Report
May 2019

The Cambridgeshire and Peterborough Local Transport Plan: Evidence Base

Cambridgeshire and Peterborough Combined Authority
Our ref: 23217301

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1 Introduction

Overview

1.1 The Cambridgeshire and Peterborough Devolution Deal gives the Cambridgeshire and Peterborough Combined Authority greater local control over transport, skills, business support and other areas.

1.2 In light of the Devolution Deal, the Combined Authority is responsible for developing a statutory Local Transport Plan (LTP) for the region. This document is the Evidence Base that supports and informs the Local Transport Plan. It examines the current and future socio-economic, environmental, and transport conditions in the region, aiming to identify the key challenges the Local Transport Plan should seek to tackle and the opportunities, particularly with regard to housing delivery, that transport can help realise.

1.3 The Combined Authority has set an ambitious growth target of doubling the regions' economic output measured in terms of Gross Value Added over the next 25 years. It will also target deprivation and lack of opportunity – ensuring that every resident can commute easily to a good job – and ensure that future growth is environmentally sustainable.

1.4 Such a task will not be easy. Transport will have a key role to play in achieving these aspirations. The Devolution Deal notes that:

> "Cambridgeshire and Peterborough recognise that for the Combined Authority to meet and exceed its ambitious targets for growth and wealth creation it needs to connect people and places. Better connecting the whole of Cambridgeshire and Peterborough has the potential to reduce city pressures and give the Cambridge hub access to wider areas of housing growth." (Cambridgeshire and Peterborough Devolution Deal, HMG 2017)

1.5 This document is the first step towards exploring how these connections can best be developed. It draws on the Cambridgeshire and Peterborough Independent Economic Review (CPIER) and the Cambridge Futures 3 research programme, the Non-Statutory Spatial Framework Phase 1 and has assessed the Local Plans of the Local Authorities within Cambridgeshire and Peterborough to provide the context for future development and growth across the region. Using this information, it explains what transport specific issues and opportunities there are across region. It develops an analysis of each specific issue, before explaining how it should be approached by the Local Transport Plan. It is necessarily high-level, examining the region as a whole.

1.6 Based on the evidence, we have identified a series of objectives which will guide the development of the Local Transport Plan. These objectives have been informed by, and feed back into, the wider goals of the Combined Authority. They capture the aspirations of the Combined Authority as to how transport will best support the wider economy, social inclusion and environmental sustainability. These objectives are to:

- Support new housing and development to accommodate a growing population and workforce, and address housing affordability issues
- Connect all new and existing communities sustainably so residents can easily access a good job within 30 minutes, spreading the region's prosperity
- Ensure all of our region's businesses and tourist attractions are connected sustainably to our main transport hubs, ports and airports
- Build a transport network that is resilient and adaptive to human and environmental disruption, improving journey time reliability
- Embed a safe systems approach into all planning and transport operations to achieve Vision Zero – zero fatalities or serious injuries
- Promote social inclusion through the provision of a sustainable transport network that is affordable and accessible for all
- Provide 'healthy streets' and high-quality public realm that puts people first and promotes active lifestyles
- Ensure transport initiatives improve air quality across the region to exceed good practice standards
- Deliver a transport network that protects and enhances our natural, historic and built environments
- Reduce emissions to as close to zero as possible to minimise the impact of transport and travel on climate change

1.7 The Local Transport Plan, informed by this Evidence Base, will develop strategies, policies and schemes to help achieve these objectives. Doing so will ensure that transport funding is most effectively targeted to achieve our goals and ensure that the regions' transport network effectively supports the Combined Authority in making the region more prosperous and liveable for all its residents.

2 Cambridgeshire and Peterborough Today

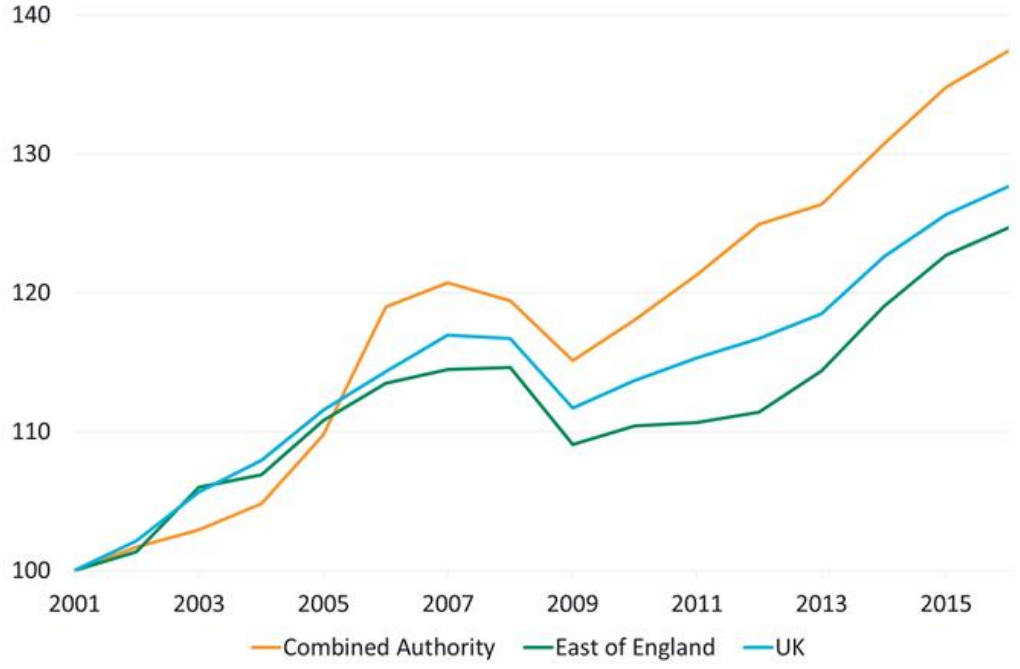
Economy

2.1 The Cambridgeshire and Peterborough economy is one of the most productive in the country. It is home to a dynamic, skilled workforce, and dense clusters of diverse and innovative businesses. But there remain significant opportunities for growth, with some areas yet to reach their full economic potential.

2.2 Overall, the region has performed well in recent years, with economic output consistently growing faster than both the East of England and the wider UK economy, as shown in Figure 2.1. Cambridgeshire and Peterborough's economy supports almost half a million jobs and produced economic output worth £24 billion in 2016.

2.3 However, performance across the six districts in the region has been variable. National statistics indicate that growth in economic output per head (a measure of productivity) between 2001 and 2016 was 47% above the UK average for Cambridge, 7% for South Cambridgeshire and 3% for Peterborough– but in Huntingdonshire, Fenland and East Cambridgeshire fell behind the UK average.

Figure 2.1: Real Gross Value Added (2001 = 100)



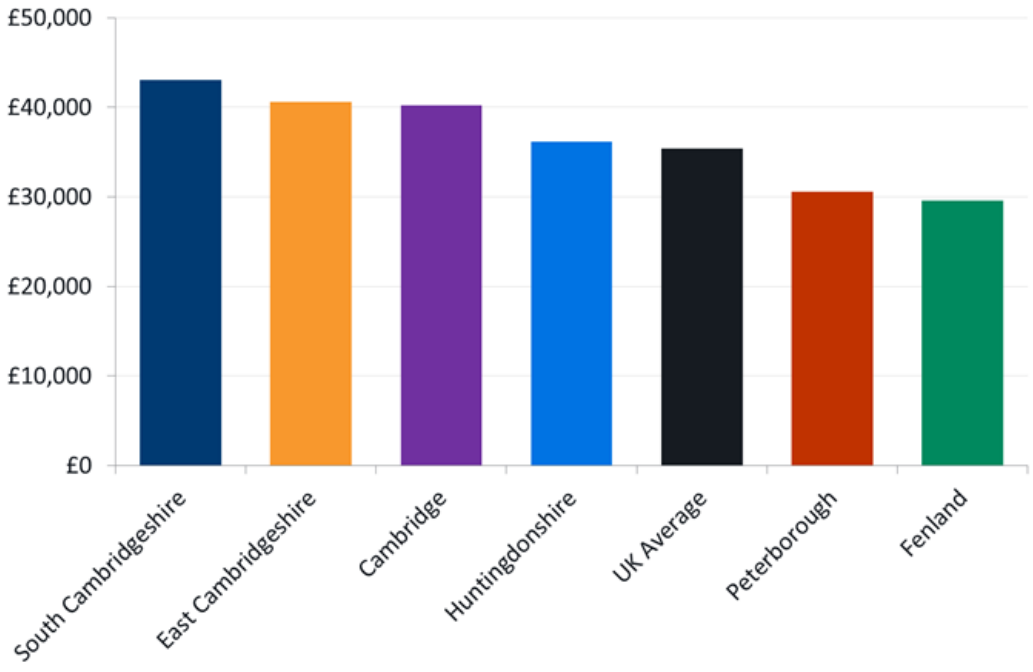
Source: Regional Accounts, Office for National Statistics

2.4 The Cambridgeshire and Peterborough Independent Economic Review (CPIER) noted how the region, rather than a single, unified economy, is in practice three interdependent and quite different ones: Greater Cambridge, Greater Peterborough, and the Fens.

2.5 The 'Greater Cambridge' area (including Cambridge, South Cambridgeshire and parts of Huntingdonshire and East Cambridgeshire) is broadly prosperous, with large numbers of international businesses, many jobs in 'knowledge intensive' sectors, high skill levels, and wages. To the north around Peterborough there is a considerable quantity of industry and potential, but deprivation is greater, and many residents feel isolated from the economic success of the 'Greater Cambridge' area. The agricultural and market towns that make up the third area, 'the Fens', have similar characteristics, although with a more rural, agricultural economy, and typically lower wages.

2.6 These different characteristics are reflected in the skill levels, wages and economic opportunities of residents in each of the six local authorities that make up Cambridgeshire and Peterborough. Figure 2.2 shows the variation in incomes across the Combined Authority: an average worker in South Cambridgeshire can expect to earn more than £13,000 more per year - or 45% more - than an average worker in Fenland.

