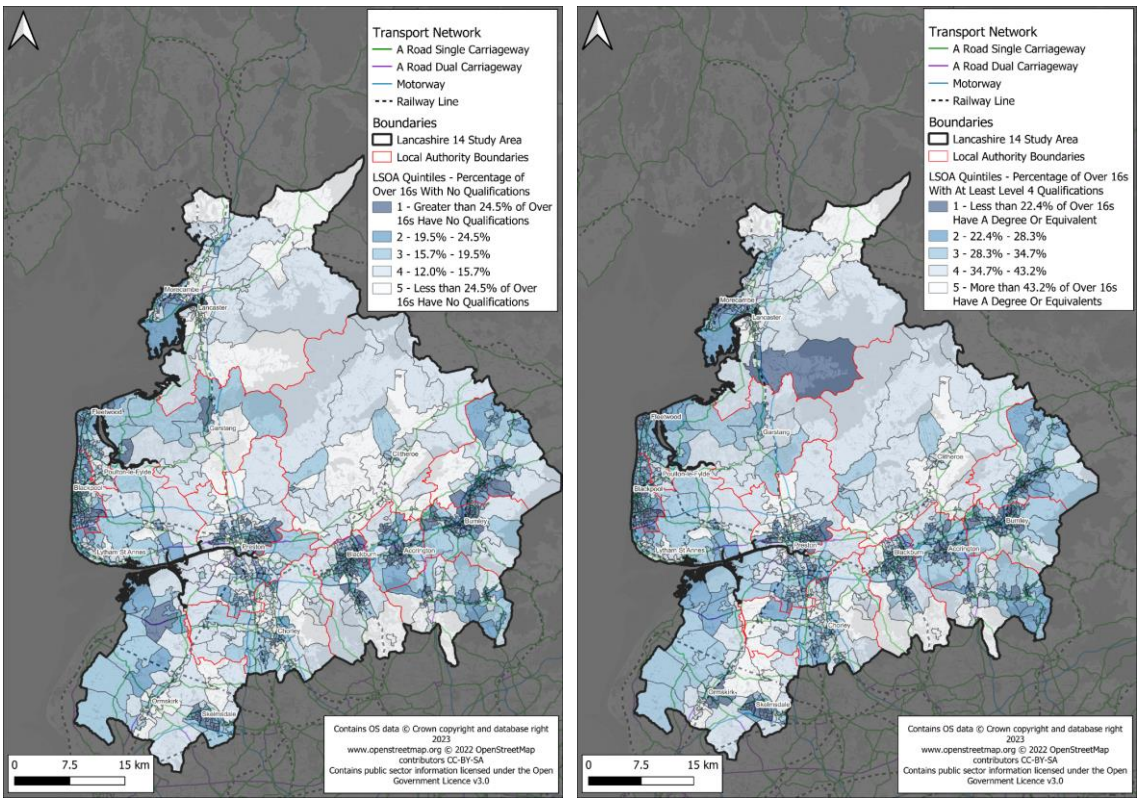
Figure 4-5: Index of Deprivation: IMD, Income



"More than 22% of the population of Pennine Lancashire live within the 10% most deprived areas in the country, and 57% of these [22%] living in the 5% most deprived areas."

Blackburn with Darwen Borough Council[48]

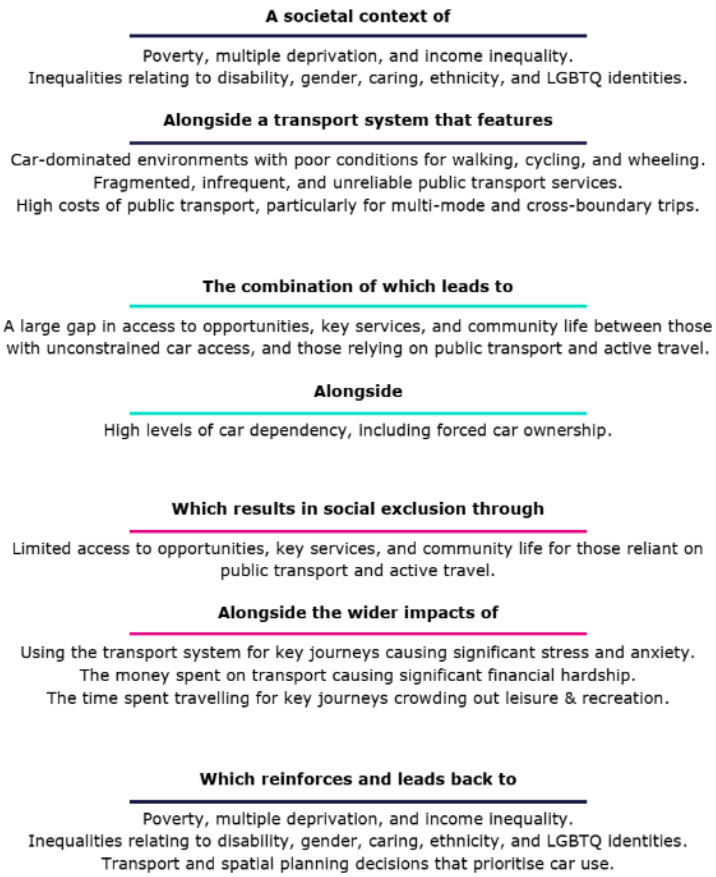
Figure 4-6: Percentage of over 16s with no qualification / Level 4+ Qualifications



Section 4.2 has already explored in depth these issues through the lens of people's health. It showed that poor health and social exclusion are synonymous in many parts of Lancashire, and clearly demonstrated that improving health must be a key priority for our region.

Transport is a significant cause of social exclusion in Lancashire. Transport for the North recently developed a data tool to map transport-related social exclusion (TRSE)[49]. TRSE means not being able to access opportunities, services, and community life as much as needed, and facing major obstacles in everyday life through the wider impacts of having to travel (further information on journey times to health and educational facilities is provided in Appendix B). These wider impacts include the time, cost, stress, and anxiety in using the transport system. These impacts can contribute to a vicious cycle of poverty, isolation, and poor access to basic services. Figure 4-7 describes this cycle.

Figure 4-7: The TRSE transport and deprivation cycle[50]



TfN's research showed that TRSE is caused by the following features of the transport system:

- fragmented and unreliable public transport services.
- exposure to harassment, discrimination, and anti-social behaviour.
- costs that exceed what is affordable for people on low incomes.
- poor active travel conditions and car-dominated environments.
- high levels of car-dependency, including forced car ownership.

The report highlights that 3.3 million people in the North live in areas where there is a risk of TRSE. These are widely distributed across the North, but are concentrated in manufacturing legacy areas, rural-urban fringes, smaller cities, and towns, and in coastal communities. These types of location are particularly common in Lancashire.

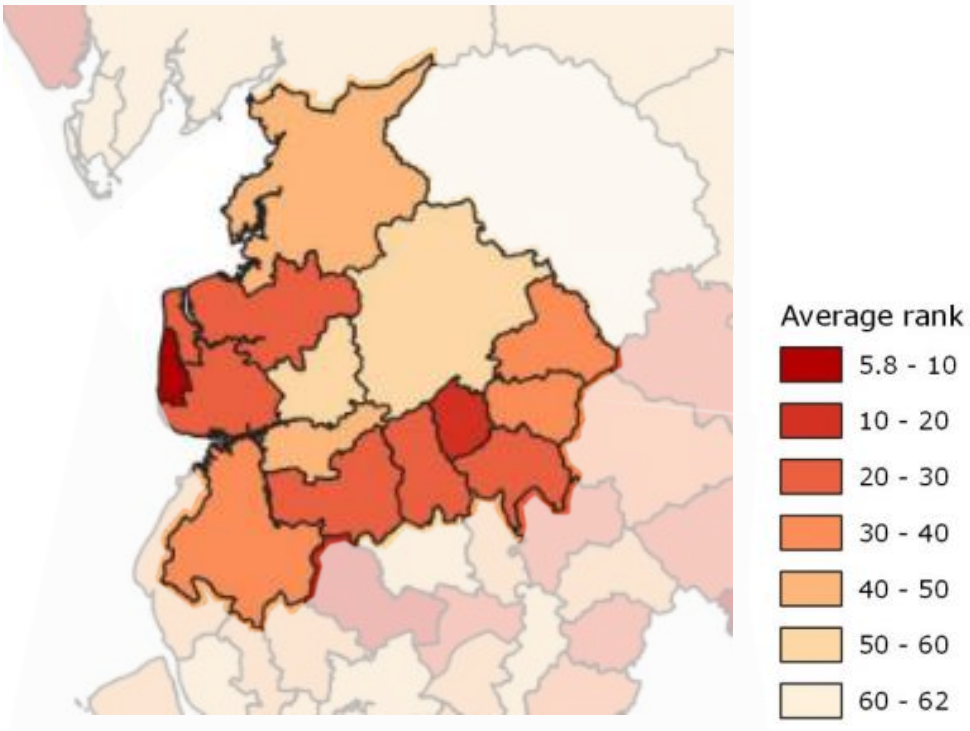
TRSE has disproportionate effects on people with disabilities and long-term health conditions (see Figure B-8 in Appendix B), people with caring responsibilities, and people on low incomes and in insecure work.

The research identified levels of TRSE using two variables:

- an accessibility score based on access to jobs, education, health, and basic services by all modes.
- a vulnerability score based on the Indices of Multiple Deprivation (discussed above).

Areas that suffer from poor accessibility and high vulnerability are therefore considered to be at the highest risk of TRSE. Figure 4-8 shows the average TRSE performance of Districts in Lancashire.

Figure 4-8: Average rank of proportion and size of population at high risk of TRSE[51]



The approach used by TfN was to rank authorities based on the size of the population and proportion of the population in high TRSE categories. Average ranks were then developed for each authority. Overall, Barnsley had the worst overall score of local authorities in the North, with a score of 5.8. York had the best overall score in the North (hence lowest risk of TRSE), with a score of 62.0.

"Lack of transport options in rural areas contributes to social isolation and loneliness, leading to a decline in health and well-being. Older residents are especially vulnerable to social isolation, which can negatively impact their quality of life."

