



**Open Report on behalf of Andy Gutherson, Executive Director - Place**

Report to:	<b>Environment and Economy Scrutiny Committee</b>
Date:	<b>24 May 2022</b>
Subject:	<b>Local Transport Plan V – Zero Carbon Target</b>

**Summary:**

This report sets out how transport is the largest source of carbon dioxide emissions in the Lincolnshire County Council area and compares emission levels with the regional and national picture.

The report provides details on how the new Local Transport Plan V will assist in meeting the Net Zero Carbon targets that the Council has set and the actions that the Local Transport Plan will introduce to reduce these transport related carbon dioxide emissions.

**Actions Required:**

The Environment and Economy Scrutiny Committee is asked to:

- (1) consider and comment on:
  - a. the work carried out to quantify the carbon dioxide emissions across the county and support the work that is underway through the Local Transport Plan V and the Green Masterplan to reduce these emissions;
  - b. proposed actions set out to help tackle carbon emissions;
- (2) agree to pass their views and any additional recommendations towards meeting Green Master Plan targets with the Executive Councillor for Economic Development, Environment and Planning and the Executive Councillor for Highways, Transport and IT, for their consideration.

## **1. Background**

### **Carbon Dioxide Emissions from Transport in Lincolnshire**

The UK government has set a national target to reach net zero carbon by 2050 as part of its response to the United Nations Paris Agreement on tackling climate change. The County Council has also adopted 2050 as its target date to reach a net zero carbon level.

Data provided by the Department for Business, Energy and Industrial Strategy (BEIS) shows that the transport sector is the largest source of carbon dioxide emissions for the whole economy across the Lincolnshire County Council area. In 2019 (the latest full year of available data) transport accounted for 32.7% of total carbon dioxide emissions in the county. The total amount of carbon dioxide emissions from the transport sector in Lincolnshire in 2019 was 1.445 million tonnes.

Figure One shows the carbon dioxide emissions for each sector of the economy for the period from 2005 to 2019.