Figure 2.2: Mean Annual Gross Pay (2017)



Source: Annual Survey of Hours and Earnings, Office for National Statistics

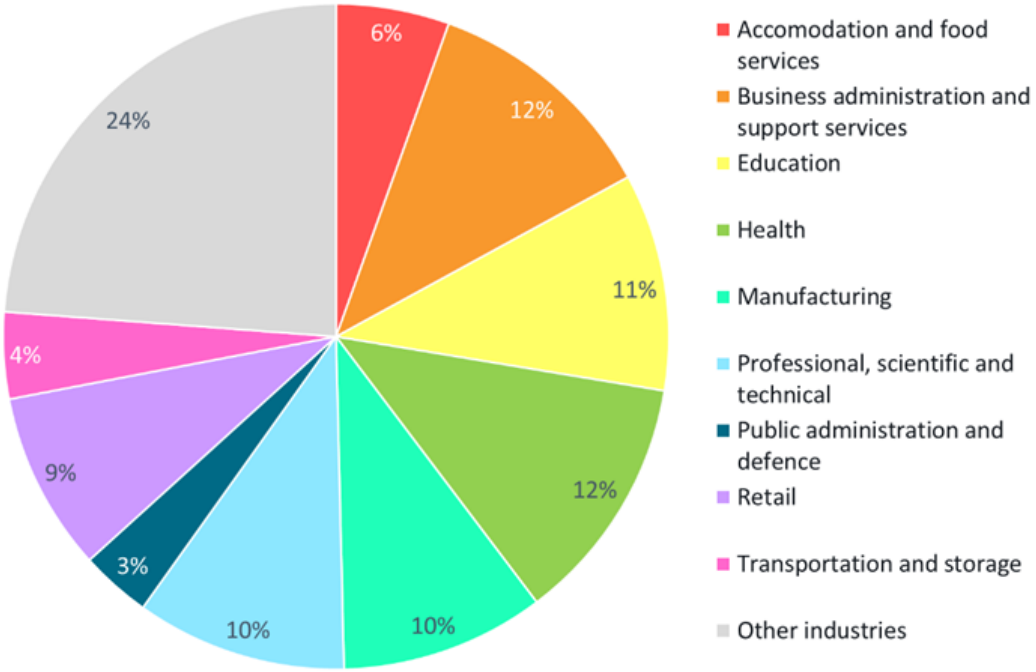
Implications for the Local Transport Plan

The Local Transport Plan should ensure that the regions' transport network best supports Cambridgeshire and Peterborough's productive economy. It should help facilitate growth in the expanding cities of Cambridge and Peterborough, while better strengthening economic linkages across the Combined Authority to allow the benefits of growth to be shared by all.

Industrial sectors

2.7 The region is host to a number of different businesses providing jobs across a diverse range of industrial sectors, as shown by Figure 2.3.

Figure 2.3: Employment by industrial sector (2016)



Source: Business Register and Employment Survey, Office for National Statistics

2.8 Behind the headline sectors, each of the districts supports a different mix of industrial specialisms, creating a diverse business environment. This diversity is illustrated by Figure 2.4, which highlights the most dominant industrial sector at a local level by employment.

2.9 The rural nature of Fenland and Huntingdonshire is reflected in high concentrations of production-based companies, particularly in agriculture. Although East Cambridgeshire is rural, the arts, entertainment and recreation, and transport service industries are highly concentrated in the area. In Peterborough, there are large numbers of jobs in business administration and support, as well as the motor trade.

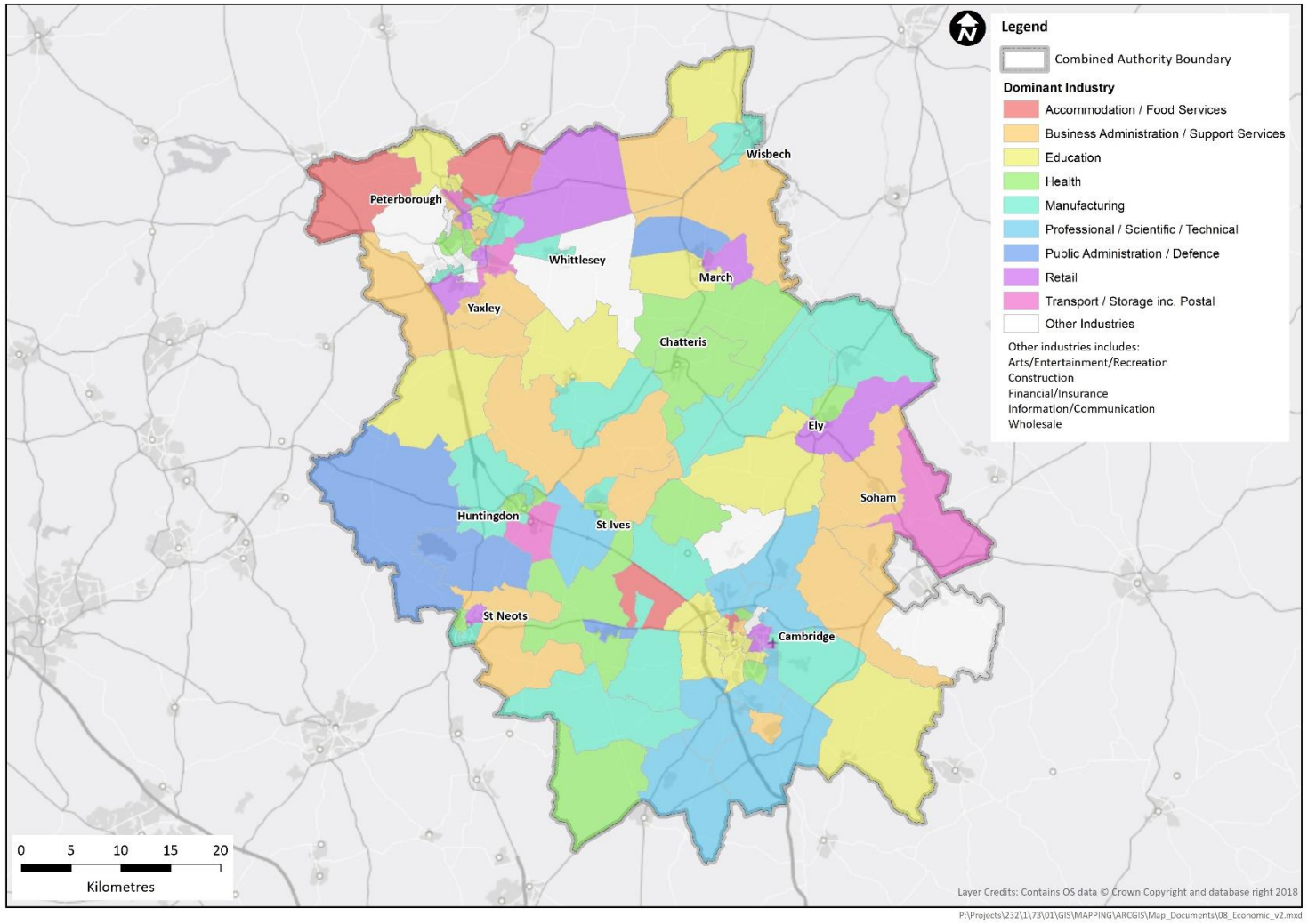
2.10 With two universities, it is unsurprising that education (and associated academic activities) is the largest employment sector in Cambridge. Moreover, the proliferation of firms in knowledge-based industries located on the periphery of Cambridge city centre means that professional, scientific and technical activities are the most prominent sector in South Cambridgeshire.

Cambridgeshire and Peterborough's 'knowledge economy'

2.11 The high-skill, high-value and knowledge-intensive jobs associated with the 'Cambridge Phenomenon' are key to the region's success. The area has produced some of the UK's most successful technology and life sciences businesses, and invaluable advancements such as the invention of Bluetooth and the Smart Meter.

2.12 Peterborough has a long history as a centre for advanced, high-end engineering. Firms such as Caterpillar Perkins, Dresser-Rand and Redring Xpelair have major centres in the city

Figure 2.4: Key employment locations and industrial sectors



Source: Business Register and Employment Survey, Office for National Statistics

2.13 These industries not only generate high incomes and wages, but directly support a broader range of industries in the rest of the region through their supply chain. For example, business administration and transport services are essential for the day-to-day running of technological firms. Continued growth within the Cambridgeshire and Peterborough 'knowledge economy' will both drive growth within the main cities of Cambridge and Peterborough, and boost demand for goods and services supplied by other businesses across the region.

Clusters

2.14 Underpinning the success of the region's knowledge-intensive businesses is the role of clustering – or 'agglomeration'. Knowledge-intensive firms benefit from being located close to one another, both physically and through good transport connectivity, as it facilitates greater collaboration and competition between firms. Greater proximity allows firms to benefit from best practices, access to deeper labour markets, and reduce costs by sharing resources. Customers also have access to a wider range of businesses to buy from, driving up competition and encouraging them to offer better value for money.

2.15 Business clustering is most prominent in the Greater Cambridge economy. Within South Cambridgeshire, the concentration of professional, scientific and technical activities is approximately two and a half times greater than the English average. 1,000 technology and biotechnology companies (1,400 when providers of services and support organisations are included) are located in the cluster, with 61 biotechnology firms in Cambridge alone[1]. Firms are often clustered in specific city districts or business parks: the Cambridge Science Park, for example, has a specific specialism in IT and technology firms, whilst the Cambridge Biomedical Campus has specialisms in healthcare, life science and bio-tech.

Implications for the Local Transport Plan

The Local Transport Plan should seek to support the co-location (or clustering) of businesses, and improve connectivity between firms, in order to support the future development of 'clusters'. Doing so has the potential to unlock economic and productivity growth, and attract more of the dynamic, innovative firms on which the Cambridgeshire and Peterborough economy relies.

Innovation

2.16 Innovation – creating and developing new products, technologies and ideas – is particularly important to the region's success. Businesses across the Cambridgeshire and Peterborough economy rely on a specialised and skilled workforce to do so. Cambridgeshire and Peterborough have amongst the highest numbers of new business start-ups per person in the country. For example, around the City of Cambridge in 2015 there were 341 patent applications per 100,000 of the population, the highest per capita rate for any UK city, compared to the national average of 18. Peterborough is a hub for high-end engineering, and the Fenlands are the home of several large 'agri-tech' firms. This indicates that the region provides an attractive environment in which enterprises can develop and innovative ideas flourish.

[1] Source: **Cambridgeshire and Peterborough Independent Economic Review** (Cambridgeshire and Peterborough Independent Economic Commission, 2018)

2.17 ‘Innovating’ firms rely heavily on access to people with the ‘right’ skills for available jobs. Cambridgeshire and Peterborough Independent Economic Review noted that 44.6% of local businesses stated, “the quality and availability of the local labour force was either very important or critically important”. Connecting workers to the ‘right’ jobs, where their skills can be most effectively and productively utilised is very important for encouraging innovation.

Implications for the Local Transport Plan

Wider connectivity between employment sites and housing areas should provide individuals better access to a range of jobs. In turn, this should allow them to better find jobs which fit their skill-sets, encouraging firms to be more productive and innovative.

Demographics

Age Profile

2.18 The Cambridgeshire and Peterborough region has a population of nearly 850,000, with 37% living in the urban settlements of Cambridge and Peterborough, 43% living in market towns such as Huntingdon and Ely, and 20% living in rural settlements and villages.

2.19 The age distribution of the region reflects the national average. Cambridge and Peterborough have a younger population, with 26% of the Cambridge population aged 20 to 29. Due to the large student population this is considerably higher than the regional (and national) average of 13%. The proportion of children and teenagers in Peterborough is higher than the rest of the region. The rural districts of Fenland, East Cambridgeshire and Huntingdonshire have an older population. Fenland has the most elderly residents, with 29% of its population aged 60+ compared to the regional and national average of 23%.