Department for Transport[52]

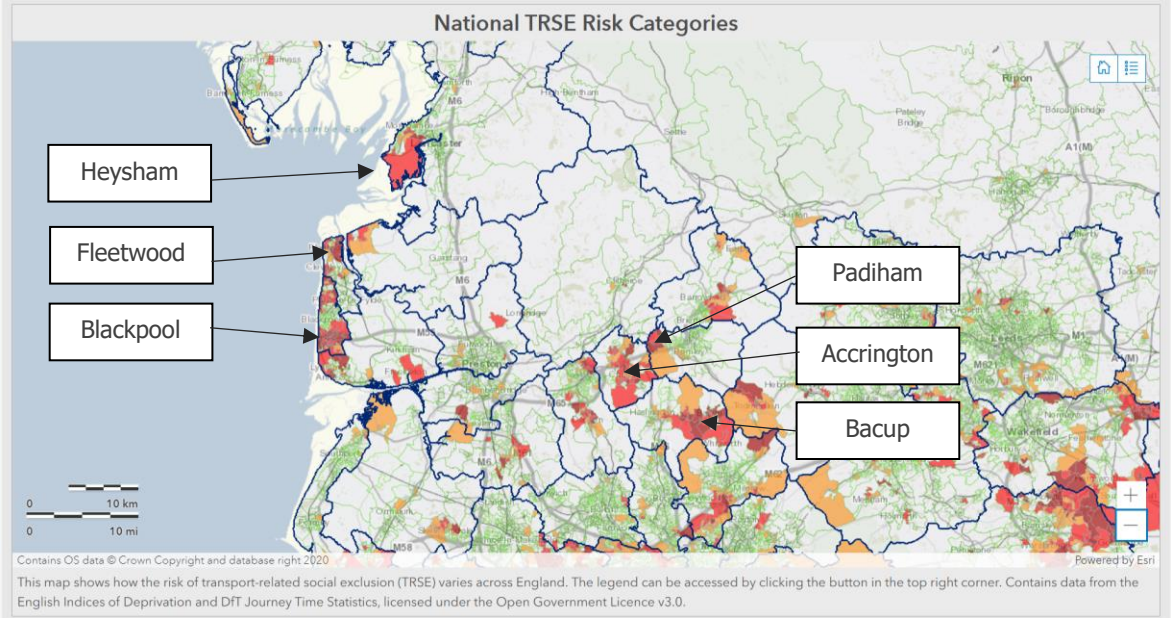
Using this approach, the authorities with the highest TRSE in Lancashire are Blackpool (8.5), Hyndburn (14.5), and Blackburn with Darwen (21.3). Performance is also poor in Rossendale (22.5), Wyre (22.8), and Chorley (25.8). Performance is better in Ribble Valley (54.3), Preston (52.5), South Ribble (48.8), Lancaster (40.8), Burnley (37.8), West Lancashire (36.5), and Pendle (30.5). Craven (across the border in North Yorkshire) experiences some of the lowest levels of TRSE in the North: despite its rural nature and limited transport options, there is limited vulnerability to deprivation.

As highlighted above, the TRSE scores are derived from rankings based on vulnerability and accessibility assessments. Vulnerability, which is based on the deprivation maps shown in Figure 4-5, highlights the high levels of vulnerability in many of our towns. Using these metrics, Blackpool is the most deprived district in England.

Accessibility is relatively good in Preston and in the inner parts of Blackpool, Blackburn, Burnley and Lancaster, but poor across most of our rural areas, including West Lancashire, Wyre, and Ribble Valley. There are also major challenges in Fleetwood and Heysham (due to their peripherality), Lytham, Hyndburn, and Rossendale.

The combined TRSE Risk shown in Figure 4-9 is based on a combination of these scores, focusing on assessments at the local area level.

Figure 4-9: TRSE Risk in Lancashire[53]



This map shows the widespread TRSE problems across Lancashire, most noticeably across much of the Fylde Coast (Blackpool, Fleetwood), Heysham, and large swathes of Hyndburn and Rossendale.

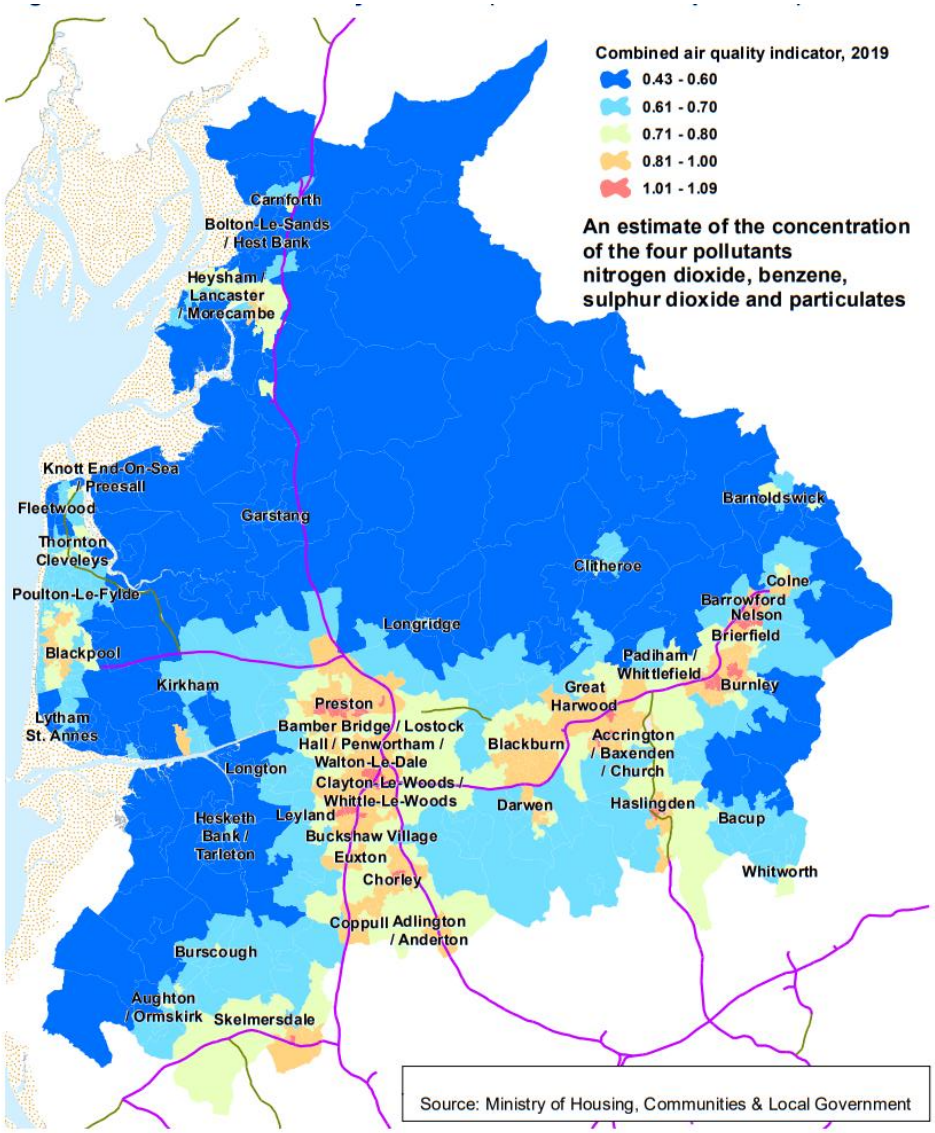
Transport-related social exclusion (TRSE) is a major problem in many parts of Lancashire. There is clear evidence that poor accessibility and transport choices are a root cause of the multiple social and health challenges faced in many of our communities, particularly the Fylde Coast, and many parts of Pennine Lancashire. This means that poor transport choices, including lack of public transport, forced car ownership, and poor active travel facilities, are directly impacting on people's life chances.

4.4 Other wellbeing challenges in Lancashire

4.4.1 Air quality

Figure 4-10 shows the combined air quality indicator for Lancashire. Values of less than one mean that pollutants (nitrogen dioxide, benzene, sulphur dioxide, and particulates) are below the national standard and deemed 'safe'.

Figure 4-10: Combined Air Quality Indicator in Lancashire[54]



Most areas of Lancashire experience good air quality, notably the more rural areas. Many urban areas suffer worse air quality, although it is less of an issue in the coastal areas due to the prevailing winds. The highest recorded scores (1.09) were recorded in four adjoining parts of Preston and one area of Hyndburn. These scores are significantly below those in London and other large cities.

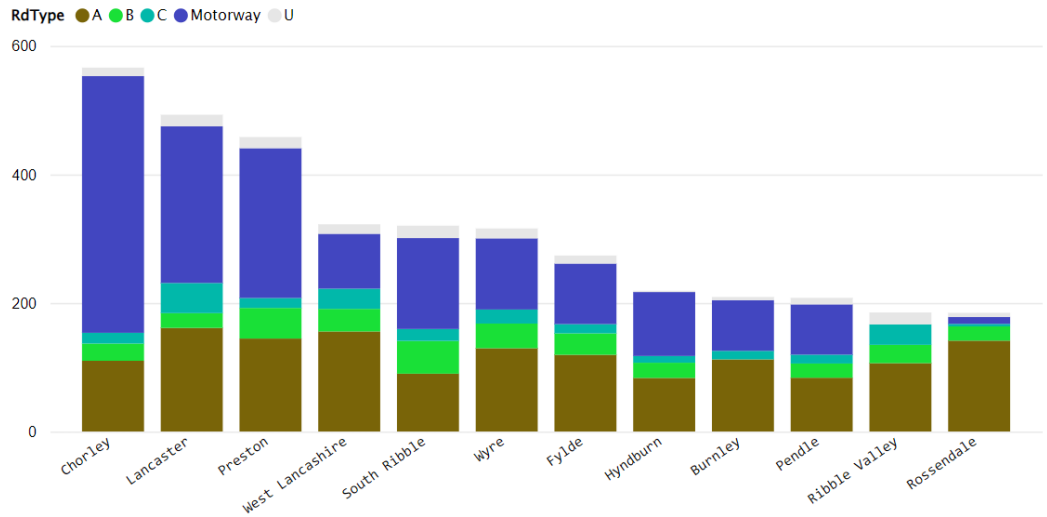
There are localised air quality challenges where emissions exceed acceptable standards. In these locations Air Quality Management Areas (AQMAs) have been declared. There are AQMAs in most of our districts, which tend to be very localised, focused on congested junctions.

"Long term exposure to air pollution can cause chronic conditions such as respiratory diseases, leading to reduced life expectancy. Short-term exposure to elevated levels of air pollution can also cause a range of health impacts and increase hospital admissions and mortality"

Public Health England[55]

Road transport is a significant contributor to NOx emissions alongside industrial sources. As shown in Figure B-10 in Appendix B emissions from road transport typically account for 30-50% of the total but account for over 50% in Chorley due to the M6 and M61. NOx emissions from motorway traffic account for 40% of road traffic emissions but, as shown in Figure 4-11, as high as 70% in Chorley and below 6% in Rossendale. In 2020 motorway traffic in Chorley, Lancaster, South Ribble, and Preston emitted over 1,000 tonnes of nitrous oxides (a quarter of the total for road transport) and over 17 tonnes of particulate matter[56].