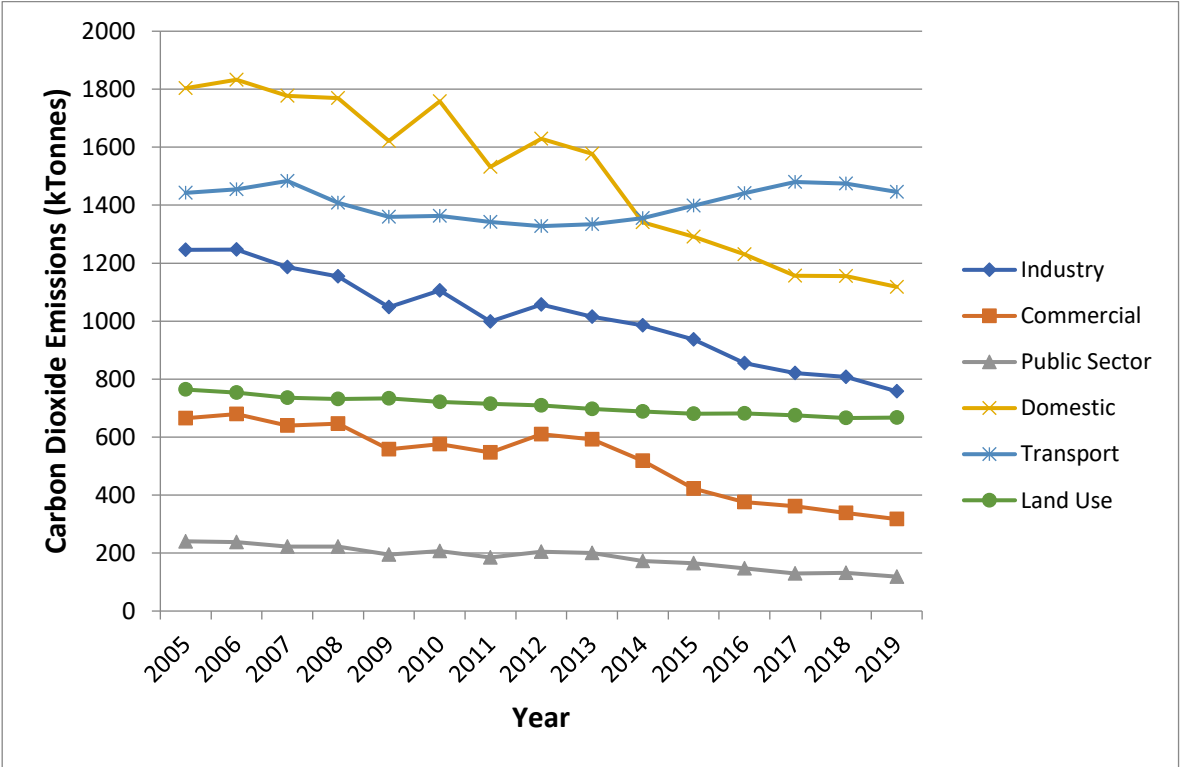


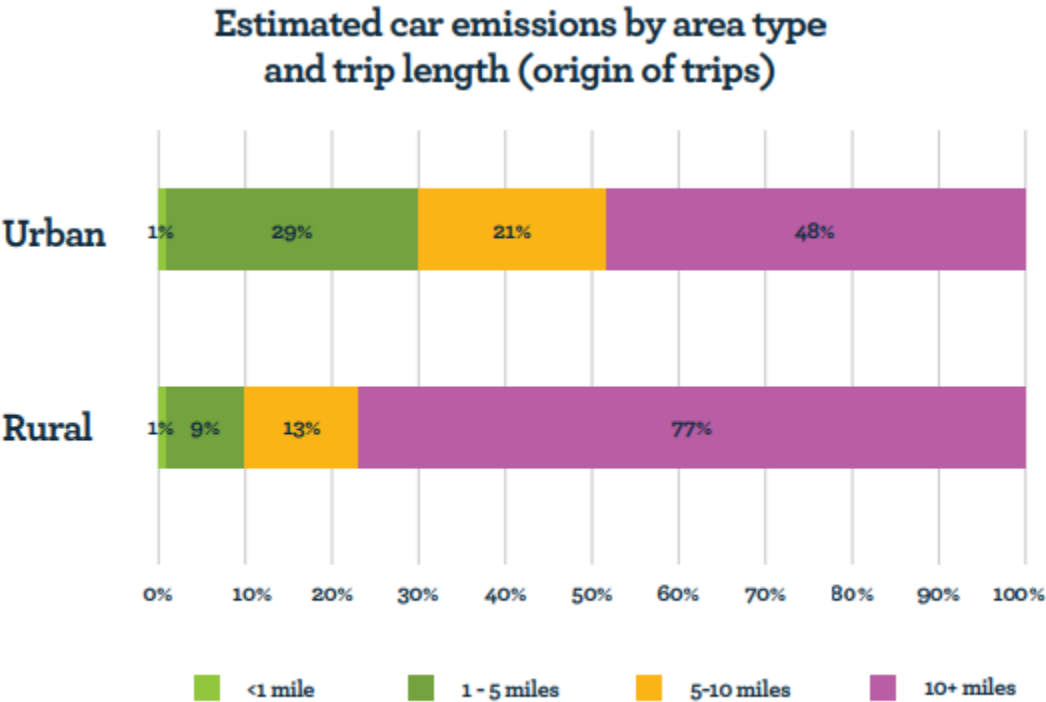
Figure One: Carbon Emissions in Lincolnshire by Sector – 2005 to 2019 (Source BEIS)

The emissions from the transport sector have remained largely static over the data period, at around 1.4 million tonnes per annum. Over the same period other sectors of the economy have begun to decarbonise. The falls in emissions from the other sectors are due to electricity grid decarbonising. The closure of coal fired power stations and the move to renewable electricity generation and gas, which has lower carbon emissions than coal, has significantly reduced emissions associated with electricity usage.

In the transport sector most of the fuel used is in the form of petrol and diesel and therefore there has not been the same level of decarbonisation seen in the electricity sector. Over the period from 2005 vehicle engines have become more efficient, however the size of cars has tended to increase, as larger vehicle types such as Sports Utility Vehicles have become much more popular. In addition, the population of Lincolnshire has increased since 2005 – rising from 677,000 in 2005 to 761,000 in 2019, resulting in an increase in road use and miles travelled in the county.

Another area that has impacted on transport emissions is van usage, which has increased by over 70% since 2000. This increase has been due to the increased demand for deliveries due to internet shopping.