Implications for the Local Transport Plan

Different areas (urban, semi-urban and rural) have different transport needs, in particular the extent to which individuals are reliant on private car. Different age groups will also have different requirements of the transport network. For example, both young people – and the elderly – are likely to be more reliant on public transport for their trip making. Ensuring a transport network that is accessible for all is hence a key priority.

Education and Skills

2.20 Cambridgeshire schools perform well in general, with 8 percentage points more pupils achieving a 9-4 pass (equivalent to A* to C) in their English and Maths GCSEs than the England average. Peterborough schools perform less well, at 4 percentage points below the England average (currently 58.5%).[2]

2.21 Residents in the Combined Authority region are more skilled than the rest of the UK, with approximately 30% of the population holding Level 4 qualifications and above, compared to the England average of 27%. Most of these residents are located in Cambridge and South Cambridgeshire, where 47% and 40% of the population respectively hold Level 4 qualifications and above. Residents in Fenland are the least qualified, with 31% of the population holding no qualifications.[3]

Implications for the Local Transport Plan

The LTP must ensure that residents across the region have access to educational opportunities. For younger people, less likely to have access to a private car, the provision of public transport options will be particularly important. Ensuring that the individuals have access to jobs for which they are appropriately qualified will allow wider and more effective contribution to the local economy.

[2] Source: **GCSE and equivalent results** (Department for Education, 2017)

[3] Source: **Highest level of qualification by age** (Office for National Statistics, 2011)

Ethnicity

2.22 The cities of Cambridge and Peterborough have diverse communities, with a high percentage of the population from Black, Asian and Minority Ethnic (BAME) groups compared to the England average. People from Black, Asian and Minority Ethnic groups can have different travel experiences and patterns compared to national travel trends – nationally, for example, people from Black, Asian and Minority Ethnic groups are:

- less likely to have access to a private car[4];
- likely to have lower than average household incomes and the affordability of transport and travel can be a greater barrier to social inclusion
- experience of racism and concerns for personal safety; and
- experience issues with overly complex information provision on public transport for residents who are not fluent in English.

Implications for the Local Transport Plan

As individual schemes come forward it is critical that consideration is given to how they will impact upon equality. Schemes must be subjected to an Equalities Impact assessment, in order to ensure that this is carried out in a structured and rigorous fashion.

Disability

2.23 The transport needs of people with more limited mobility need to be considered to ensure that all residents are included and have access to key services and opportunities within communities. More than twenty percent of Fenland residents, for example, are limited in their day-to-day activities, which is three percent above the England average.[5]

2.24 Residents who are limited in their mobility will be less/unable to access certain modes of transport, such as certain forms of 'active' travel. It is critical that as schemes are put forward for the Local Transport Plan, and the relative balance of 'modes' which make up our transport network changes, that the implications this may have for disabled residents are considered.

Implications for the Local Transport Plan

Ensuring that the transport network is accessible for all is critical for ensuring social inclusion and equal opportunities. Good public transport accessibility, together with alternatives such as community transport services, are important in meeting these goals.

Unemployment and deprivation

2.25 There is significant variation in the level of unemployment and deprivation across the region. While the Cambridgeshire labour market performs well, with an unemployment rate 1.5 percentage points below the UK average, Peterborough has higher levels of unemployment, at 0.6 percentage points above the UK average.[6]

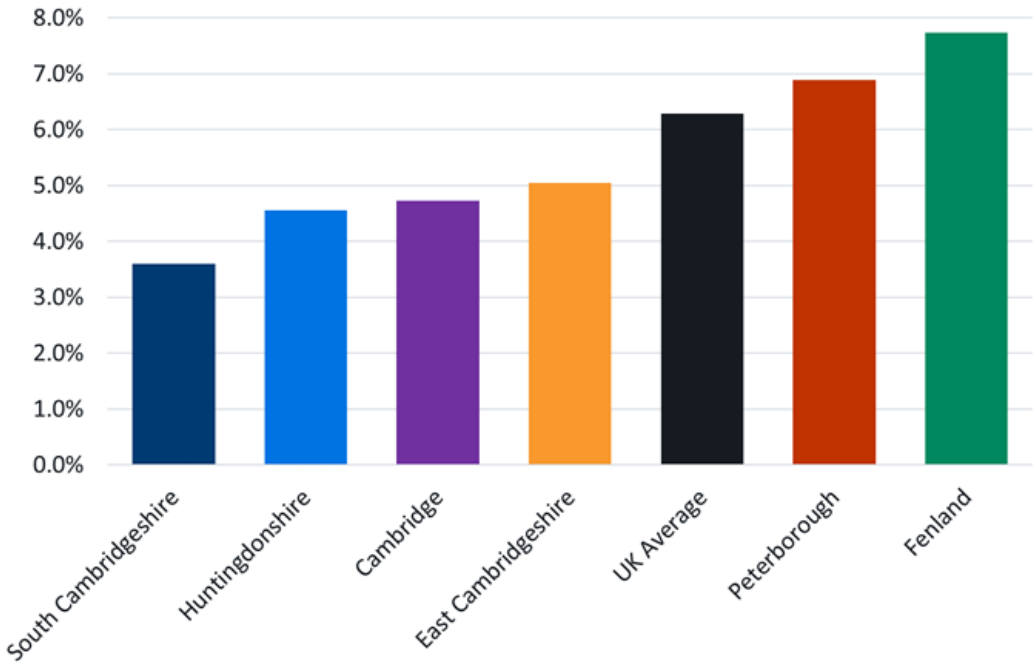
[4] Source: **National Travel Survey** (Department for Transport, 2018)

[5] Source: **Long term health problem or disability by health by sex and age** (Office for National Statistics, 2011)

[6] Source: **Regional labour market: Local indicators for counties, local and unitary authorities** (Office for National Statistics, 2011)

2.26 The average unemployment rate between 2004 and 2016 for each district is summarised in Figure 2.5, with Fenland and Peterborough falling behind the UK average. Residents in the Fenland and Peterborough areas are twice as likely to be unemployed as those living in South Cambridgeshire.

Figure 2.5: Average unemployment rate by district (2004-2016)



Source: Labour Force Survey, Office for National Statistics

2.27 Fenland and Peterborough are also more deprived than the rest of the area, ranked in the top 20% of most deprived local authorities, with hotspots of deprivation around Wisbech, March and Peterborough city centre. These districts experience significantly higher levels of poverty: 18.5% and 17.6% of households fall below 60% of the median income (before housing costs)[7].

Implications for the Local Transport Plan

Designing a transport network which is affordable for all must be a key consideration. Ensuring that transport connectivity is evenly distributed and effective across the region will ensure that no single area is 'left behind' by future growth.

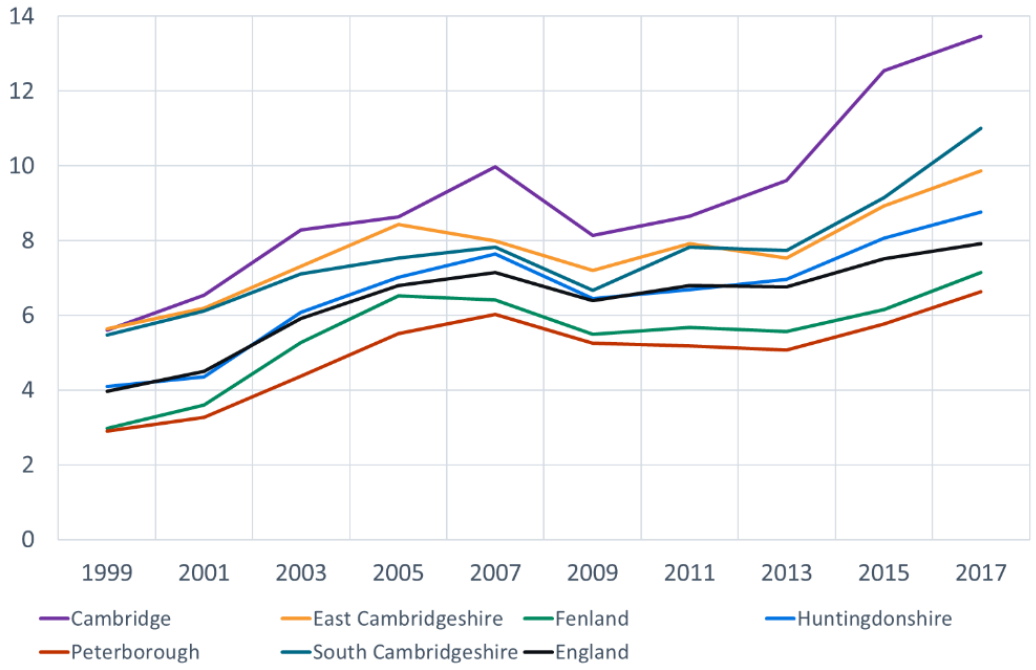
Housing Affordability

2.28 The cost of housing in the Cambridgeshire and Peterborough area acts as a constraint on growth, deterring new residents from settling locally.

2.29 The ratio of median house prices to median gross workplace earnings has risen materially in all districts since 1999 (see Figure 2.6). This has been identified in the Cambridgeshire and Peterborough Independent Economic Review as a key issue and potential limiting factor for development into the future.

[7] Source: **Households in poverty estimates for middle layer super output areas in England and Wales** (Office for National Statistics, 2017)

Figure 2.6: Ratio of median house price to median gross workplace based annual earnings



Source: Office for National Statistics

2.30 The root cause of this issue is the gap between population growth and new housing construction. This gap has widened significantly over time (in 2016 only 3,400 new dwellings were built to accommodate 8,000 additional residents[8]). The resultant shortfall has progressively driven prices up. This issue is particularly chronic in Cambridge where house prices are 87% above the national average.

2.31 The ratio of house price to income is greater at the lower end of the housing market in all districts (except Fenland). This means that even the most 'affordable' housing is largely unaffordable. This imbalance has led to a 'housing paradox'. High house prices deter people from living in the region, but the small size of urban areas is a key reason that the area is so attractive.

Implications for the Local Transport Plan

Ensuring residents in Cambridgeshire and Peterborough can live in affordable, attractive communities is critical to ensuring the success of the area. The Local Transport Plan must seek to connect where people live with amenities and job opportunities, driving sustainable development and improving living standards. Ensuring that future development sites are unlocked and adequately served by transport infrastructure is therefore a priority.

[8]Source: House Building Statistics (Ministry of Housing Communities and Local Government, 2018)

Environment

2.32 The rural landscapes and areas of historic value in Cambridgeshire and Peterborough combine to create a high quality of life for its residents, as well attracting large amounts of tourism to the region.

2.33 The landscape is largely flat with small rolling hills in the West and South of Cambridgeshire, falling to flat open fenland in the North and East. Although there are no designated Areas of Outstanding Natural Beauty (AONBs), the relatively rural landscape is still valued highly by residents.