Figure 4-11: Transport NOx emissions (tonnes per annum) by district and road type, 2020[57]



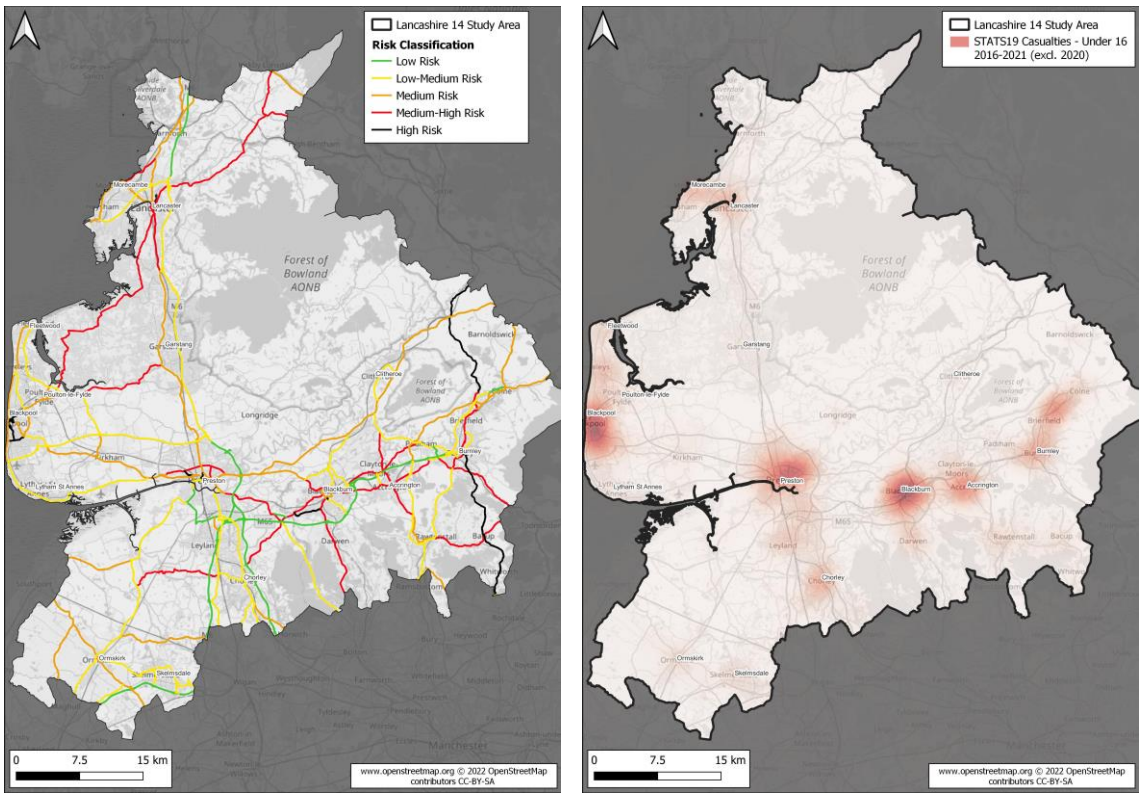
Note: data provided by Lancashire Insights excludes Blackburn with Darwen and Blackpool.

4.4.2 Road safety

Evidence on road collisions across Lancashire is available in the collisions section of Lancashire Insights[58]. The number of people killed or seriously injured (KSI) in a road traffic collision in Lancashire has returned to pre-pandemic levels, although they are still significantly below what they were ten years ago. When taking account of population, Lancashire has a higher rate of road traffic collisions per head of population. The afternoon school-run and evening rush hour are peak times for collisions and casualties.

Figure 4-12 shows Road Safety Foundation risk ratings for main roads[59], and hotspots of casualties amongst under 16-year-olds based on observed data[60]. The risk ratings are based on the number of fatal and serious accidents and the amount of traffic on each section of road.

Figure 4-12: Road risks and under-16 casualty hotspots



The left-hand map shows that motorways are the lowest-risk roads in Lancashire, with green low risk ratings on the M61, M65 and M6 south of Preston. There are higher risks due to driver fatigue on the M6 north of Preston, which National Highways has recognised in its Route Strategy, and M55 towards Blackpool. There are much higher safety risks on local roads, with black high-risk rating on the A671 through Bacup, A682 through Gisburn, A6062 at Ewood Park and routes in the middle of Blackpool. There are several medium-high risk routes across our area, associated with high traffic speeds, and/or road geometry. Many of these higher-risk routes pass through our urban areas.

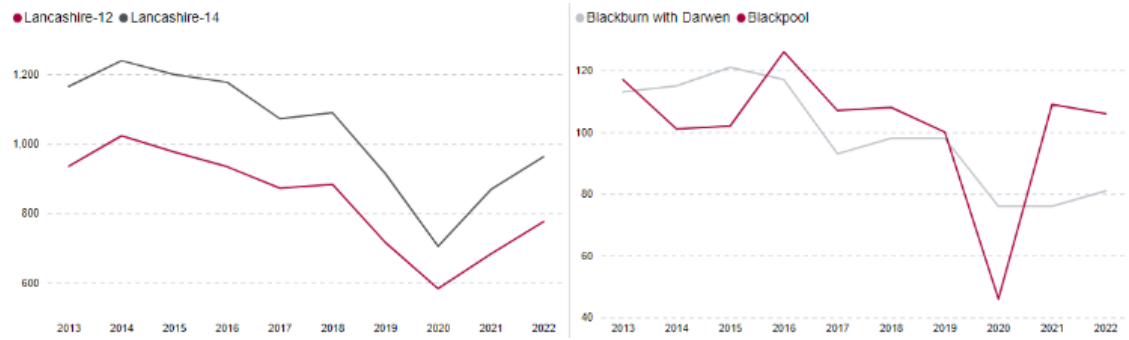
"Children killed and seriously injured on roads in Lancashire is 33.8 per 100,000 which is significantly worse compared to England's average at18 per 100,000."

Lancashire County Council[61]

The right-hand map shows the implications of unsafe routes, in the form of hotspots of casualties amongst under-16s. These are heavily concentrated in our urban areas, with particular problems in Blackpool, Blackburn, and Preston. Although there are more children and young people living in our larger towns, this indicates that we have a real social justice challenge, where children are being injured (or killed) by vehicles. Road collisions are a leading cause of death amongst children and young people.

Figure 4-13 shows the KSI collision trends between 2016 and 2022. Road casualties between 2016 and 2021 are shown in Figure B-9 in Appendix B.

Figure 4-13: KSI collisions in Lancashire[62]



Note: Lancashire-12 = Districts covered by Lancashire County Council, Lancashire-14 including Blackpool and Blackburn with Darwen.

There was a reduction in both KSI collisions (and casualties) over the period to 2020, although 2020's figures were strongly influenced by the lockdowns during COVID-19. There was a significant increase in 2021 following the opening-up of the economy, and further increases in 2022, although collisions and casualties are lower than the 2016 baseline. The trends are similar in Lancashire and Blackburn with Darwen; but there appears to be a recent increase in Blackpool.

More detailed analyses, using the same dataset, show that the highest numbers of casualties took place on weekdays, between 3pm and 6pm (school-run and evening peak traffic), with a smaller peak between 8am and 9am. 63% of casualties were occupants of cars, 14% were pedestrians, almost 9% were cyclists and 8% riders of powered two-wheelers. 77% of collisions took place during fine weather, 72% during daylight, and 69% with dry surface conditions on the road. 43% of collisions and almost 60% of all casualties were on roads with 30mph speed limits. The largest single cause of these collisions was driver or rider error, followed by driver behaviour and/or inexperience.

4.4.3 Personal security

Road safety and personal security can also deter people from using more sustainable modes or being able to access opportunities. More than 60% of respondents to a 2012-13 survey did not feel safe when using our roads to walk or cycle or have concerns over personal safety and anti-social behaviour (see Table B-9 in Appendix B). The main barriers that prevent people from cycling are related to safety: traffic volume being the most common (64%), generally feeling unsafe (42%), difficult junctions to cross (14%), and lack of confidence (8%).

> *"The main barriers that prevent people from cycling are unsurprisingly related to safety – traffic volume being the most common, generally feeling unsafe, difficult junctions to cross, and lack of confidence."*
>
> Lancashire County Council, Blackpool Council, Blackburn with Darwen[63]

Safety issues also feature prominently for barriers to walking, but not quite as high as cycling. Traffic volume accounts for 26% of respondents' main barriers, feeling unsafe (20%) and difficult junctions to cross (12%), while street lighting features much higher than for cycling (9% vs 3%).

There is, therefore, a significant problem with road safety and personal security in Lancashire. There are more collisions on our road network, per head of population, than comparable areas. We have problems on many of our A-roads, and our children are vulnerable, particularly in our larger urban areas where there is heavy traffic. The conditions on the road network mean that many people do not feel safe walking and cycling, which is a major barrier to encouraging more people to adopt active travel choices.

5 Our environmental challenges

5.1 Introduction

In Lancashire, we are blessed with a high-quality natural environment, from the high-quality agricultural land of West Lancashire to the majestic moorland of Pendle and the Forest of Bowland. Our coast is also an important asset, attracting both visitors to Blackpool, Lytham St Annes and Morecambe, and visiting birds to the Arnside and Silverdale Area of Outstanding Natural Beauty.

However, we also have several environmental challenges. The previous chapter described the problems caused by poor housing and poor-quality public realm in our towns and cities. Whilst our air quality is good overall, there are localised hotspots caused by traffic in our towns. We also have high levels of noise in places near to our major roads, including the M6 and M65.

We are also facing a climate emergency which requires us to act with urgency. We need to rapidly reduce carbon emissions from all sectors of our economy to net zero before 2050. The transport sector is now the largest source of carbon emissions in Lancashire and action must be taken to reduce traffic demand and accelerate electrification of our transport system.

- Section 5.2 presents a deep dive into the carbon challenge facing our area, including the sources from different sectors of the economy, and a brief introduction to the transport challenge.
- Section 5.3 sets out our proposed trajectory to Net Zero across all sectors in Lancashire, including transport, and highlights the scale of the challenge in moving away from 'Business as Usual'.
- Section 5.4 explores the root causes of our carbon emissions, including geographic variations and the sources of traffic demand.
- Section 5.5 considers wider environmental issues, including our natural environment.