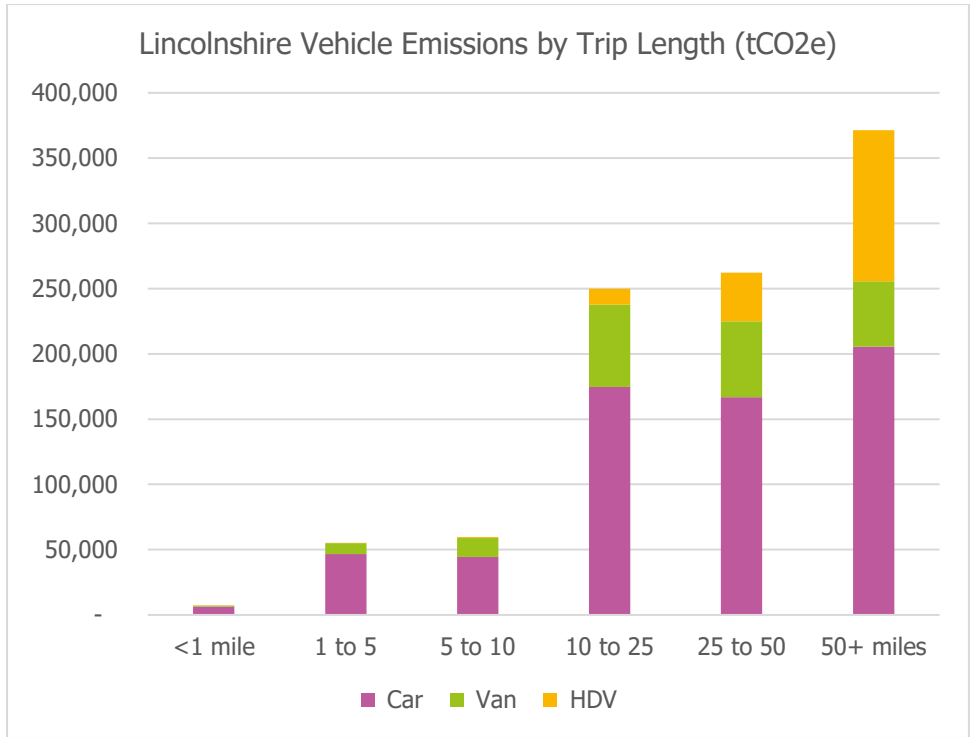
The rural nature of the county means that large numbers of residents must commute long distances to work by road vehicle, adding to the transport related carbon dioxide emissions in the county. There is a strong urban and rural divide in transport carbon dioxide emissions. For example, transport carbon dioxide emissions per person in the urban City of Lincoln Council area are 0.62 tonnes of carbon dioxide per person per annum. For the rural East Lindsey District Council area, the figure is 1.93 tonnes of carbon dioxide per person per annum.