2.34 Protecting this environment is imperative, and to ensure a clear understanding of the baseline conditions at present within the Cambridgeshire and Peterborough area a Strategic Environmental Assessment (SEA) has been carried out. This evidence base draws upon, and lies parallel to, this Strategic Environmental Assessment.

Heritage Value

2.35 The two cities in the region have areas of outstanding heritage value. Peterborough boasts a 13th century cathedral, 70 scheduled monuments and 68 Grade I listed buildings, such as Burghley House. Cambridge is most famous for its University, which dates to the 13th century and has 67 Grade 1 listed buildings and 12 parks and gardens, such as Parker's Piece.[9]

2.36 Market towns in the region are also well-known for their heritage value. To name a few, Wisbech is known for its examples of Georgian architecture, Ely is home to Oliver Cromwell's House and the Stretham Old Engine, and Huntingdon includes sights such as the Hemingford Grey Manor House. There are also historic villages such as Thorney and Eye.

Implications for the Local Transport Plan

Transport should be sensitive to the region's heritage environment, enabling residents and visitors to reach historic sites of interest and ensuring infrastructure does not damage or diminish them.

Natural Environment

2.37 The natural ecosystems that make up the region are valuable assets. There are nine National Nature Reserves (NNRs) in the area, such as Barnack Hills and Holes in Peterborough, which is one of Britain's most important wildlife sites and represents half of the surviving limestone in Cambridgeshire. There are also 12 Sites of Special Scientific Interest (SSSIs), which are conserved areas due to the presence of rare species or geological and physiological features, such as Adventurers' Land in Fenland and Barrington Chalk Pit in South Cambridgeshire. The location of these sites is shown in Figure 2.7.

2.38 The region also contains the largest area of the highest quality (grade one) farmland in the country, making it highly important for the agricultural industry.[10]

[9] Source: Cambridgeshire and Peterborough Combined Authority Local Transport Plan (Mott MacDonald, 2019)

[10] Source: **Cambridgeshire and Peterborough Independent Economic Review** (Cambridgeshire and Peterborough Independent Economic Commission, 2018)

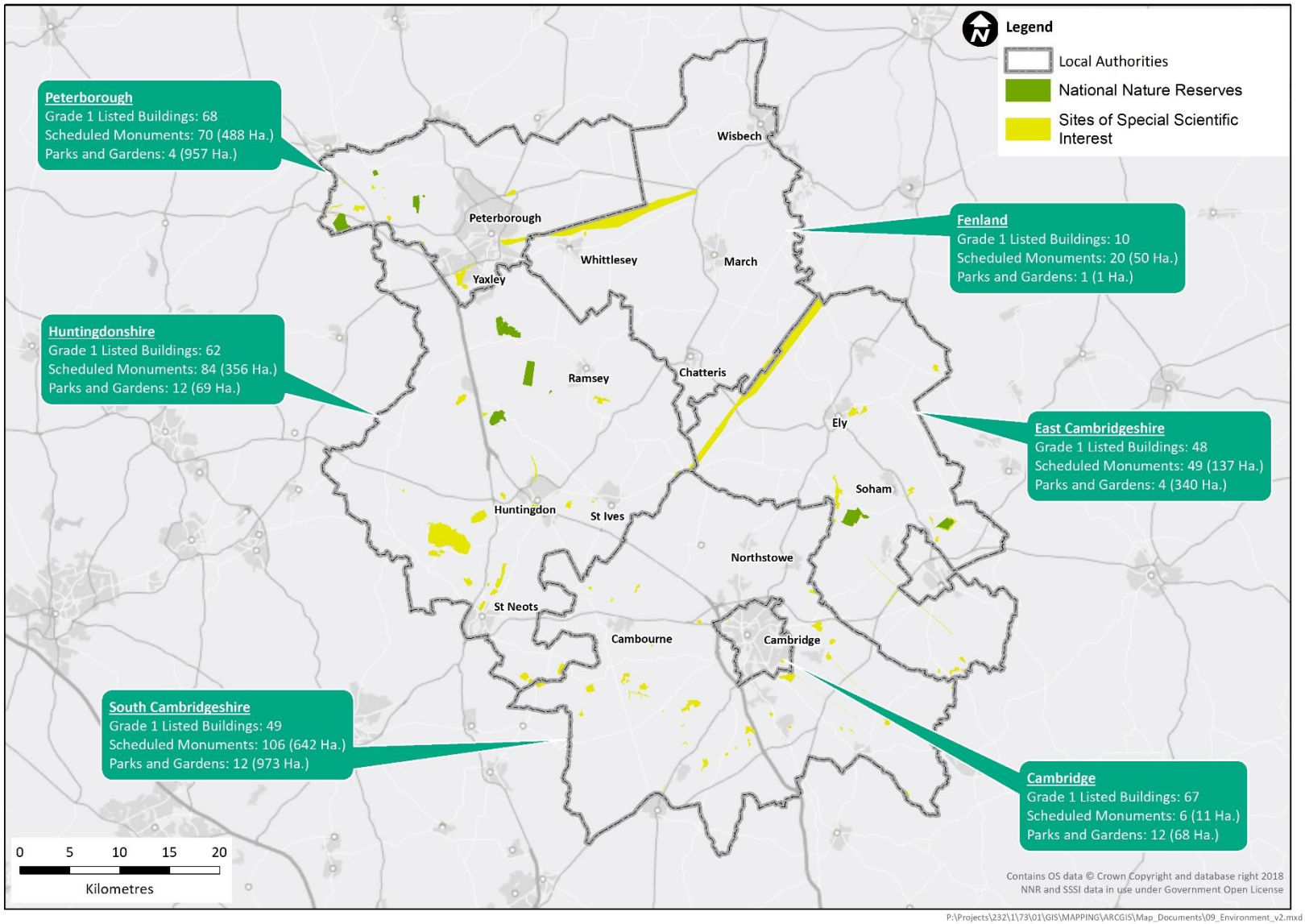
2.39 In Cambridgeshire and Peterborough there almost 40% coverage of species identified within the UK Biodiversity Action Plan. These priority species are those that were identified as being the most threatened and requiring conservation action.[11] Road building and other transport infrastructure could result in loss of those habitats and species.

Implications for the Local Transport Plan

The construction of new transport infrastructure has the potential to irrevocably damage the local natural environment. Clearly, wherever possible this must be prevented. Negative operational impacts such as noise, vibration, dust and changes to drainage must be mitigated. The wider impacts of granting greater accessibility to 'sensitive' natural areas must be considered.

[11] Source: Cambridgeshire and Peterborough Combined Authority Local Transport Plan SEA – Environmental Report (Mott MacDonald, 2019)

Figure 2.7: Selected key environmental features



Flooding

2.40 The amount of flat land in the region means that many areas are susceptible to flooding, an issue which new developments have the potential to exacerbate. Without flood defenses, 34.5% of the Cambridgeshire and Peterborough area is at high risk of flooding, as over 50% of the land in Cambridgeshire is below mean sea level. The Fenland area is particularly susceptible as it is very low lying and relies on pumped drainage.[12] This high flood risk may be problematic for the transport network in those districts. Railway lines have typically been constructed on low lying land and this is exacerbated by the amount of development around railways, which reduces available drainage.

Implications for the Local Transport Plan

The impact of new and existing transport infrastructure on flood risk must be carefully considered. Building resilience into new infrastructure will be important, and will ensure that if flooding occurs the transport network is still able to function effectively. Ensuring that the system is flexible and adaptable will allow future changes in flood risk to be effectively ameliorated.

Greenhouse Gases

2.41 In 2016, total carbon dioxide (CO_2) emissions in Cambridgeshire and Peterborough were 5,614 kilo-tonnes. In the same year per capita emissions in Cambridgeshire (7.2 tonnes) were higher than in Peterborough (5.1 tonnes) and the regional and national averages (5.4 tonnes).[13]

2.42 The highest proportion of CO_2 emission in Cambridge derived from road transport emissions (40.6%), followed by industry and commercial emissions (30.6%) and domestic emissions (21.8%). In Peterborough, the equivalent figures were 43.1% (road transport), 28.6% (industry and commercial) and 27.6% (domestic).[14]

2.43 Comparing the Districts and City Councils, South Cambridgeshire District Council had the highest CO_2 emissions per capita, followed by Fenland, Huntingdonshire, East Cambridgeshire and Cambridge City Council.

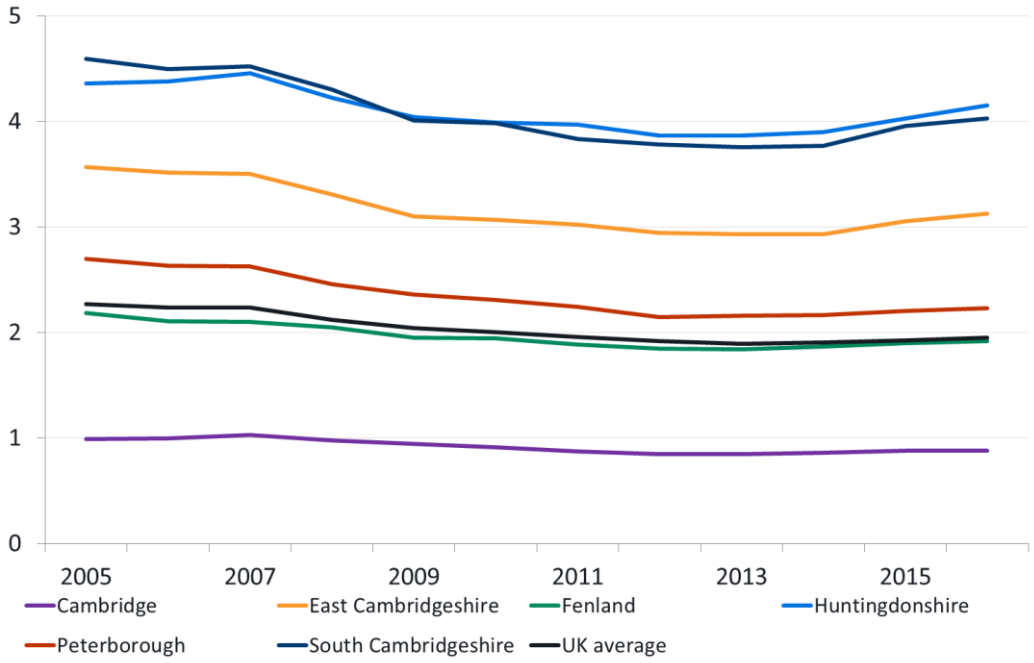
2.44 Figure 2.8 illustrates the gradual downward trend in transport-related CO_2 emissions per capita across the region. However, there is considerable diversity between the cities and more rural districts, where car ownership and usage is considerably higher. Fenland District is a notable outlier and may indicate a paucity of transport opportunities and limited access to private cars within the district. In isolation, traffic growth will be expected to result in an overall increase in CO2 emissions.