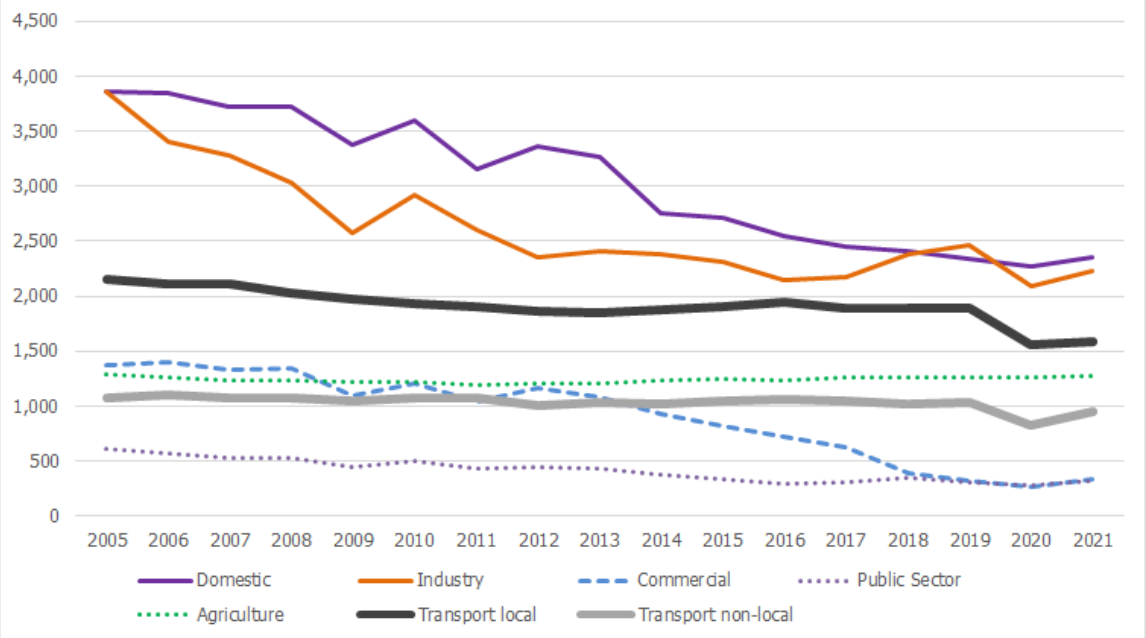
Key points – environmental challenges

- Transport-related carbon emissions from transport per head of population are above the North West average but below the English average, although this average masks significant variations across Lancashire.
- Emissions generated by our residents are lowest in towns and cities and highest in rural areas (on a per capita basis).
- Transport carbon emissions need to fall quickly and significantly to meet our Net Zero targets.
- National and local action to reduce transport carbon emissions is required, including tackling emissions from through traffic.
- Major roads also have impacts in terms of noise, and particulate matter.

5.2 Carbon emissions in Lancashire

Lancashire Insights[64] and DESNZ data[65] provide detailed evidence on the carbon emissions generated in Lancashire. Figure 5-1 is taken from the DESNZ data and shows greenhouse gas emissions by sector in Lancashire between 2005 and 2021.

Figure 5-1: Greenhouse gas emissions (kt CO_2e) by sector in Lancashire[66]



Source: DESNZ UK local authority and regional greenhouse gas emissions national statistics: 2015-2021, Table 1.1 Local authority territorial greenhouse gas emissions estimates. Chart excludes emissions from LULCF and waste management sectors for ease of presentation.

This shows that there have been significant reductions in greenhouse gas emissions from the domestic (residential), industrial and sectors, but little change from agriculture. Transport is a particular problem (see also Figures C-1 and C-2 in Appendix C).

Figure 5-1 presents separate trajectories for local (A roads, minor roads, and other sources, including buses) and non-local transport (motorways and diesel railways). It shows that traffic on motorways is a major contributor to carbon emissions in Lancashire. Between 2005 and 2019, there was little change in transport emissions, (a slight fall in local transport, virtually static for non-local transport). The onset of the COVID-19 pandemic in 2020 resulted in significant reductions in traffic and associated emissions. Following the easing of restrictions in 2021, there was a significant bounceback in traffic on motorways in Lancashire.

Table 5-1 shows the sources of emissions in Lancashire's 12 districts, Blackburn with Darwen and Blackpool in 2021.

Table 5-1: Estimates of CO_2 emissions, 2021 (thousands of tonnes)[67]

ID	First Area name	Industry	Commercial	Public sector	Domestic	Transport	Land use change and forestry	Agriculture	Total emissions	Per Capita Emissions (tonnes)
1	Burnley	74.7	21.8	21.7	134.3	121.1	-5.9	2.8	370.6	3.91
2	Chorley	71.6	19.1	27.1	174.8	320.4	-4.3	9.3	618.0	5.24
3	Fylde	86.3	12.8	14.9	136.4	156.8	40.9	13.2	461.3	5.64
4	Hyndburn	115.0	20.0	8.8	119.9	130.2	-5.3	2.6	391.4	4.76
5	Lancaster	101.0	24.2	45.4	206.1	328.8	25.9	32.2	763.8	5.37
6	Pendle	88.0	13.5	11.7	142.3	118.9	-7.6	7.7	374.6	3.91
7	Preston	102.1	56.3	50.0	202.4	264.1	-3.3	9.4	681.2	4.61
8	Ribble Valley	682.3	5.8	6.3	109.3	112.2	-47.4	28.7	897.4	14.50
9	Rossendale	94.1	8.6	7.0	114.3	111.1	-2.8	3.0	335.5	4.72
10	South Ribble	121.9	19.9	9.3	159.8	215.0	3.0	7.2	536.4	4.82
11	West Lancashire	229.7	14.6	26.1	176.7	199.1	203.9	51.9	902.1	7.70
12	Wyre	128.0	37.1	15.5	178.0	203.7	71.9	18.5	652.7	5.80
13	Lancashire-12	1,894.5	253.8	243.8	1,854.3	2,281.5	269.0	186.6	6,985.0	5.65
14	Blackburn with Darwen	184.5	32.1	34.0	211.0	136.0	-5.9	2.9	594.6	3.84
15	Blackpool	77.1	37.6	40.4	211.8	101.6	2.7	0.4	471.8	3.35
16	Lancashire-14	2,156.1	323.5	318.3	2,277.2	2,519.1	265.7	189.9	8,051.4	5.26
17	North West	9,759.3	1,834.0	1,748.9	10,530.5	11,906.5	-88.5	675.1	36,471.2	4.91
18	England	58,597.1	14,653.7	13,226.0	76,940.4	93,134.4	-2,411.7	5,972.3	260,428.0	4.61
19	United Kingdom	81,244.2	16,903.6	15,580.7	93,844.5	112,252.3	-5,892.8	9,199.0	323,462.4	4.83

The above shows that per capita emissions for the Lancashire-14 are higher than the averages for the North West, England, and the UK. However, this is skewed by emissions in particular districts, particularly Ribble Valley which has very high industry emissions, generated by the Hanson cement works in Clitheroe. This highlights the importance of decarbonising the construction industry, by reducing demand for concrete and new innovations in production processes.

The industry sector contributes a higher proportion of emissions in Lancashire (26.8%) than the national average (25.1%). The other most notable difference is the Land use change and forestry sector, which in England and the UK is a net absorber of carbon (-2.8%), but in Lancashire is a net emitter (+3.3%), driven primarily by activity in West Lancashire.

"Cars, buses, vans, and HGVs in the North of England accounted for approximately 25 mega-tonnes (95%) of CO2 emissions in 2018. Nearly one-quarter of the UK's total emissions from road users originate from the North of England."

Transport for the North[68]

Transport contributes a smaller proportion of the total in Lancashire (31.2%) than the national (34.7%) and North West averages (32.6%)[69]. Transport-related emissions per capita in Lancashire (1.64 tonnes per capita) are also slightly lower than the UK average (1.68) but higher than the North West average (1.60).

Table 5-2 uses the data from Table 5-1 to calculate the proportions of emissions due to transport, and the equivalent transport emissions per capita for each district in Lancashire.

Table 5-2: Calculation of transport CO_2 emissions per capita in Lancashire[70]

Local authority	Total emissions per capita (CO_2e/pn)	Transport % of total emissions	Transport emissions per capita (CO_2e/pn)
Blackburn with Darwen	3.84	23%	0.88
Blackpool	3.35	22%	0.73
Burnley	3.91	33%	1.29
Chorley	5.24	52%	2.71
Fylde	5.64	34%	1.92
Hyndburn	4.76	33%	1.58
Lancaster	5.37	43%	2.31
Pendle	3.91	32%	1.24
Preston	4.61	39%	1.79
Ribble Valley	14.50	13%	1.81
Rossendale	4.72	33%	1.56
South Ribble	4.82	40%	1.93
West Lancashire	7.70	22%	1.70
Wyre	5.80	31%	1.81
Lancashire-14	**5.26**	**31%**	**1.63**
North West	**4.91**	**33%**	**1.60**
UK	**4.83**	**35%**	**1.68**

This shows marked variations across Lancashire. The lowest transport emissions per capita are in Blackpool, Blackburn with Darwen, Pendle and Burnley. In Blackpool, despite large numbers of annual visitors, total emissions in the town are relatively low compared with resident population. The highest transport emissions per capita are in Chorley and Lancaster, due to high traffic flows compared to resident population. In Lancaster, this is caused by high traffic volumes on the M6, which is mainly through traffic. In Chorley, this is caused by traffic on the M6, M61 and M65, which all run through the borough.

It is important to note that this table shows the transport emissions within each district, i.e. on the road and rail networks within the boundaries of each district. It does not account for the journeys to and from each district. This means that for example, Blackpool's emissions may look low as it has relatively low levels of through trips (apart from Fleetwood). However, it attracts trips from all over the UK (and abroad). The total transport carbon generated from Blackpool, including these visitor trips, is much higher than the figures implied above.

There are also very high numbers of through-trips on the motorways passing through Lancashire. Many trips are heading towards the Lake District. The carbon generated by the Lake District visitor economy is, therefore, much greater than the traffic within the Lake District itself; it includes the carbon on motorways in districts such as Lancaster and Chorley.

It is, therefore, common to separate the transport carbon on motorways (and diesel railways) from the transport carbon on local transport networks. This shows the carbon that is 'in-scope' for influence by our local transport authorities, which relates more to the travel undertaken by residents, workers, and visitors in their areas. Figure 5-1 shows the trajectories of emissions of 'local' and 'non-local' transport carbon since 2005.

Our analyses show that 63% of carbon is generated on local transport networks, and 37% from motorways and railways across the 14 Lancashire authorities. The proportion generated by motorways and railways varies widely, with a negligible proportion (due to no motorways) in Blackpool and Ribble Valley, rising to 47% in South Ribble, 49% in Lancaster, 54% in Preston, and 66% in Chorley (associated with the M6, M61 and M65).