Source: Midlands Connect Carbon Baseline Tool

**Figure Two: Midlands Connect Car Emission and Trip Length**

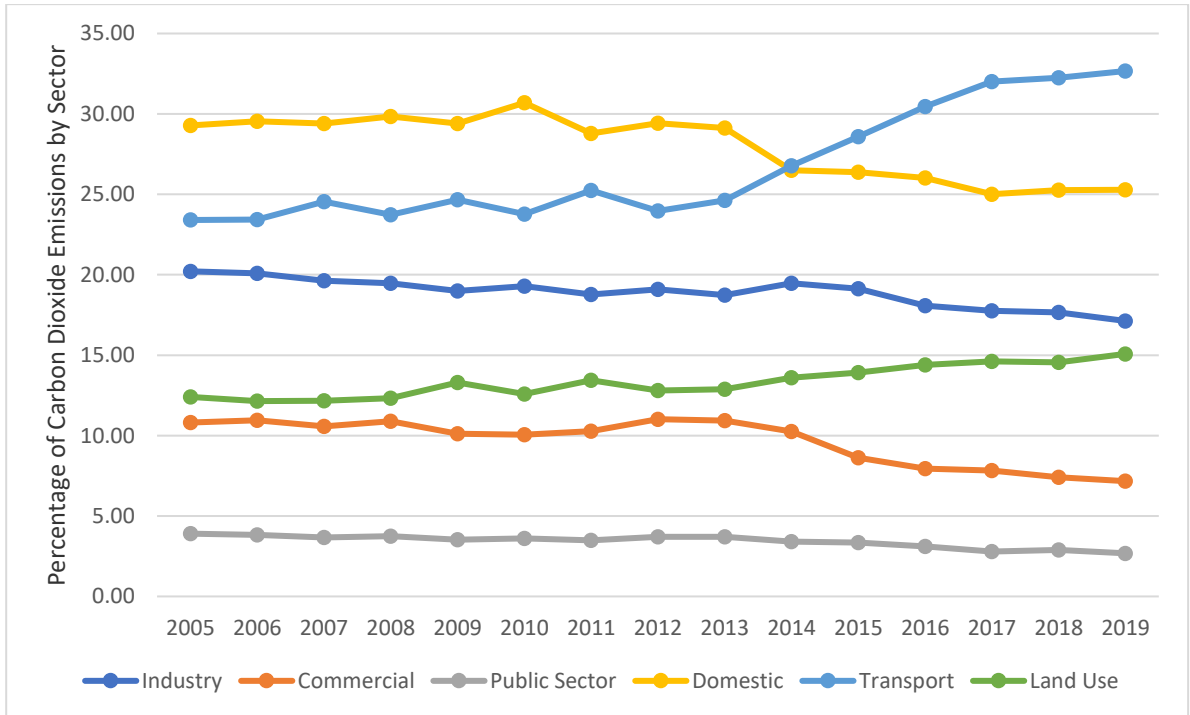
Research from Midlands Connect shows that rural drivers are much more likely to make car journeys of over ten miles and that these trips are responsible for over three quarters of their car related carbon dioxide emissions.



Source: Midlands Connect

**Figure Three: Carbon Dioxide Emissions by Trip Length**

Figure Three shows that journeys of over ten miles are responsible for the bulk of the transport related emissions in the county.



**Figure Four: Percentage Lincolnshire Carbon Dioxide Emissions by Sector**

Figure Four shows that the proportion of the county’s carbon dioxide emissions coming from transport has risen from around 23% of the total in 2005 to around 33% of total carbon dioxide emissions in 2019.

When compared to the national picture transport makes up a larger proportion of carbon dioxide emissions in Lincolnshire than nationally. Transport produced 27% of the UK’s total emissions in 2019. Of this, the majority (91%) came from road transport vehicles (111 million tonnes of Carbon Dioxide). The biggest contributors to this were cars and taxis, which made up 61% of the emissions from road transport (68 MtCO<sub>2</sub>e), followed by Heavy Goods Vehicles (HGVs) (18% of road transport emissions, 19.5 MtCO<sub>2</sub>e) and vans (17% of emissions, 19 MtCO<sub>2</sub>e).

## 2. Electric Vehicle Uptake and Charging Infrastructure in Lincolnshire

Sales of electric vehicles within Lincolnshire are behind the national level but have started to grow rapidly. At the end of 2020 0.44% of registered vehicles in Lincolnshire were classed as being Ultra Low Emission Vehicles (ULEVs) compared to a national level of 1.08%. This equated to 3,652 electric vehicles being registered in the county at the end of 2020.

In 2021 there were 190,727 registrations of battery electric vehicles (BEVs) across the UK, (11.6% of all new car sales), while plug-in hybrid electric vehicle (PHEVs) made up 7% or 114,554 cars. March 2022 saw the highest volume of BEV registrations ever recorded in a single month, with 39,315 new zero emission cars – an increase of 78.7% on the previous year.

Local Authority	Total public charging devices	Total public rapid charging devices	Charging devices per 100,000 population
Boston	48	7	67.8
East Lindsey	54	6	38
Lincoln	62	13	62
North Kesteven	15	1	12.7
South Holland	12	0	12.5
South Kesteven	45	26	31.4
West Lindsey	21	10	21.8
<b>Lincolnshire Total</b>	<b>257</b>	<b>63</b>	<b>33.5</b>

Source: Department for Transport and Zap Map

**Figure Five: Electric Vehicle Charging Points by Lincolnshire District - April 2022**

Boston has the highest concentration of publicly available electric vehicle charging points in the County. With the lowest levels of public charge points in South Holland and North Kesteven.