[12] Source: Cambridgeshire and Peterborough Combined Authority Local Transport Plan SEA – Environmental Report (Mott MacDonald, 2019)

[13] Source: *ibid.*

[14] Source: *ibid.*

Figure 2.8: Transport CO_2 emissions per capita



Air Quality

2.45 There are also areas that suffer from poor air quality. Hotspots with a high concentration of business activity and transport movements lead to localised air quality problems, which contribute to higher carbon emissions in the region and UK-wide.

2.46 There are 11 Air Quality Management Areas (AQMAs) in the region, which have been declared as at risk of not meeting national air quality objectives.[15] The Air Quality Management Areas are:

- Cambridge City Centre – high levels of nitrous dioxide (NO_2) around and inside the inner ring road;
- A14 Corridor – high levels of NO_2 and Particulate Matter (PM_{10}) along the A14 between Bar Hill and Milton and NO_2 between Hemingford and Fenstanton;
- Peterborough – two rural areas near Flag Fen, to the east of Peterborough between the City and Whittlesey, have high sulphur dioxide (SO_2) emissions from the brickworks outside the Local Authority area;
- Wisbech – two AQMAs have been declared surrounding the HL Foods site due to high levels of SO_2 and PM_{10}. An area along the B198 Lynn Road and the A1101 also has high levels of NO_2;
- Whittlesey – high levels of SO_2 along roads and cycle routes to the west and northwest of Whittlesey brickworks and in an area covering roads, footpaths, dwellings and public spaces to the east;
- Brampton - high levels of NO_2 in the area encompassing properties close to the A14 in Brampton and Hinchingbrooke;

[15] Source: Cambridgeshire and Peterborough Combined Authority Local Transport Plan SEA – Environmental Report (Mott MacDonald, 2019)

- St Neots - high levels of NO_2 in the area encompassing the junction of the High Street with New Street and South Street;
- Huntingdon – high levels of NO_2 in the town centre.

Implications for the Local Transport Plan

Aiming for 'zero emissions' urban areas over the next 20 years is an ambitious but realistic target. However, it will only be achievable if the Local Transport Plan is equally ambitious in its scope. Any interventions which enhance the attractiveness of travel by motorised modes (particularly private car) should be accompanied by initiatives that increase the effectiveness (e.g. car-sharing) and efficiency (e.g. low-emissions vehicles) of car trips or promote mode shift. Additionally, the infrastructure required to encourage users to invest in electric vehicles must be planned and implemented.

Environmental Assessment

2.47 The Cambridgeshire and Peterborough Local Transport Plan is accompanied by a Strategic Environmental Assessment (SEA). The Local Transport Plan has been developed and informed by the Strategic Environmental Assessment in order to ensure that its objectives are in alignment with the Strategic Environmental Assessment objectives.

2.48 In addition to testing the compatibility of Strategic Environmental Assessment and Local Transport Plan objectives, the Strategic Environmental Assessment involves:

- reviewing alternatives;
- assessment of alternative strategies and preferred Local Transport Plan measures;
- assessment of the cumulative effects of the Local Transport Plan;
- development of mitigation measures and opportunities for enhancement; and
- developing monitoring proposals.

Implications for the Local Transport Plan

In accordance with Article 9 of the SEA Directive a Post-Adoption Statement will be produced to demonstrate how environmental considerations have been integrated into the Local Transport Plan, provide a summary of consultation responses and how these have been addressed, the reason for choosing the Local Transport Plan as adopted, and describe the measures proposed for monitoring.

Political governance

2.49 Across Cambridgeshire and Peterborough multiple organisations have different responsibilities for planning, transport and development, all of which shape our communities and the way we travel. An overview of these organizations is shown in the diagram opposite.

Cambridgeshire and Peterborough Combined Authority

2.50 The Cambridgeshire and Peterborough Combined Authority was formed in March 2017, with its first democratically elected Mayor appointed in May 2017. The Combined Authority builds on the area's economic assets and its strategic connectivity, with political, economic and planning powers. These powers have been granted through a combination of devolved powers and budgets from Central Government, including £600 million over 30 years. In addition to these powers, the Combined Authority receives funding from Central Government in a number of areas, including transport and housing.

2.51 The powers and budgets were agreed as part of a *Devolution Deal* in March 2017, giving the Combined Authority responsibility for creating this statutory document, *The Cambridgeshire & Peterborough Local Transport Plan*. Aligned to the Local Transport Plan (LTP) is the requirement for the Combined Authority to develop a *Non-Statutory Spatial Framework* (NSSF). These plans are being developed in parallel with the Local Transport Plan to ensure as close fit as possible.

2.52 Local transport functions transferred to the Combined Authority from the *Transport Act 1985, Transport Act 2000, and Local Transport Act 2008* include:

- the duty to produce a Local Transport Plan;
- ability to produce a Bus Strategy;
- rights to franchise local bus services within its area, subject to the completion of the process set out in the *Bus Services Act 2017*;
- powers to enter into quality bus partnerships and enhanced partnerships;
- responsibility for the provision of bus information and the production of a bus information strategy;
- the role of Travel Concession Authority;
- financial powers to enable the funding of community transport; and
- powers to support bus services.

2.53 The Combined Authority can, by agreement, further devolve responsibility for aspects of transport planning and project delivery to Cambridgeshire County Council and Peterborough City Council. In addition to the Devolution Deal, the Combined Authority has been granted the powers, responsibilities and budgets of the former Greater Cambridge Greater Peterborough Enterprise Partnership since April 2018. These were awarded through a *Growth Deal* with Central Government in July 2014. and are now overseen by The Business Board led by representatives from key business sectors, the public sector, and education community, reporting to the Combined Authority.

2.54 The Combined Authority is made up of representatives from the six local authorities within the area.

Implications for the Local Transport Plan

The local authority has been given these devolved powers partially under the premise that it will allow more effective targeting of local need. Examining how powers, such as bus franchising, can be most effectively delivered, will be a key component of the Local Transport Plan.

Cambridgeshire County Council and Peterborough City Council

2.55 The remaining parts of the Transport Act 1985 functions not transferred to the Combined Authority remain with Cambridgeshire County Council and Peterborough City Council.

2.56 Local highway functions, as per the *Highways Act 1980*, mainly remain with Cambridgeshire County Council and Peterborough City Council. This includes responsibility for highway maintenance to ensure they are safe and usable, including during adverse weather conditions; maintaining records; and regulating development impacts on highways.

2.57 Both these authorities as Local Education Authorities, are responsible for Home to School Transport, Special Education Needs, and Adult and Social Care transport. Eligibility for travel, are outlined in local policy documentation and guidelines.

2.58 Peterborough City Council is a *Unitary Authority*, and as such is also the *Local Planning Authority* for Peterborough, responsible for exercising planning functions across Peterborough. This includes developing the *Local Plan* for Peterborough in adherence to the *Planning and Compulsory Purchase Act 2004* and the *National Planning Policy Framework*. Local Plans provide a spatial vision and a framework for the future development of the area, addressing needs and opportunities in relation to housing, the economy, community facilities and infrastructure – as well as a basis for safeguarding the environment, adapting to climate change and securing good design (e.g. setting parking standards in new developments). They are also a critical tool in guiding decisions about individual development proposals.

2.59 In addition to developing the Local Plan, Peterborough City Council's responsibilities that have bearing on transport and travel, include determining planning applications; supporting development of *Neighbourhood Plans*; and the provision of off-street parking.

2.60 Both City Councils have distinct visions for their future development. Cambridge City Council describe their vision as "One Cambridge, Fair for All", while Peterborough City Council state that they wish to develop a "bigger and better Peterborough that grows the right way, and through truly sustainable development". Both closely compatible, these visions feed into the vision produced by the Combined Authority.

Implications for the Local Transport Plan

The Local Plans identify future development across the region, which allows for more effective planning of transport infrastructure. In order to realise the objectives outlined in each local plan, region-wide transport infrastructure will need to be closely integrated with new developments.

Local Planning Authorities

2.61 Cambridgeshire is made up of five Local Planning Authorities: Cambridge City Council, East Cambridgeshire District Council, Fenland District Council, Huntingdonshire District Council and South Cambridgeshire District Council. All Local Planning Authorities have the same powers and responsibilities for their respective areas as described for Peterborough City Council.

Town and Parish Councils

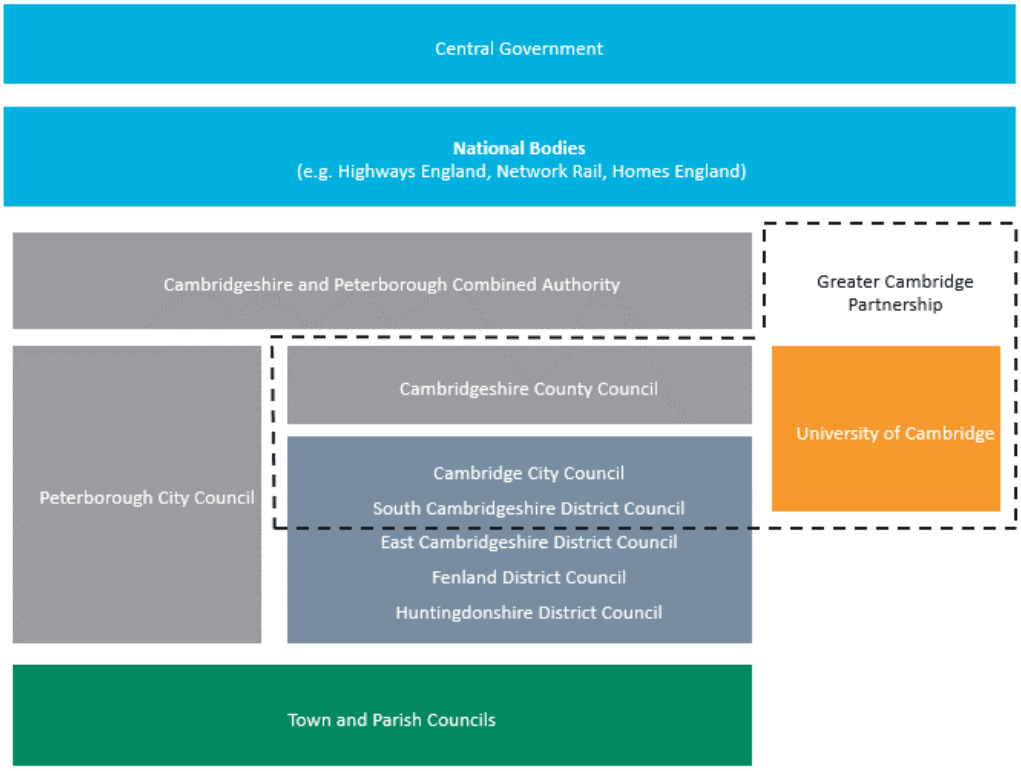
2.62 *Town Councils* and *Parish Councils* have more specific responsibilities. They have a duty to provide allotments if demanded, and powers to provide and maintain a variety of local services including bridleways, burial grounds, bus shelters, car parks, commons and open spaces, community transport schemes, community safety and crime reduction measures, events and festivals, footpaths, leisure and sports facilities, litter bins, public toilets, planning, street cleaning and lighting, tourism activities, traffic calming measures, village greens and youth projects.