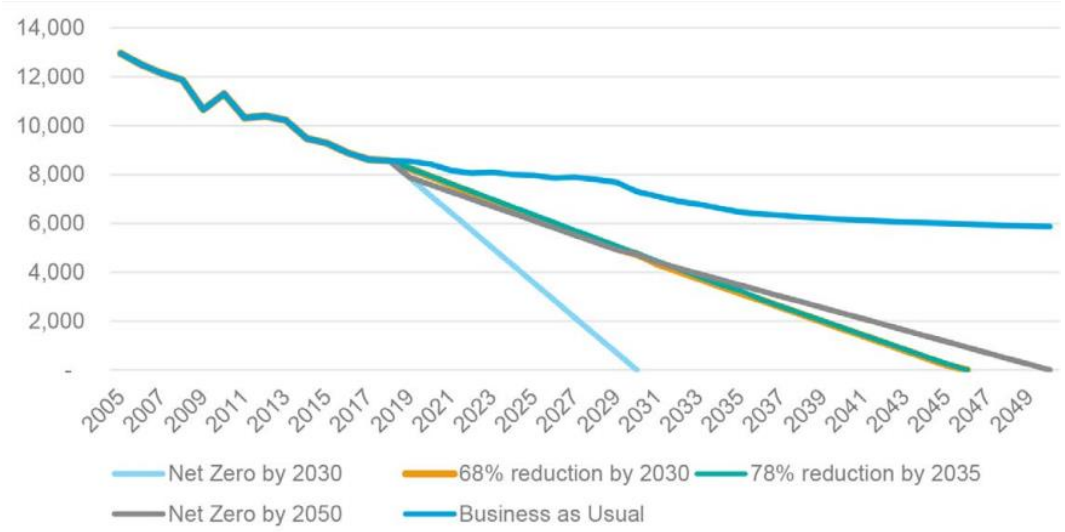
We have a significant problem with carbon emissions in Lancashire. Transport emissions have stayed virtually static over the last two decades (see Figure C-2 in Appendix C) and will need to fall significantly if we are to hit Net Zero by 2050. Transport carbon emissions across Lancashire differ significantly across our districts, due to travel patterns of our residents, employees, and visitors. However, the headline per capita figures mask several factors, including traffic towards our visitor economy hotspots passing through other districts, and traffic to places beyond Lancashire influencing the carbon footprint of our own districts.

5.3 Our trajectory to Net Zero in Lancashire

The options for delivering rapid reductions for carbon across Lancashire were investigated in the ground-breaking Lancashire Net Zero Carbon Pathways Report[71]. This report explored achieving three different targets, as shown in Figure 5-2:

- Net zero by 2030
- a 68% reduction by 2030 (relative to a 1990 base)
- a 78% reduction by 2035 (relative to a 1990 base)

Figure 5-2: Carbon pathways in Lancashire[72]



The report concluded that it will not be feasible to achieve net zero by 2030, but it would be possible to achieve a 68% reduction by 2030 and 78% reduction by 2035 with an ambitious programme of measures across all sectors.

The report highlights that the use of a Net Zero target date can be misleading, because the key issue is actually the rate of decarbonisation and the total cumulative emissions up to 2050. Delaying decarbonisation and acting later will mean more carbon emitted in total, accelerating climate change. Early action is needed, which will reduce cumulative total emissions, giving more chance of mitigation against the worst effects of climate change.

Figure 5-2 also shows that there is a very large gap between the future business as usual scenario and the pathways. Concerted action will therefore be needed across all sectors of the economy to reduce emissions. This is a major challenge for the transport sector. Figure 5-1 showed that transport emissions have changed very little over the last two decades. This is due to increased population, economic activity, and traffic across Lancashire. A step-change will be needed over the next two decades to bridge the gap between the business-as-usual and our ambitions.

The Carbon Pathways Report identified a number of potential measures to reduce transport emissions, which can be categorised as being 'Avoid', 'Shift' or 'Improve' type measures:

- Avoid: reduce overall travel demand through reducing the need to travel, including using digital technologies and bringing services closer to people.
- Shift: increase the proportion of travel by the most efficient and sustainable modes: active, shared, and public transport.
- Improve: increase energy efficiency of vehicles and driving conditions, and move to alternative energy sources, particularly electricity.

Table 5-3 summarises the assessment of measures that were considered.

Table 5-3: Assessment of transport measures in Pathways Report[73]

Measure	Potential reduction	Deliver-ability (0-4)	Council influence (0-4)	Comments on the deliverability and influence
National action: ban on petrol/ diesel car/ van sales	Highest	n/a	1	Local influence is supporting charging points
National action: ban on diesel HGV sales	Highest	n/a	1	Local influence is supporting fuelling / charging infrastructure
Accelerate ULEV uptake	High	3	2	Stronger influence over e.g. taxi fleets, car clubs
Increase active travel / micro mobility use	Medium	3	3	Requires community involvement and support
Increase public transport use	Medium	3	3	Requires agreement with bus operators (BSIP)
Demand management	Medium	2	3	Deliverability restricted by public acceptability
Efficient network management	Lowest	3	4	Impact could be increased by introducing speed limits at 50mph or 60mph which would reduce deliverability
Land use planning (20-minute neighbourhoods)	Medium	3	2	Requires coordination across several stakeholders
Digital connectivity	Medium	3	2	Roll out in areas that aren't commercially viable is challenging

The table highlights that the greatest impacts will be achieved through national action on the forthcoming bans on petrol and diesel car and HGV sales.

The recent Government announcement delaying the ban on petrol and diesel car sales, from 2030 to 2035, could have an impact. However, more important is the recent announcement of the 'EV mandate', which requires progressive increases in the proportions of EV sales every year to 2035 (ultra-low emission vehicles account for only 1.3% of vehicles in Lancashire – see Table C-1 in Appendix C).

Partners in Lancashire can support the acceleration of Ultra-Low Emissions Vehicles (ULEVs) through measures such as provision of charging points. Blackpool Council published an EV Strategy in February 2023[74] and Lancashire County Council and Blackburn with Darwen Borough Council published an Electric Vehicle Infrastructure Strategy[75] in May 2023, which forecast future demand and charging requirements, and developed action plans.

"Modelled data suggest that in 2027 23% of vehicles owned in Blackpool would be EVs (defined as BEVs & PHEVs), rising to 57% in 2032."

Blackpool Council[76]

It is important to recognise that electric vehicles themselves have environmental impacts, including sourcing and transport of materials for their manufacturing, transportation and delivery, eventual disposal, and electricity generation and parts replacement.

We can have a strong influence through 'shift' measures, such as significantly increasing active travel, micromobility and public transport across Lancashire. This will require significant improvements to public transport, including more frequent, faster, more reliable, and attractive services, which will require long-term, sustained revenue budgets to support and improve services. This should also include working with the rail industry to increase demand for rail services. There could also be potential to influence travel behaviour through travel planning and demand management measures.

We can also have a strong influence on 'avoid' measures, by reducing the need to travel by providing services closer to our residents. Broadband coverage across Lancashire is variable: by providing consistently high-speed digital connectivity, we can help enable residents to access services across digital platforms. Through effective land use planning, we can enhance the sustainability of new development and improve service provision in existing neighbourhoods, which will also tackle social exclusion.

The Government's Transport Decarbonisation Plan[77] highlighted that local authorities are best placed to develop decarbonisation strategies for their areas. This is because we have a strong understanding of how our diverse places work, and we can therefore develop targeted place-based strategies. We therefore first need to understand the root causes of our carbon challenges.

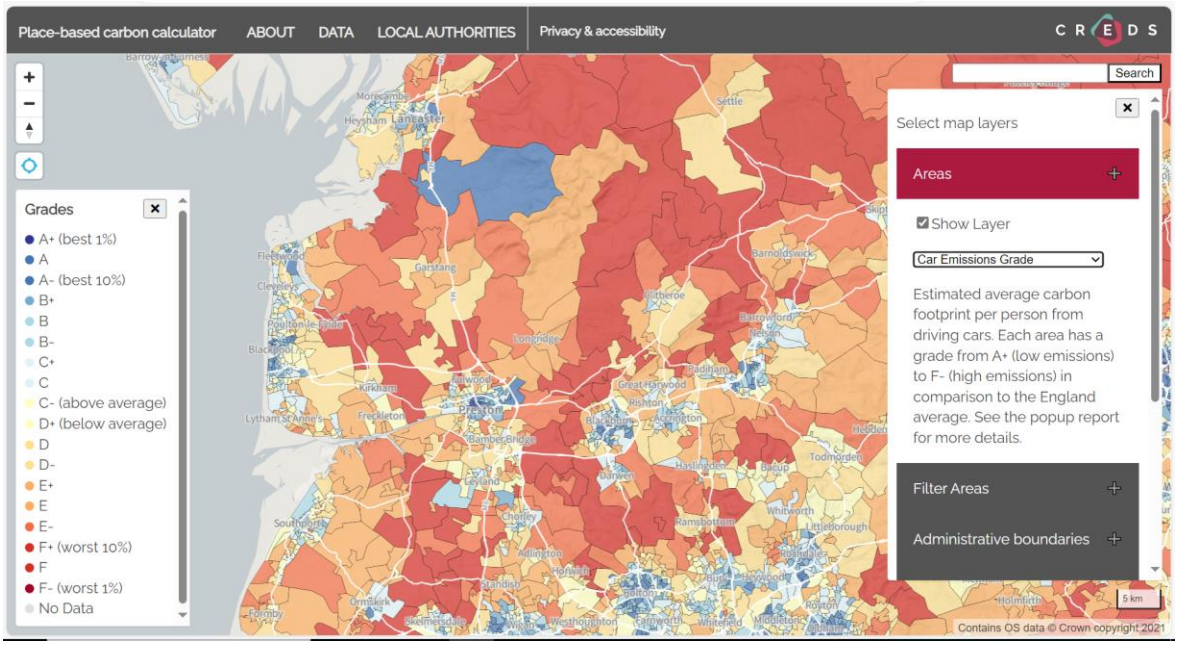
Our decarbonisation pathway aims to achieve a 68% reduction by 2030 and 78% by 2035 (from a 1990 base). Achieving this will require comprehensive action to reduce the need to travel, enable shift towards active and shared travel, and accelerate uptake of ultra-low emissions vehicles. Strong national action is needed to create the conditions for this change, whilst in Lancashire we can design a strong place-based strategy to respond to the different needs of our diverse areas.

5.4 Understanding the root causes of our transport carbon challenge

Lancashire is very diverse, with a mix of urban and rural areas, covering more than 50 miles north to south and east to west. The CREDS Place-based carbon calculator[78] provides data on carbon emissions generated at the neighbourhood level.

The tool helps to provide detailed understanding of total emissions, transport emissions and the root causes at detailed levels. Figure 5-3 shows the ranking of estimated car-based carbon emissions generated by people living in neighbourhoods (termed 'Lower Super Output Areas', LSOAs) across Lancashire, expressed in per capita terms. Blue shading indicates low emissions per capita, red indicates high emissions per capita.

Figure 5-3: Ranking of car-based carbon emissions per capita



The map shows that car-based carbon emissions per capita are lowest in the centres of our largest towns and cities, including Blackpool, Fleetwood, Preston, Ormskirk, Lancaster, Blackburn, and Burnley. Emissions are also low in the area covered by the Lancaster University campus. In contrast, emissions are highest in our more rural areas, including parts of West Lancashire, Fylde, Ribble Valley, and rural areas around Darwen.