For England the figure is 45.8 public charging points per 100,000 population and the East Midlands figure is 33.4 charge points per 100,000 population.

The Council commissioned a report on the required electric vehicle infrastructure for the county from WSP. This report is part of the supporting documents for the new Local Transport Plan V and makes recommendations on the number of public charging points that will be required - 3,394 electric vehicle charging points by 2030 across Greater Lincolnshire

Road freight is likely to require the use of internal combustion engines for a considerable time. The Government's Zero Carbon Roadmap for Transport indicates that the sale of diesel HGVs will only be phased out from 2040. In order to support lower carbon options in the freight sector Business Lincolnshire has been supporting a company that is looking to open biodiesel filling stations for HGVs in Grantham and Spalding.

### **3. National Policy Responses to Decarbonising Transport**

In 2021 the Department for Transport published their plans for getting to a net zero carbon transport system in their report "Decarbonising Transport - A Better, Greener Britain". The key policies in the plan that will assist in reducing carbon emissions from transport in Lincolnshire are:

- New diesel and petrol cars and vans will no longer be sold from 2030, and that all new cars and vans must be fully zero emission at the tailpipe from 2035 (effectively a ban on the sale of new hybrid cars from 2035)
- A consultation on ending the sale of all non-zero emission HGVs from 2040, with lighter HGVs from 2035.
- A consultation on setting phase-out dates for all non-zero emission road vehicles, with 2040 as a backstop
- Organisations representing more than 95% of the UK's bus industry have pledged to only invest in low-emission vehicles from 2025

The Decarbonising Transport report also includes a section on looking at alternative fuels for vehicles, such as hydrogen and biofuels. Hydrogen has a high potential for Lincolnshire due to main UK production facilities being located on the South Humber Bank. There is a strong potential to produce biofuels from agricultural waste streams.

The government consulted on a new Low Carbon Fuels Strategy in early 2022 and is expected to publish full details on their proposals later this year. The new Strategy is expected to include incentives for the production of hydrogen.

### **4. Local Transport Plan V - Actions to Reduce Carbon Emissions in Lincolnshire**

Local Transport Plan V was approved and adopted by Full Council on 18<sup>th</sup> February 2022. Members will recall that it includes a number of specific objectives and policies aimed at addressing the issue of carbon reduction throughout the transport network. Additionally, the Department for Transport (DfT) have highlighted a broadening role for LTPs in recent

policy announcements, with greater emphasis being placed on the document as part of the Decarbonisation of Transport and Bus Service Improvement Plans. The direction of travel for LTPs is that they are to become the cornerstone of local transport policy and are likely to form the basis and evidence for future government investment in local highways and transport. Decarbonising transport is a significant policy objective set out by central government that needs to be reflected in LTPs.

LTP V has been built upon the foundations of existing Council policy including the Corporate Plan and Green Master Plan as well as taking account of the wider spatial planning requirements laid out in the numerous Local Development Plans across Lincolnshire.

As a result of this broad policy base, 6 key and interwoven themes were identified including:

1. Supporting Economic Growth;
2. Future Ready Green Transport (Climate Change);
3. Promoting Thriving Environments;
4. Supporting Safety, Security and a Healthy Lifestyle;
5. Promoting High Aspirations; and
6. Improving the Quality of Life.

Decarbonisation is in many ways central to all these themes and provides an excellent opportunity to weave this crucial policy objective throughout all future transport and highway investment.

Following adoption of LTP V three workstreams and action plans that support decarbonisation have been prioritised for development and are now ready to move forward, this paper provides an opportunity for them to be scrutinised. It should be noted that many other aspects of LTP V are taking place to support decarbonisation, but the focus of this paper is on the three specific workstreams below.

#### Electric Vehicle Charging Infrastructure

LTP V had a number of supporting strategies, including one on Electric Vehicles (EV) and alternative fuels. The pace of change in this area has been dramatic and even in the few months since LTP adoption much has moved forwards.

The role of EVs is rapidly changing not just in the UK but also across Lincolnshire. The growth in sales of new EVs is rising at an ever-increasing rate. In 2021, 190,000 battery-powered electric vehicles (BEVs) were sold in the UK. This was more than the five previous years combined, and nearly 1 in 8 of all new cars sold. It is predicated by the end of 2024 this could be as high as 1 in 2.