Greater Cambridge Partnership

2.63 The Greater Cambridge Partnership is the body that is responsible for delivering and administering the funding for the *Greater Cambridge City Deal* – a deal agreed with Central Government in June 2014 for bolstering economic growth. The City Deal devolves up to £500million of funding over 15 years from Central Government and up to another £500 million from private investment for a long-term infrastructure investment fund and powers for the Greater Cambridge Partnership to be the joint decision-making body for delivery of the funding and the deal, working closely with communities, business, and industry leaders.

2.64 The Greater Cambridge Partnership comprises four partners: Cambridgeshire County Council, South Cambridgeshire District Council, Cambridge City Council, and the University of Cambridge (marked with a dashed line on Figure 2.9).

Figure 2.9: Political governance in Cambridgeshire and Peterborough



Central Government and National Bodies

2.65 Central Government Departments set national policy and allocate budgets to projects and programmers, as well as devolving budgets to local bodies. The main sources of transport and planning policy and funding are the Department for Transport and the Ministry of Housing, Communities and Local Government.

2.66 National transport bodies also hold responsibilities for transport in the Cambridgeshire and Peterborough area.

2.67 *Network Rail* owns and is responsible for the rail infrastructure in the UK, including railway tracks, signals, tunnels, bridges, and most stations. They also set the national rail timetable. Network Rail do not own or run passenger or freight trains or set ticket prices – this is the responsibility of train and freight operating companies. The East-West Rail company, established by the government in 2017, is separately responsible for restoring the rail connection between Oxford and Milton Keynes and Cambridge.

2.68 Similarly, Highways England is responsible for operating, maintaining and improving the *Strategic Highway Network* (motorways and major A Roads in the UK), as well as undergoing consultation on formation of a *Major Road Network* which also comprises principal local roads.

2.69 An arms-length body of the Ministry of Housing, Communities and Local Government*, Homes England* brings together land, money, expertise and planning to fund new homes. It also invests in creating employment floorspace and other community facilities. It is the regulator of social housing providers and works with partners to meet local priorities. Homes England consider transport connectivity in their spatial planning, for its potential to support and unlock new developments.

Transport Operators

2.70 The operation of most transport services is provided by private sector operators, such as train operating companies or bus companies. These companies operate on a commercial, for profit basis, and can be subsidised by different tiers of government.

2.71 Community Transport is non-profit making transport for individuals who do not have access to public transport, for example due to accessibility concerns. These services have Voluntary Management Committees made up of local residents and sometimes employ paid professional staff.

Transport

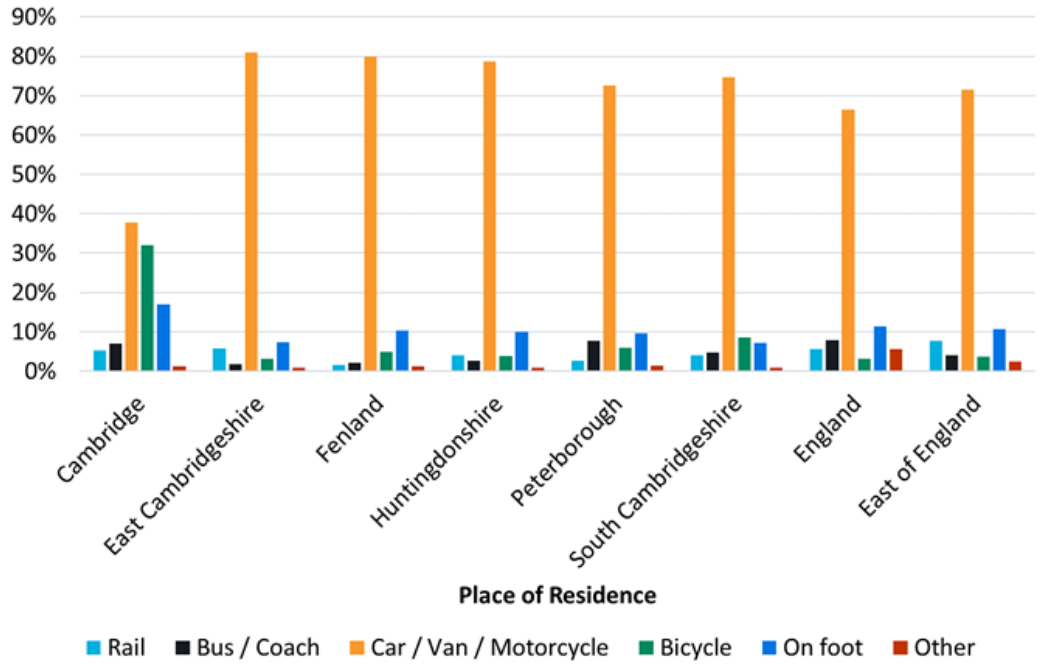
2.72 The Cambridgeshire and Peterborough area has an extensive transport network, connecting people and places across the Combined Authority, and beyond, and supporting the region's productive economy.

How do people travel?

2.73 Across the East of England, the average person makes 19 trips per week, broadly in line with the national average. The majority of trips are made for shopping (20%), commuting (15%) and personal business (10%).[16]

2.74 Within the Combined Authority area, private car forms the primary mode of travel although there is significant variation in the use of other modes. Cambridge is a particular outlier: only 38% of journeys to work are by car or motorcycle compared to more than 80% in East Cambridgeshire. Cycling accounts for 32% of trips to work within Cambridge, but less than 10% elsewhere, as illustrated by the figure below.[17]

Figure 2.10: Method of travel to work (2011)



Source: Census 2011, Travel to Work Dataset

Why do people travel?

Commuting

2.75 Both Cambridge and Peterborough have extensive commuting catchments stretching outside their city boundaries. Figure 2.11 shows the commuting patterns for Cambridge, South Cambridgeshire, Peterborough, Fenland, East Cambridgeshire and Huntingdonshire, based on 2011 census data. Cambridge has an expansive labor market, with only 40% of jobs within the

[16] Source: National Travel Survey 2016/2017 (Department for Transport, 2018)

[17] Source: Method of travel to work (Office for National Statistics, 2018)

city occupied by those who also live within the city boundaries. 28% commute from South Cambridgeshire, 16% from elsewhere within the Combined Authority, and 18% from elsewhere in the country.

2.76 Peterborough's labor market stretches into neighboring Fenland and Huntingdon, as well as south Lincolnshire and east Northamptonshire. 37% of jobs within the city are occupied by those who live outside the local authority boundaries. Peterborough's economy is, therefore, highly dependent upon good connectivity to provide businesses located in the city access to the labor they require. Huntingdonshire, Fenland and East Cambridgeshire each have smaller, more self-contained labor markets, with less than 37% of commuters to these areas travelling from outside the respective local authority boundaries. Far fewer people commute longer distances elsewhere.

Implications for the Local Transport Plan

Good-quality, high-capacity transport provision is key to supporting commuting linkages, both within and beyond the Combined Authority, connecting the 'right' people to the 'right' jobs.

Education

2.77 Trips to schools, colleges and universities, account for 12% of all trips within the East of England. While trips – particularly to primary education – are typically local, the rural geography of much of the Combined Authority means that many students travel significant distances to access secondary or tertiary education[18].

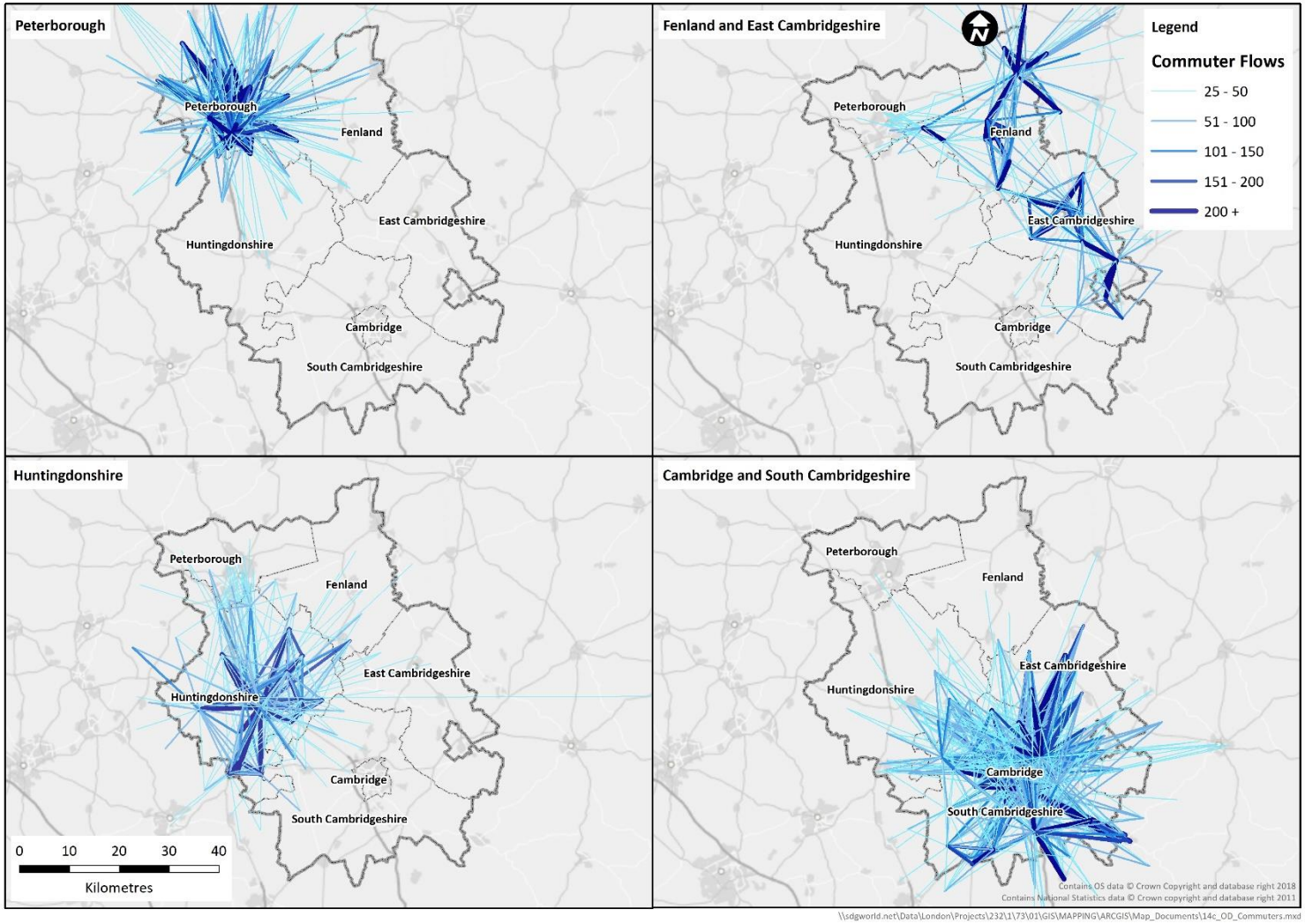
2.78 Colleges within Cambridge and Peterborough often have large catchments extending into neighboring districts. Cambridge Regional College, for example, is located to the north of Cambridge and has significant educational flows along the A14 and guided busway corridor towards St Ives. Similarly, Hills Road Sixth Form College, located in the south of Cambridge, has a catchment extending well outside the city boundaries. As education authorities, Cambridgeshire County Council and Peterborough City Council have a responsibility for the provision of Home to School transport for pupils over certain distances / journey time thresholds from their place of education, as well as providing access to Special Educational Needs facilities and for Children's Community Services.