The level of transport carbon emissions is a function of two factors:

- the total distance driven; and
- fuel consumption.

More efficient, smaller vehicles use less fuel, and electric vehicles generate no tailpipe emissions, whilst larger diesel SUVs are less fuel-efficient.

"Out of the 8 million registered cars in the North in 2018, nearly 25% were large cars or SUVs, which tend to produce higher emissions."

Transport for the North[79]

Figure 5-4 shows the national rankings of distance driven by car per person across Lancashire. It shows a strong correlation with the patterns of transport carbon emissions shown in Figure 5-3 because the shortest distances are travelled in the urban areas, and longest distances in the rural areas. This is no surprise: people living in our towns and cities are able to access shops, services. and jobs relatively close to home. Residents of rural areas must travel much further.

Figure 5-4: Distance travelled by car per person in Lancashire

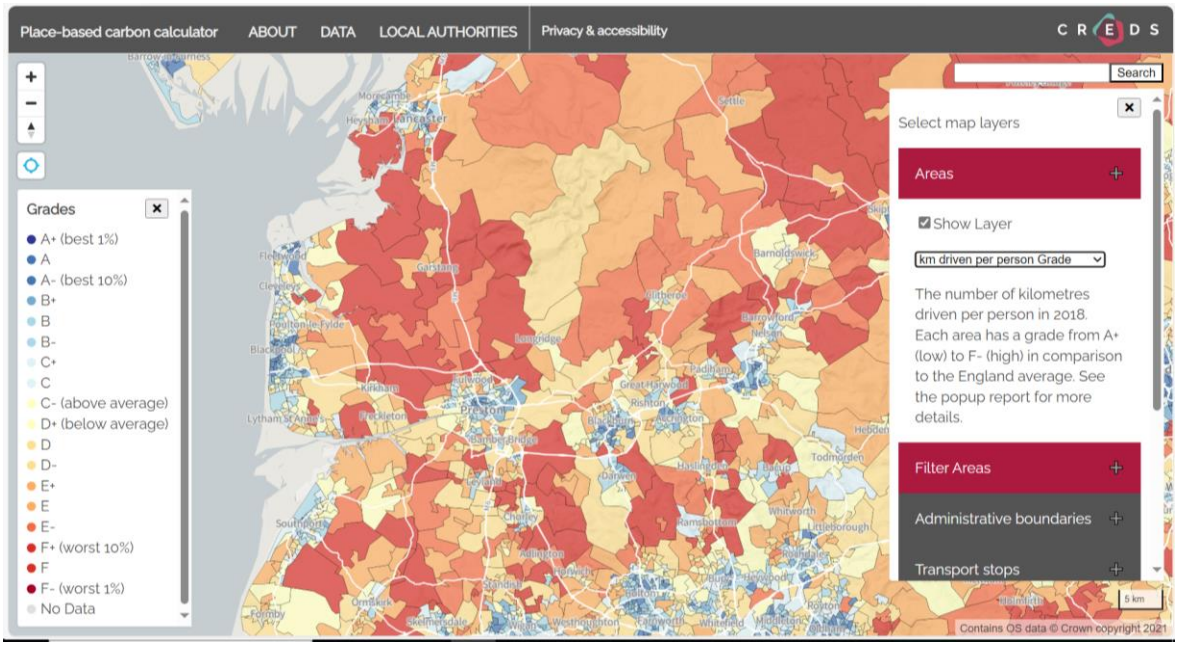
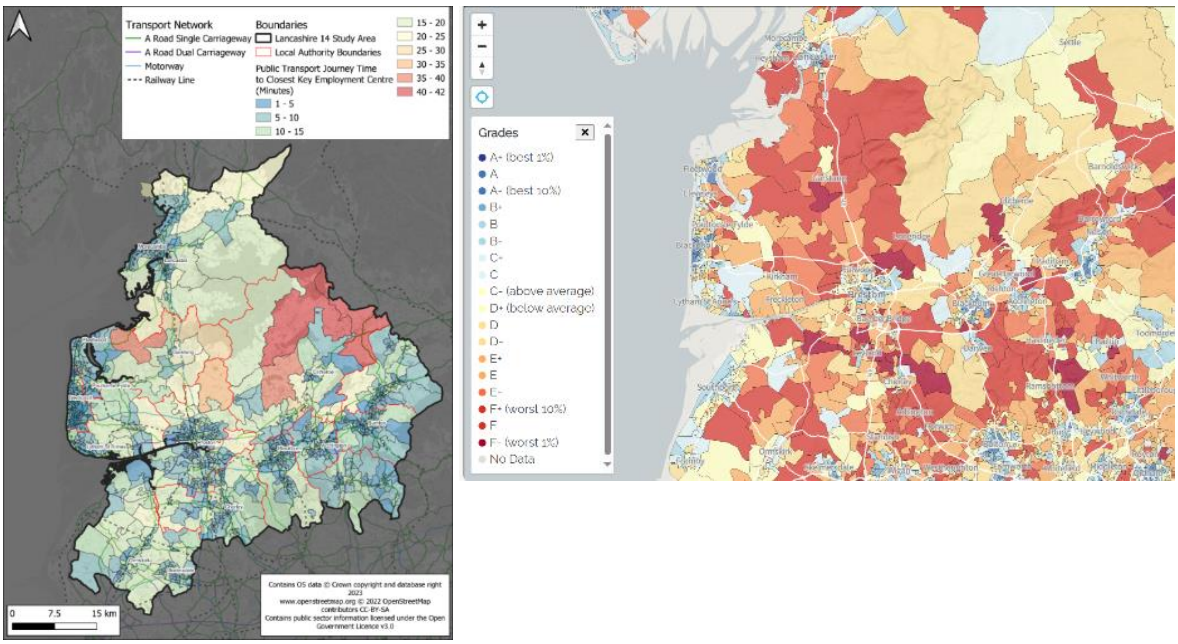


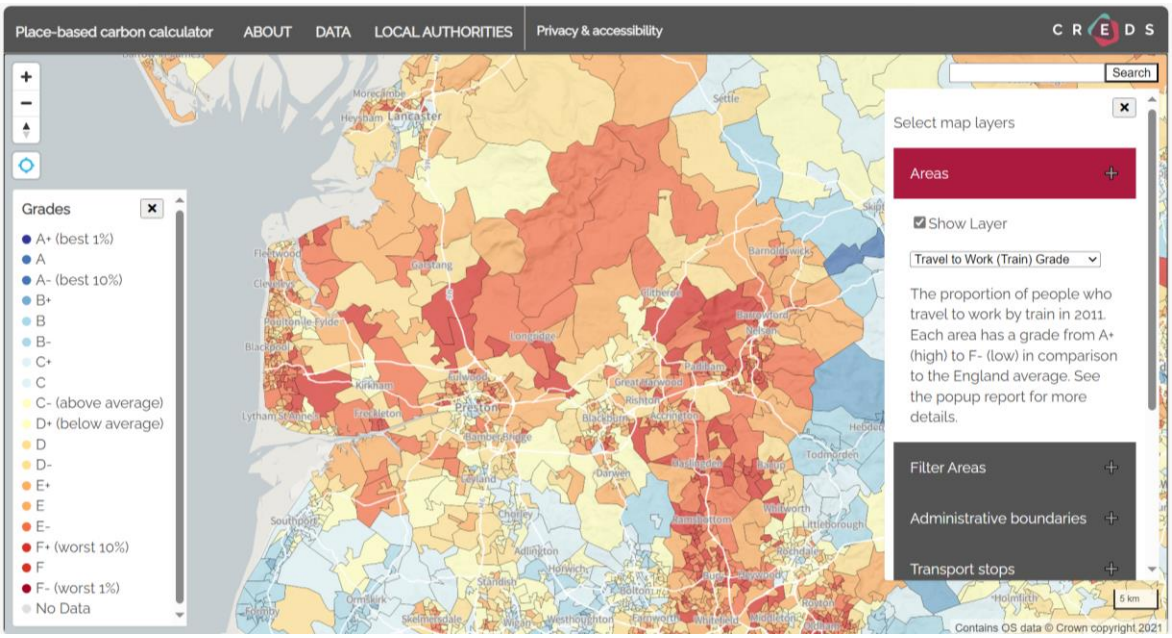
Figure 5-5 compares the public transport accessibility mapping (from Figure 3-5) with the car-based commuting mode share (from Figure 3-6). It clearly shows that car use is much higher in places where public transport accessibility is poorer; and conversely that car use is much lower in places with better public transport accessibility.

Figure 5-5: Public transport accessibility and car mode share for travel to work



In the south of Lancashire, where more people commute to Greater Manchester, the data show that there are higher levels of rail-based commuting, from places including Chorley and Darwen. There are also high levels of rail-based commuting from Ormskirk on Merseyrail services into Liverpool City Region. There is much less rail commuting from other parts of Lancashire, apart from Lancaster and Preston, due to the sparser provision of rail services. Places such as the Fylde Coast are also more distant from major rail communicating destinations, such as Manchester and Liverpool, contributing to much lower rail commuting demand. This is illustrated by Figure 5-6.

Figure 5-6: Rail commuting in Lancashire



The low levels of rail commuting from most of Pennine Lancashire are particularly notable, particularly when compared with the high levels of rail commuting from adjacent parts of Calderdale and Craven to Leeds and Bradford. However, the recent introduction of train services from Burnley to Manchester, via the Todmorden Curve, has increased rail demand (although this was after the 2011 Census, which formed the basis of the commuting figures above). The high costs of rail travel are also an important factor influencing mode choices, particularly for peak period commuting.

We should, however, remember that these analyses all relate to residents living in these places; they do not take account of the carbon emissions from journeys to major destinations. Whilst commuting to workplaces in Lancashire is captured in these assessments, no account has been taken of business travel and trips to major tourism destinations, such as Blackpool and Morecambe.

It will be important to promote effective public transport options to support the visitor economy in the sub-region, including bus, coach, and rail. This will be a key component in helping to reduce carbon emissions generated by visitors to Lancashire. There has been strong growth in tourism-led rail travel following the COVID-19 pandemic. A recent socio-economic study of Northern Trains services[80] included assessment of the changes in demand following the pandemic, which suggested potential increases in trip-making by rail for day trips, UK holidays and visiting friends and family.

We will face multiple challenges in decarbonising transport in Lancashire. Resident-based emissions are lowest in our towns, because people tend to travel shorter distances to shops, services and jobs, and a wider range of non-car travel options are available. We can build on these conditions to enable a further shift and reduction in emissions in our urban areas.