Number of new plug-in registrations by month

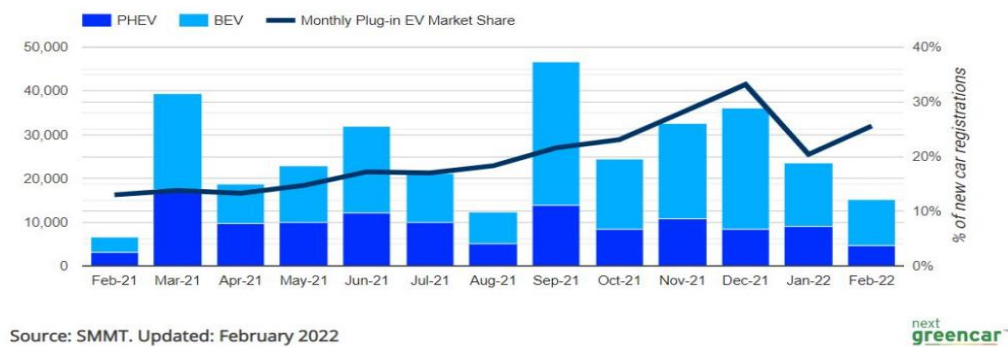


Figure Six: Number of new plug-in registrations by month

The DfT launched its new EV infrastructure Strategy on 25 March 2022 with the stated ambition of delivering 300,000 to 500,000 public chargers by 2030 aimed at supporting two key priorities: to enable long distance journeys and to support those without off-street parking.

It also contains 6 goals:

1. Everyone can find and access reliable public chargepoints wherever they live – be that city centre or rural village, urban flat or suburban house, in the north, south, east, or west of the country. Charging opportunities will not be limited by income or location.
2. Effortless on and off-street charging for private and commercial drivers is the norm – easy overnight charging is, and will remain, the default for those with driveways. But charging should be just as convenient and stress-free for those who currently park on street. This must extend beyond privately owned cars; those who drive vans and commercial vehicles must also have access to chargepoints that meet their needs.
3. Fairly priced and inclusively designed public charging is open to all – there will be vibrant competition across the charging sector with choice in provider and type of charging, and open data on pricing and availability. Streets will not be cluttered by trailing charging cables.
4. Market-led rollout for the majority of chargepoints delivers a thriving charging sector – the sector is booming now with smart UK SMEs driving the pace of change and forcing big corporates to adapt. By 2030, this will represent a huge global opportunity for UK Plc. A thriving competitive market will help to drive down costs for consumers.
5. Infrastructure is seamlessly integrated into a smart energy system – to minimise the impact of the EV transition on the grid (both distribution and generation), but also to offer the lowest cost tariffs to consumers and to capitalise on the exciting opportunities of ‘Vehicle-to-Grid’.
6. Continued innovation to meet drivers’ needs lowers cost and increases convenience – because although the fundamentals of delivering electricity to charge batteries will not change, the charging landscape of 2030 will be very different. We are already seeing startling innovation in both technology (speed, smartness and delivery method) and business models (from peer-to-peer charging to portable tariffs).



The national strategy acknowledges there are challenges, and it is fair to say we would recognise some of this at the local level:

- The pace of rollout is too slow;
- Too often, public charging lets people down (by that they mean publicly accessible rather than publicly funded);
- The business case for commercial deployment can be challenging;
- Connecting new chargepoints to the electricity system can be slow and expensive; and,
- We need more local engagement, leadership, and planning.

To help overcome this government have announced a new funding stream known as Local Electric Vehicle Infrastructure (LEVI) fund. Working with Midlands Connect and 4 other local authorities, Lincolnshire County Council are leading a bid for the pilot part of this funding stream, it should be noted this fund is for on-street chargers in mainly residential locations. The details of this bid are currently being worked up but if successful the first set of on-street chargers could be making an appearance before the end of the year. Crucial to this pilot will be site selection and work on identifying the most suitable locations is starting with criteria including identified demand from residents, suitable power availability, propensity of future uptake of EV and public acceptance. The Executive Member for Transport and Highways is being briefed weekly on the bid's development.