Implications for the Local Transport Plan

Safe and quick accessibility by walk, cycle or bus and taxi (public or contracted) to schools and other educational facilities will maximise opportunities for young people who typically will not have access to a car for such journeys.

[18] Source: National Travel Survey 2016/2017 (Department for Transport, 2018)

Figure 2.11: Commuting patterns across Cambridgeshire and Peterborough



Source: Travel to work data, 2011 Census, Office for National Statistics

Table 2.1: Commuting patterns to selected destinations

Place of Residence	Place of Work					
	Cambridge	East Cambridgeshire	Fenland	Huntingdonshire	Peterborough	South Cambridgeshire
Cambridge	40%	3%	0%	1%	0%	14%
East Cambridgeshire	8%	63%	2%	1%	0%	8%
Fenland	1%	6%	66%	4%	6%	2%
Huntingdonshire	6%	2%	3%	67%	7%	10%
Peterborough	1%	1%	7%	6%	63%	1%
South Cambridgeshir	28%	5%	1%	4%	1%	41%
Rest of England	17%	21%	20%	15%	23%	25%
Total	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*

Source: Location of usual residence and place of work, 2011 Census, Office for National Statistics

Leisure

2.79 Approximately 40% of journeys in the East of England are for shopping or leisure, and such trips place particular requirements on the transport network[19]. Both Cambridge and Peterborough form key leisure destinations, with large shopping districts and shopping centers (such as the Queensgate in Peterborough) which attract customers from across the Combined Authority area.

2.80 Smaller towns across the Combined Authority area also offer nationally and internationally-renowned tourist destinations. For instance, Ely is the site of Oliver Cromwell's house and Ely Cathedral, Wisbech is the site of Peckover House and Garden, and Newmarket (situated just outside the combined authority border), is considered the headquarters of British horse racing. Rural areas also have a strong offer for visitors. Fenland, for example, draws people seeking to access its nature reserves and bird wildlife.

2.81 These sites will all attract significant numbers of visitors from across the country and abroad. These journeys will take place throughout the day.

Implications for the Local Transport Plan

Currently public transport links to leisure and tourism sites outside the cities of Cambridge and Peterborough are poorly developed. Linking these 'rural' and 'town' sites to wider transport infrastructure will spread the benefits of tourism more evenly across the region.

Health

2.82 Cambridge and Peterborough are home to the large hospitals of Addenbrooke's and Peterborough City respectively, which provide most of the intensive care and 'routine' operations for residents of the combined authority. Both hospitals are located on the periphery of their respective cities, over 2.5 kilometers from the city centre.

Implications for the Local Transport Plan

Access to these hospitals, as well as doctors' surgeries, outpatient facilities and pharmacies, is key to supporting the health and social care of residents. Ensuring access in the off-peak and late at night/early in the morning for those unable to use a private car will be very important.

[19] Source: **National Travel Survey 2016/2017** (Department for Transport, 2018)

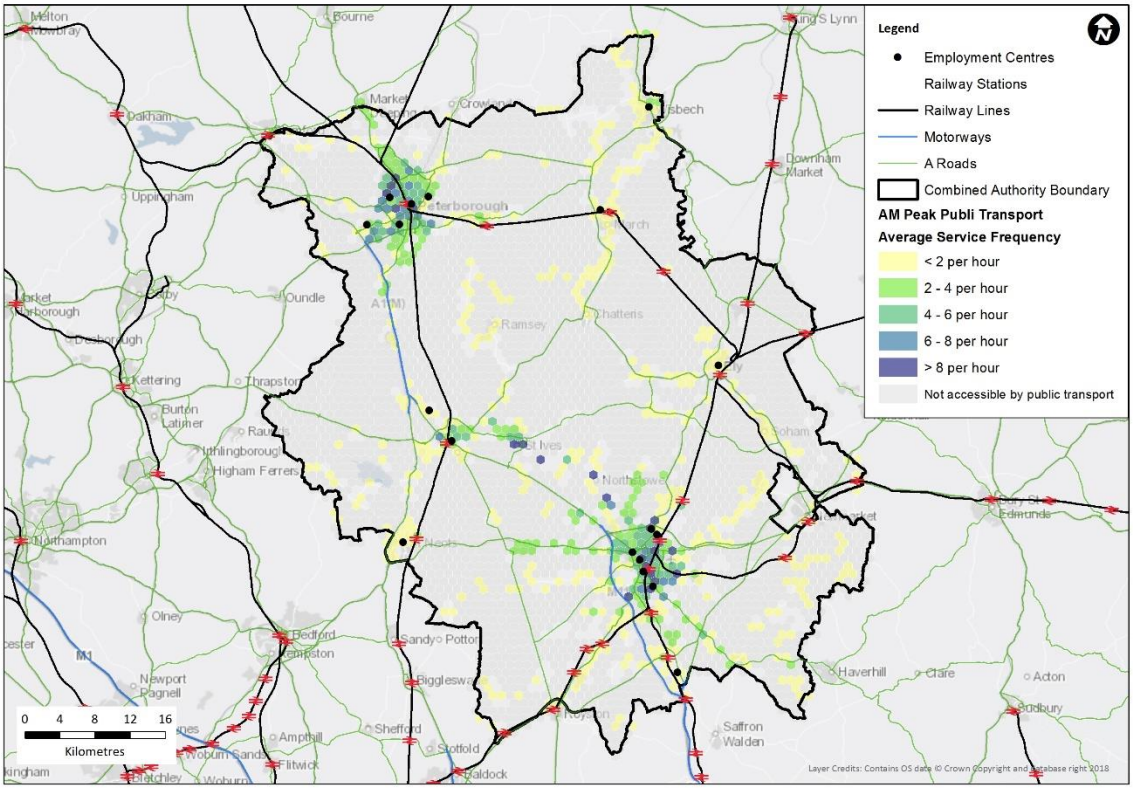
Public Transport

Overall Connectivity

2.83 At a broad spatial scale Cambridgeshire and Peterborough enjoys relatively good transport connectivity, with strong links to major cities, ports and airports outside the Combined Authority area, and good connections between major urban areas within it. From Peterborough and Cambridge urban areas, London can be reached by rail in under an hour, Stansted Airport can be accessed on direct Cross-Country rail services, and the A14 and M11 provide good strategic connectivity, including for freight travelling to the ports of Harwich, Ipswich and Felixstowe on the East Coast.

2.84 An overview of this transport infrastructure is provided in Figure 2.12 below, together with the service frequency of local bus and rail services across the Combined Authority. This high-level connectivity is critical for ensuring that the region's businesses have easy access to the staff, suppliers and markets they need, and that tourist attractions can flourish. For example, domestic tourism alone brings an estimated 1.8 million visitor trips and £256 million annually into the area's economy[20].

Figure 2.12: Transport infrastructure and accessibility (2018)



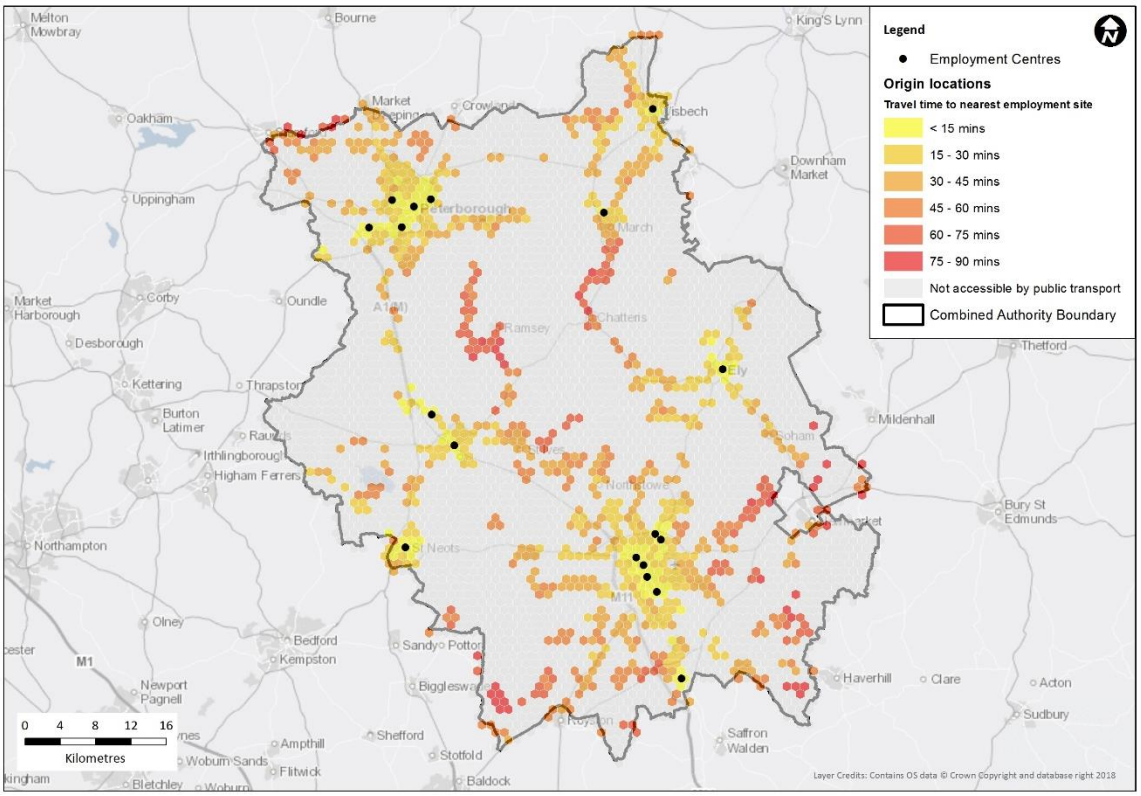
Source: Steer analysis

[20] Source: **Great Britain Tourism Survey 2017** (Visit Britain, 2018)

2.85 Connectivity within the Combined Authority is more variable, and urban areas benefit from significantly better transport network coverage than their rural counterparts. This translates into poorer access to jobs and opportunities for rural residents. In Cambridge and Peterborough, 88% and 95% of residents are within 15 minutes by walking or public transport of a local primary school respectively. By contrast, in South Cambridgeshire and East Cambridgeshire this figure falls to 77% and 79% respectively[21].