However, the emissions generated by residents of our rural areas are much higher, due to longer distances to travel to shops, services, and jobs and fewer sustainable travel options. In these areas, it is likely that there will be a greater emphasis on supporting a shift to zero emissions vehicles, however, it will also be important to improve travel choices in these areas.

Furthermore, we must tackle the emissions generated by the large numbers of trips to Lancashire, particularly to places such as Blackpool, Morecambe, and our rural tourism hotspots. We will need to work with organisations such as Marketing Lancashire and Visit Blackpool[81] as well as the wider transport sector to promote alternatives to driving. We will also need to work with National Highways, Transport for the North, and adjacent local authorities to develop transport solutions that help address cross-boundary movements.

5.5 Wider environmental considerations

Carbon emissions are not our only environmental challenge. There are multiple challenges to the planet resulting from mass consumption, environmental degradation, pollution, and loss of biodiversity. A shift to electric vehicles will not solve the challenges faced by the planet: a more fundamental shift will be needed to tackle the wide-ranging and inter-related challenges that are faced.

5.5.1 Particulate matter

A good example is very small particulates from brake and tyre wear from vehicles. These are termed 'micro-particulates' and are classified as PM10 and PM2.5[82]. These are particularly harmful to human health through absorption into the lungs. They are also harmful to the natural environment.

Cars are becoming larger and heavier: there is a recognised trend of 'car bloat' or 'autoobesity', with cars becoming significantly wider since the 1990s, including the recent trend towards Sports Utility Vehicles (SUVs). This has been a key factor driving increases in air pollution[83], and the continuing shift to SUVs and heavier electric vehicles is likely to lead to increases in the concentrations of these particulates in the future. Electric cars will not solve this pollution problem, because brake and tyre wear will remain a challenge, and electric cars are heavier, exacerbating this problem.

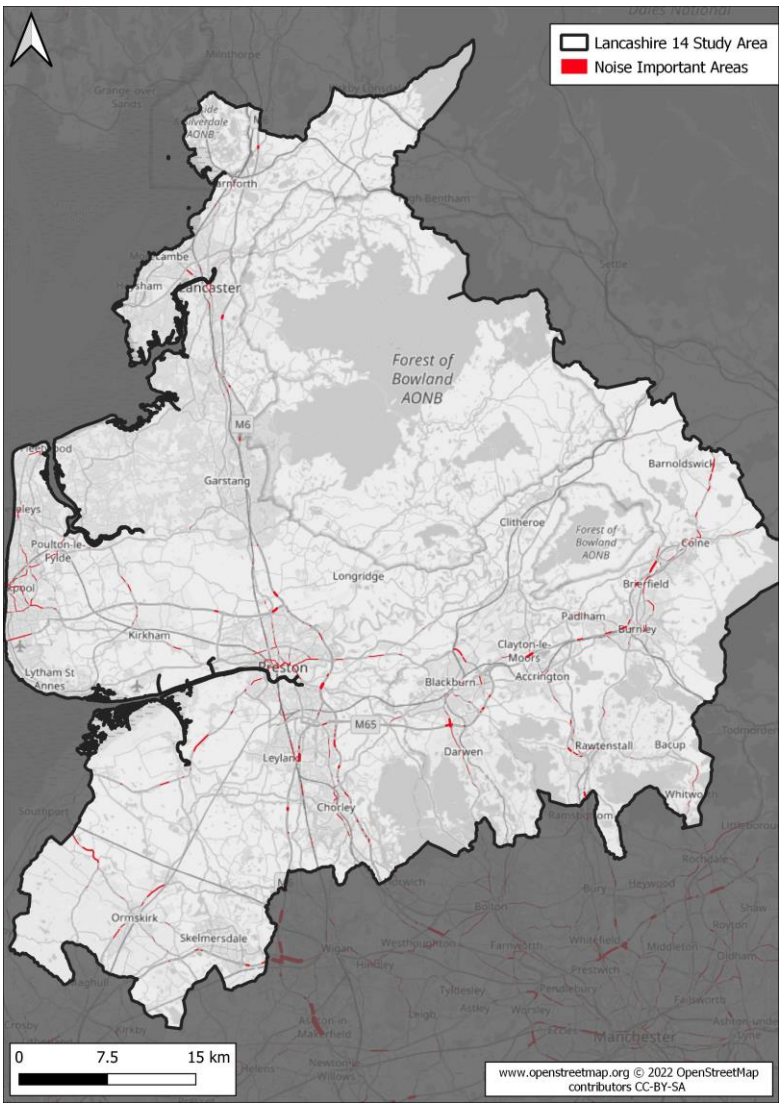
5.5.2 Noise

It is also important to recognise that noise from traffic (and transport more generally) can have significant impacts on people.

> *"Long-term exposure to noise can cause a variety of health effects including annoyance, sleep disturbance, negative effects on the cardiovascular and metabolic system, as well as cognitive impairment in children."*
>
> European Environment Agency[84]

Figure 5-7 shows the designated 'Noise Important Areas' across Lancashire (as determined by the Department for Environment, Food and Rural Affairs). This shows that noise tends to be concentrated in areas with high traffic flows, most noticeably near to the motorways (M6, M61, M65) and dual carriageways (A56), but also within parts of our largest urban areas (particularly Blackpool and Preston).

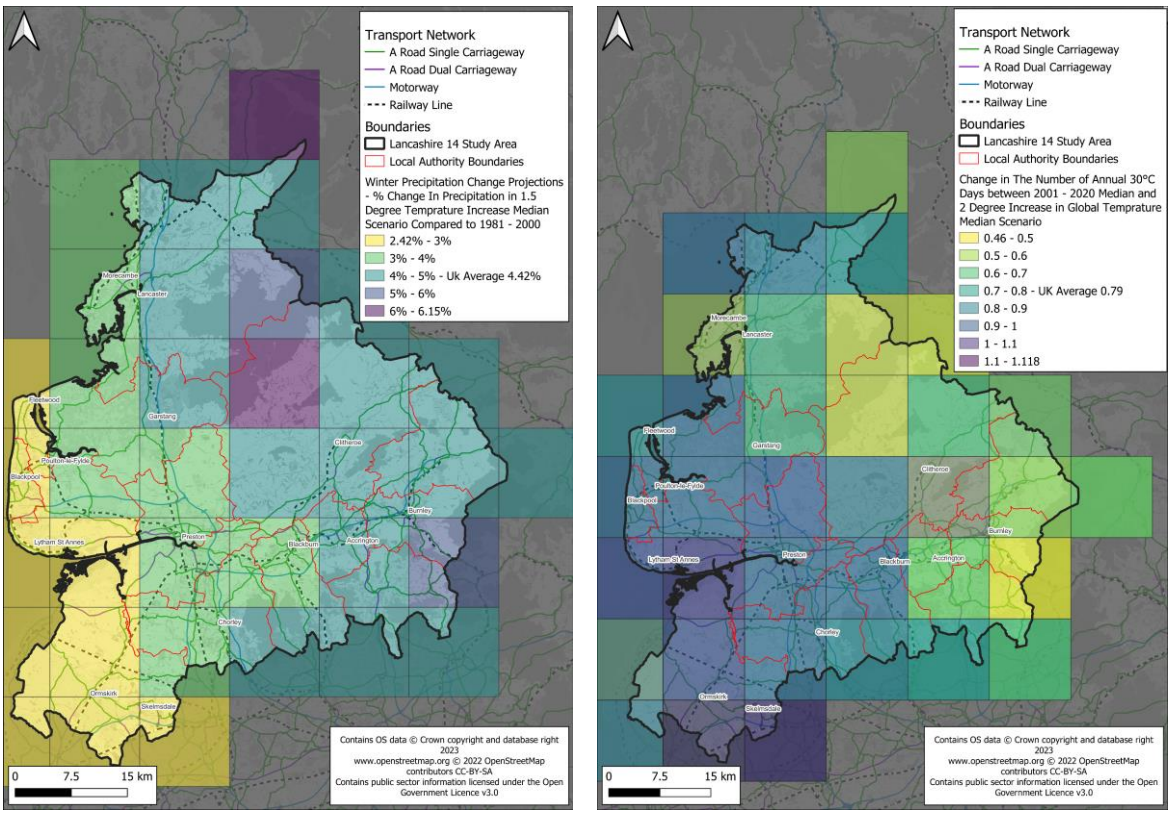
Figure 5-7: Noise Important Areas in Lancashire



5.5.3 Extreme weather

The impacts of climate change are becoming more apparent. We are already seeing the effects of more extreme weather: from the record high temperatures of summer 2022 to the storms of autumn 2023. Figure 5-8 shows that there will be significant increases in winter precipitation and high summer temperatures.

Figure 5-8: Forecast increases in winter precipitation and hot days in summer



The highest increases in winter rainfall are forecast on the Ribble estuary, Preston, Fylde Coast, and Lancaster. This will increase risks of flooding and transport disruption, particularly in the more low-lying areas. The highest rises in summer temperatures are forecast in West Lancashire and Central Lancashire. This could also cause significant disruption, through increased risk of buckling of rail tracks and melting of road surfaces.

Increased summer heat is also a major cause of mortality, particularly amongst older people and people with health conditions. This is likely to be a major challenge for more vulnerable people in places such as Blackpool, Preston and Skelmersdale. This will exacerbate the existing health problems amongst our most deprived communities, demonstrating that climate change is closely linked with our wider health and social challenges in Lancashire.

We face several wider environmental challenges in Lancashire. We will need to proactively address the increase in particulate emissions resulting from brake and tyre wear. Noise is a particular challenge around our busiest roads, particularly motorways. Climate change is already happening, with extreme high temperatures, high winds, and intense rainfall, all of which are creating further pressures on the resilience of our transport system.

6 Summary of challenges

6.1 Introduction

This chapter draws together the evidence from this Green Paper to highlight the conclusions on the major challenges that we face, under the three big themes that we introduced in Chapter 2. It highlights that most of these challenges are inter-related, and we must take a systems-wide approach in response.

6.2 Our economic challenges

In 2018, GVA per capita in Lancashire was £22,800 compared to £29,400 in England (20% less productive than the English average). Forecasts also indicate that, without action, our productivity gap will continue to worsen against the national average over the next two decades.

This 'productivity gap' is caused by multiple factors including low workplace skills and qualifications, low levels of innovation amongst many businesses, and poor health amongst many of our residents. Transport is also a contributory factor. Poor transport connectivity constrains our labour markets and access to markets for our businesses.

One of the major causes of our challenges is our economic geography. Lancashire does not operate as a single economy, and we are not capturing the full potential of our 1.5 million population and 700,000 workers. Instead, we comprise four separate economic corridors, which are largely self-contained with limited interactions between them.

We have a major disconnect in our connectivity. Our four economic corridors are focused on north-south movements, along our north-south road and rail corridors such as the M6, M61, West Coast Main Line, and rail corridors to Liverpool and Manchester.