#### Improving Access to Rail Stations

Encouraging more passengers to use public transport is a key plank in helping reduce the carbon footprint of transport. Rail in particular is ideally suited for longer distance trips and regular journeys. Lincolnshire is unfortunately not blessed with an intensive rail network but most of our key urban areas do have stations and improving barriers to accessing them is one proven way of increasing rail usage and passenger flows, this in turn supports business cases for further improvements and so creates a virtuous circle.

To that end as part of a first tranche of work to test the methodology, 5 stations across Lincolnshire have had accessibility improvement plans developed for them, these include:

- Grantham
- Skegness
- Market Rasen
- Gainsborough Lea Road and
- Ancaster

These plans will be placed on the appropriate Local Transport Board agendas for discussion and review before building them into the local area transport strategies. The full list of reports is attached at Appendices A- E.

#### Freight

The decarbonisation of freight both on road and by rail is a subject that is taxing the logistics and freight industry. For the most part the role that LCC can play is limited as the industry is market driven and privately controlled but there are areas of support that the public sector can offer to help the industry shift towards a less carbon intensive future. This area

of work is the least developed of the LTP V workstreams and additional work is currently ongoing, but some suggested approaches are included for consideration and comment.

Potential Action	Description
Establish Key Road Freight Network for Lincolnshire	Development of a Road Freight Network for Lincolnshire, identifying preferred routes. This will help inform policy interventions and dialogue with the freight sector when processing complaints from the general public and focus freight onto the most efficient and appropriate routes.
Intelligent Loading Bays in Lincoln, Stamford, Boston or Spalding	Intelligent loading bays allow drivers to book kerbside space ensuring there is somewhere to load/unload on arrival, reducing unnecessary road miles, reducing emissions and freight vehicle parking in unsuitable locations.
Consolidation Centre(s)	A consolidation centre allows multiple loads to be dropped at a single (often out of town) location for onward movement by a single vehicle, potentially reducing road miles with associated social and environmental benefits.
Fund Cycle Logistics operation	Cycle logistics provides emission free freight and helps reduce congestion. It can be effective at 'last mile' deliveries and cycle cargo bikes. They may need start-up capital or revenue support to establish their operation.
Develop Corridor Partnerships	Corridor Partnerships help manage a 'whole route' approach ensuring journeys are considered from a strategic viewpoint including carbon reduction
Support freight mode shift	Encourage and support the transition of freight from road to rail and water.

## 5. Conclusion

Transport is the largest source of carbon dioxide emissions in Lincolnshire making up around one third of the total emissions. In addition, transport emissions have remained largely constant over the last twenty years, while carbon dioxide emissions from other sectors have been falling.

National policies, such as restrictions on the sale of petrol and diesel cars, will begin to reduce carbon dioxide emissions from transport. However, it is vital that the correct infrastructure is in place to allow the take up of electric and alternatively powered vehicles.

The Local Transport Plan V sets out a framework and action plan for these carbon dioxide emission reductions. The new Local Electric Vehicle Infrastructure Fund presents an opportunity to significantly increase the provision of public EV charging points in the county.

By working with other local authorities from across the Midlands the County Council can be part of a large-scale scheme which will be an attractive investment for national electric vehicle charging point providers.

The decarbonisation of freight is another significant challenge for Lincolnshire. Local Transport Plan V sets out a framework of interventions that can begin to reduce the carbon impact of the sector. The national policies on alternative low carbon fuels will contribute to this area of work.

The proposals and actions set out in this paper are just part of a much wider suite of measures that are likely to be required, if carbon emissions are to be reduced in a timely fashion. Other policy areas such as behaviour change, greater modal shift including more use of active travel as well as better planning and design of communities will all need to play a role. However, the debate and discussion on these aspects will need to be part of another scrutiny paper.

## 6. Consultation

### a) Risks and Impact Analysis

Not applicable.

## 7. Appendices

These are listed below and attached at the back of the report	
Appendix A	Grantham (Lincolnshire- Accessible Rail Stations)
Appendix B	Skegness (Lincolnshire- Accessible Rail Stations)
Appendix C	Ancaster (Lincolnshire- Accessible Rail Stations)
Appendix D	Gainsborough Lea Road (Lincolnshire- Accessible Rail Stations)
Appendix E	Market Rasen (Lincolnshire- Accessible Rail Stations)

## 8. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

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