This is despite 70% of our population, more than one million people, living in the most densely populated east-west corridor between the Fylde Coast and Pennine Lancashire. These one million people effectively live and work in four different economic corridors. Despite apparently short journey times between places, the main urban centres still operate separately from each other in economic terms. Poor east-west transport connectivity is one of the primary causes of this disconnection. Although the M55 and M65 connect east-west through this corridor, rail links are particularly poor.

Poor quality, slow, unreliable transport links have the effect of shrinking labour markets and opportunities for people living in our area. This is especially true in our rural areas where the car is therefore a much more common mode of travel for commuting compared to our urban areas. Allied with the challenges of poor skills in many areas, this is a significant challenge for existing businesses, and acts as a barrier to business growth and in attracting new inward investors. Poor bus connections freeze-out many people from the labour market, whilst traffic congestion creates journey time reliability challenges during peak commuting periods.

Our economy is highly dependent on effective national and international connectivity. Our businesses rely on good road links for access to UK-based markets and supply chains, rail links to connect with customers, and access to international gateways. Manchester Airport is particularly important in providing connectivity to North America and Asia. Congestion and poor journey reliability on motorways and major 'A' roads creates additional cost pressures for businesses, and reliability issues on the rail network are a challenge in connecting to Manchester Airport and other cities across the North.

We have big ambitions to transform our economy over the next 20 years including supporting business growth, inward investment and transforming our towns and cities to attract new talent. However, we have a range of challenges in planning for this growth across Lancashire. For sites located in our town centres, we need to integrate transport infrastructure with quality place-making. In other locations, we must provide effective travel choices to maximise accessibility to labour markets and facilitate business-to-business connectivity.

In planning for housing, we must take a tailored approach. In some areas, such as Chorley and Fylde, we need to plan for stronger housing demand take a strategic approach to capacity planning. In areas of weaker housing demand, such as Pendle and Hyndburn, there will be a greater focus on placemaking and regeneration of existing communities.

6.3 Our health and wellbeing challenges

Our economic challenges are strongly inter-related with the health and wellbeing challenges faced in many parts of Lancashire. We have several health and wellbeing challenges including high levels of inequality, social exclusion, isolation, and poor health (both physical and mental) amongst many people. Our transport system is one of the root causes of these challenges.

We have shown that health problems are one of the major causes of our productivity gap, with many people excluded from the workforce, or facing problems with low pay, financial insecurity, and ill health. Poor health accounts for almost 17% of our gap in productivity with the rest of England. These problems start in early childhood for many children, continuing through the education system, and resulting in low skills and qualifications, constraining many people's potential. Poor-quality, damp, cold housing is a major problem, causing ill health amongst many communities.

There are major geographic variations in health. Our most severe health challenges are concentrated in our towns. Although transport options tend to be more comprehensive in our towns, car ownership is much lower, and people are much more dependent on walking and local bus services. Many people face widespread problems with transport services and accessibility, hampering their ability to access jobs, shops, and services. This includes long journey times, high travel costs (and very limited budgets due to low pay and dependence on benefits), and service reliability. Many people also face problems with anti-social behaviour, harassment and intimidation when using the transport system.

Over a quarter of our neighbourhoods are in the most deprived 10% in England for health. Our most deprived neighbourhoods are concentrated in the urban areas, and problems are most acute in Blackpool and Blackburn with Darwen. However, many deprivation datasets often mask high deprivation and poor health in rural areas.

Deprivation is strongly linked with incomes and therefore poverty. Lack of qualifications and skills is also a major problem: people with no or low workplace skills struggle to enter the workforce, or are stuck in low-paid jobs, which are frequently precarious.

Transport-related social exclusion (TRSE) is a major problem in many parts of Lancashire. The authorities with the highest TRSE in Lancashire are Blackpool, Hyndburn, and Blackburn with Darwen.

There is clear evidence that poor accessibility and transport choices are a root cause of the multiple social and health challenges faced in many of our communities, particularly the Fylde Coast, and many parts of Pennine Lancashire. This means that poor transport choices, including lack of public transport, forced car ownership, and poor active travel facilities, are directly impacting on people's life chances.

Most areas of Lancashire experience good air quality, notably the more rural areas. Many urban areas suffer worse air quality, although it is less of an issue in the coastal areas due to the prevailing winds. There are localised air quality challenges where emissions tend to be associated with congested and busy parts of the highway network. Emissions from road transport typically account for 30-50% of nitrous oxides emissions.

We also have significant problems with road safety and personal security in Lancashire. There are more collisions on our road network, per head of population, than comparable areas. We have problems on many of our A-roads, and our children are vulnerable, particularly in our larger urban areas where there is heavy traffic. The conditions on the road network mean that many people do not feel safe walking and cycling, which is a major barrier to encouraging more people to adopt active travel choices.

6.4 Our environmental challenges

We have a significant challenge to reduce carbon emissions in Lancashire. Transport emissions have stayed virtually static over the last two decades and need to fall significantly if we are to hit Net Zero by 2050.

Per capita emissions from all sources are significantly above the North West and English averages. However, this is in part due to high industrial emissions in particular districts. Since 2014 transport is the largest source of carbon emissions in Lancashire and has remained fairly constant. Transport-related emissions per capita in Lancashire are slightly lower than the UK average but higher than the North West average.

Transport carbon emissions across Lancashire differ significantly across our districts, due to travel patterns of our residents, employees, and visitors. The lowest per capita emissions are in Blackpool, Blackburn with Darwen, Pendle and Burnley, and the highest in Chorley and Lancaster.

However, the headline per capita figures include emissions from through traffic in each district, including travel to and from our visitor economy hotspots, and traffic to and from places beyond Lancashire.

Our decarbonisation pathway aims to achieve a 68% reduction by 2030 and 78% by 2035 (from a 1990 base). This means that the rate of decarbonisation must speed up to limit total cumulative emissions because there is a very large gap between future emissions under the 'business as usual' scenario and the pathway needed to achieve our targets. Delaying decarbonisation and acting later will mean that a higher rate of decarbonisation is needed.

Across the transport sector, this will mean comprehensive action to reduce the need to travel, enable shift towards active and shared travel, and accelerate uptake of ultra-low emissions vehicles. National action is needed to create the conditions for this change, including the forthcoming national bans on the sale of petrol and diesel cars and HGVs.

At a local level, we can reduce transport carbon emissions by increasing the share of journeys made by active modes, micromobility and public transport. We can also adopt policies that reduce the need to travel, for example bringing services closer to residents. A strong place-based strategy is needed to respond to the different needs of our diverse areas.

We will face multiple challenges in decarbonising transport in Lancashire. Resident-based emissions are lowest in our towns, because people can travel shorter distance to shops, services and jobs, and a wider range of travel options are available. We can build on these conditions to enable a further shift and reduction in emissions in our urban areas.

However, the emissions generated by residents of our rural areas are much higher, due to longer distances to travel to shops, services, and jobs. In these areas, it is likely that there will be a greater emphasis on supporting a shift to zero emissions vehicles, however, it will also be important to improve travel choices in these areas.

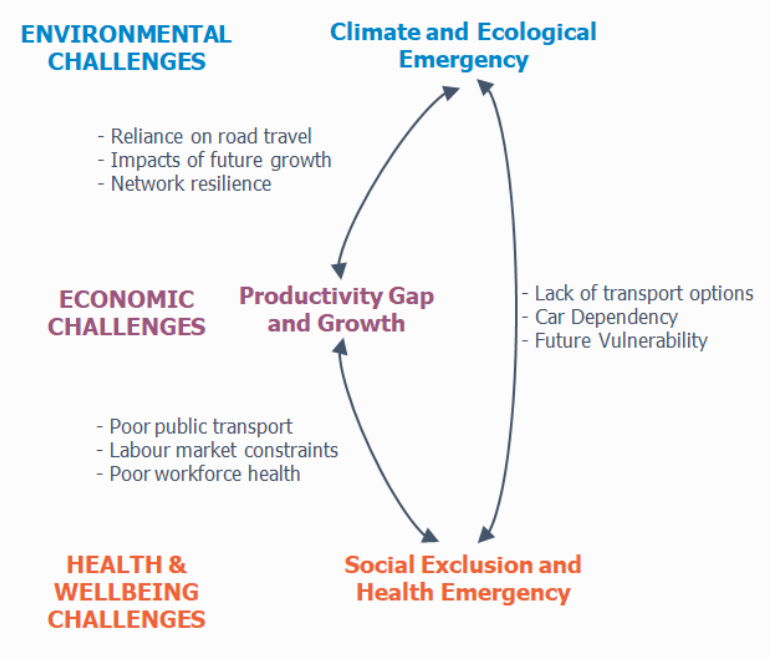
Furthermore, we must tackle the emissions generated by the large numbers of trips to Lancashire, particularly to places such as Blackpool, Morecambe, and our rural tourism hotspots. We will need to work with bodies promoting tourism in our area, notably Marketing Lancashire and Visit Blackpool, and the wider transport sector to promote alternatives to driving. We will also need to work with National Highways, Transport for the North, and adjacent local transport authorities to develop transport solutions that help address cross-boundary movements.

We face several wider environmental challenges in Lancashire. We will need to address the increase in particulate emissions resulting from brake and tyre wear. Noise is a particular challenge around our busiest roads, particularly motorways. Climate change is already happening, with extreme high temperatures, high winds, and intense rainfall, all of which are creating further pressures on the resilience of our transport system.

6.5 These challenges are interconnected

All of the above challenges are interconnected, with causes including high dependence on cars for travel within, to, from, and through Lancashire, poor public transport options in many areas, impacts of future development growth on the transport network, and potential resilience challenges resulting from a changing climate. Figure 6-1 summarises these interconnected challenges.

Figure 6-1: Our interconnected challenges call for an integrated approach



There are clear interactions between social exclusion and the productivity gap in our economy, resulting from poor transport connections that constrain our labour markets and hamper business growth. There are also strong linkages between the climate and ecological emergency and social exclusion, due to the problems caused by car dependency and lack of transport options for many people. The climate emergency will also have increasing impacts on the performance of our economy, as extreme weather events impact on the availability and reliability of transport networks.

In developing the new Joint Local Transport Plan (JLTP), through understanding the interactions between these challenges, we can develop policies that will support multiple policy objectives. Examples of this approach include:

- Through improving public transport, we can improve accessibility to help tackle social exclusion, improve business connectivity, and reduce car dependency, which will play a key role in reducing transport carbon emissions.
- By enabling more people to walk and cycle across Lancashire, we can help to get people more active, which will improve physical and mental health, help people re-enter the workforce, with a healthier workforce also helping to improve productivity across the economy.
- In tackling issues relating to the resilience of the transport network, we can proactively respond to the implications of a changing climate and more extreme weather, and support the connectivity needs of our future economy.

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