2.86 Figure 2.13 demonstrates the accessibility by public transport to major employment sites (with more than 2,500 jobs) within Cambridgeshire and Peterborough, with each 'hexcell' representing one square kilometre. Although 58% of the population of Cambridgeshire and Peterborough are within 30 minutes of a major employment centre (and a further 25% are within 60 minutes), many rural areas in particular either lack direct public transport accessibility, or suffer from lengthy journey times that make it difficult to those without a car to access jobs and services elsewhere.

Figure 2.13: Accessibility to major employment sites by public transport (2018)



Source: Steer analysis

[21] Source: **Journey time statistics** (Department for Transport, 2018)

Rail

2.87 Broadly, Cambridgeshire and Peterborough are well-connected by rail, with services operating directly between major population centres, and to London, Norwich and the Midlands. Both Cambridge and Peterborough are directly connected to London, with fast, high-frequency services to Kings Cross with a journey time of less than an hour. Cambridge also benefits from direct services to Liverpool Street, and a small commuter network linking to outlying towns and villages such as Royston and Shelford.

2.88 Stansted Airport is linked directly to Cambridge and Peterborough by an hourly CrossCountry service (which extends to Leicester and Birmingham), and Peterborough is also well-connected to the national rail network, with regular services to Leeds, Manchester, Newcastle and Edinburgh. Peterborough is a member of the consortium of East Coast Mainline Authorities, a group of local authorities, combined authorities and Scottish Regional Transport Partnerships currently lobbying to gather £3bn invested in the East Coast mainline (London to Edinburgh, running via Peterborough), by 2032[22].

2.89 Services between Cambridge and Peterborough are limited, with only an hourly service taking approximately 50 minutes, despite being just 40 miles apart. There is no direct rail link to Bedford, Milton Keynes or Oxford, with passengers required to travel via London. Some large towns – such as Wisbech – are entirely disconnected from the rail network.

2.90 The reliability of some rail links is poor, and can act as a barrier to use of rail, in particular Great Northern/Thameslink services to Peterborough and Cambridge. Approximately 15% of these services arrive more than five minutes late, meaning that on average a weekly commute will be delayed at least once per week[23]. Rail fares have also increased significantly above wage inflation, with a CAGR (compound annual growth rate) of 3.8% compared to the CAGR of RPI (Retail Price Index, all items) of 2.7% between 2007 and 2017[24].

2.91 Despite this, rail patronage has increased significantly within the region since the late 1990s. Passengers at Cambridge, for example, have increased from 3.9 to 11.4 million between 1997/8 and 2016/17, an almost four-fold increase, with passengers at Peterborough increasing from 2.5 to 4.8 million, or 87%, over the same time period[25]. Such increases, whilst clearly positive, place increasing capacity pressures on the rail network, particularly in peak times. Fast services to Cambridge from Kings Cross are frequently overcrowded, including in off-peak times such as Saturday mornings, together with services between Cambridge and Peterborough via Ely, which are formed of only two or three coaches. Additional capacity will be required if rail patronage is to continue to grow.

[22] Source: **The Consortium of the East Coast Mainline Authorities website** (Accessed May 2019)

[23] Source: **Public Performance Measure Statistics 2018/2019** (Office for Rail and Road, 2019)

[24] Source: **Rail Fares Index** (Office for Rail and Road, 2018)

[25] Source: **Station Usage Estimates** (Office for Rail and Road, 2018)

Implications for the Local Transport Plan

Rail usage is on the increase, and the Local Transport Plan must look to enhance existing services to accommodate this trend. Closer links between London, Stansted, Cambridge and Peterborough will help to drive greater growth throughout the region by opening access to wider national and international opportunities. Expanding the rail network where possible to market towns such as Wisbech will help to integrate them into the wider transport network.

Bus

2.92 Cambridgeshire and Peterborough benefits from an extensive bus network, including limited-stop Guided Bus and Park-and-Ride services. Peterborough and Cambridge, as the two largest cities, benefit from high-frequency urban bus networks, with services operating along multiple corridors every 15 minutes or better, and extending to neighbouring villages.

2.93 Market towns across the region, such as Cambourne or Chatteris, are typically linked by hourly or half-hourly services to Cambridge or Peterborough. Guided Busway services link Cambridge City Centre, Addenbrookes' and the Cambridge Science Park directly to Longstanton, St Ives and Huntingdon, and Cambridge benefits from an extensive Park-and-Ride network, with dedicated services operating from five sites on the city's periphery.

2.94 However, many rural villages – despite close proximity to Cambridge or Peterborough – lack high-quality services, with either irregular peak-only bus services or none at all. This presents a barrier for those without access to a car, and undermines uptake of sustainable travel opportunities. Reductions in subsidies for rural services have also resulted in reduced service provision, especially early morning and evening services, with total bus mileage across English rural areas falling from 192 to 178 million miles per year between 2011/12 and 2016/17[26]

2.95 Reliability, in part due to traffic congestion, remains a challenge for bus services and can act to reduce the attractiveness of travelling by bus, including Park-and-Ride services. Only 73% and 79% of services within Cambridgeshire and Peterborough respectively operate on time, more than one in five services operate more than five minutes late, despite reliability improvements since 2006/7. Affordability of bus services broadly remains a concern, with bus fares increasing nationally by 66% since 2005, significantly more than inflation[27].

2.96 Reductions in service provision have also resulted in a reduction in patronage, especially within rural areas. Bus patronage in Cambridgeshire has fallen by 12%, from 22.7 to 20.0 million trips, between 2009/10 and 2016/17, and by 9%, from 11.0 to 10.1 trips, within Peterborough[28], despite high levels of population growth and investment in the Cambridge Guided Busway. Reductions in bus patronage reduce the viability of the bus network, undermining accessibility for those without a car, and contribute towards worsening traffic congestion.

[26] Source: **Annual bus statistics** (Department for Transport, 2018)

[27] Source: **Annual bus statistics** (Department for Transport, 2018)

[28] Source: **Passenger journeys on local bus services by local authority**: England, from 2009/10 (Department for Transport, 2018)

Implications for the Local Transport Plan

The bus network has the potential to greatly improve connectivity, particularly in areas beyond the major cities of Cambridge and Peterborough. The rights to franchise bus services have been devolved to the Combined Authority and the Local Transport Plan must examine the potential benefits of what this, or other modes of ownership, may bring to the network. In addition, better timetabling and reliability should help to improve public perception of buses.

Air

2.97 Stansted Airport acts as the key international gateway for the region, serving over 170 destinations in 39 countries. It benefits from good road connectivity via the M11 and A14 to Cambridgeshire and Peterborough, with 10 million people living within one hour of the airport by road[29]. Rail accessibility, however, is limited to an hourly service to Cambridge, Ely and Peterborough.

2.98 Other airports also provide useful connections for residents, visitors and businesses in Cambridgeshire and Peterborough. Norwich Airport is better located for East Cambridgeshire and Fenland, although services only eight year-round destinations and is only accessible from the Combined Authority by road. Luton and East Midlands Airports also form viable options for those in the West or North of the Combined Authority area.

2.99 Heathrow Airport, with a comprehensive range of global destinations, is located approximately two hours by road to Cambridgeshire and Peterborough, although lacks direct rail accessibility to the region. London Gatwick Airport is linked to Peterborough by direct Thameslink services with a journey time of approximately two hours.

2.100 Tourism is a key economic driver in Cambridge, with an estimated £583 million annually contributed to the from 5.3 million tourists[30]. The city is one of the most popular destinations for overseas visitors to visit, particularly those from China, where only 7% of individuals hold a passport – a figure expected to significantly increase in the coming decades as economic growth encourages more travelling. Air connections to international markets are therefore very important for ensuring that Cambridge remains an attractive and viable option for foreign tourists to visit.

Implications for the Local Transport Plan

Connecting Cambridgeshire and Peterborough to air networks will build the regions' global outreach, helping to keep connections with international tourism and labour markets.

[29] Source: **London Stansted Airport website** (Stansted Airport, accessed December 2018)

[30] Source: **Meet Tourism Cambridge website** (Accessed, May 2019)

Accessibility

2.101 Levels of public transport accessibility vary greatly across Cambridgeshire and Peterborough, with key amenities significantly more accessible in Cambridge and Peterborough cities than more rural districts. Within Cambridge and Peterborough 98% and 87% of residents are within 30 minutes of walking or public transport access of a town centre. This figure falls to just 22% of residents of South Cambridgeshire.[31] Likewise in Cambridge and Peterborough, 88% and 95% of residents are within 15 minutes by walking or public transport of a local primary school. This proportion falls to 77% and 79% for South Cambridgeshire and East Cambridgeshire.

Implications for the Local Transport Plan

For all journey types the cities of Cambridge and Peterborough have better accessibility to core amenities than other areas across the Combined Authority. The Local Transport Plan must look to rectify this imbalance, moving away from a transport network which is 'car dependent', to one which provides a range of public transport options in all localities. This should ensure that transport is safer, greener, and more accessible for all residents. New transport infrastructure must look to follow current trends, such as the rise in rail usage, but must also have the capacity to adapt to future changes, as new travel patterns and transport technologies will have a prominent impact on how individuals choose to travel in the future.

Road Network

2.102 Broadly, Cambridgeshire and Peterborough is well-served by the strategic[32] highway network. The M11 motorway provides links to Stansted, London and the South East, the A14 dual carriageway an East-West connection to the Port of Felixstowe and the Midlands, and the A1/A1(M) to the North of England and London. The A14 and A1(M) provide a high-quality link between Peterborough and Cambridge, and a network of predominately modern, single-carriageway roads (such as the A10 and A141) link to surrounding market towns such as Chatteris and Wisbech.

2.103 While the region therefore benefits from good strategic connectivity, some linkages suffer from regular congestion, especially in peak times, and poor journey time reliability. Figure 2.14 outlines the congestion patterns on the regions' highway network, with congestion represented as the ratio between peak-hour and free-flow (night) speeds. Congestion acts to make journey times longer and less reliable, decreasing productivity, increasing costs to businesses through late deliveries and worsening air quality.

2.104 Key 'pinch-points' include the A14 between Huntingdon and Cambridge and the A428 south of St Neots and at Caxton Gibbet. Both are currently expected to be relieved by committed Highways England schemes – the A14 upgrade, currently under construction, will upgrade the A14 to motorway-standard and is expected to open in 2020, and the committed A428 upgrade will provide a dual-carriageway link between St Neots and Caxton Gibbet, with construction commencing in 2021/22.

[31] Source: **Journey Time Statistics** (Department for Transport, 2018)

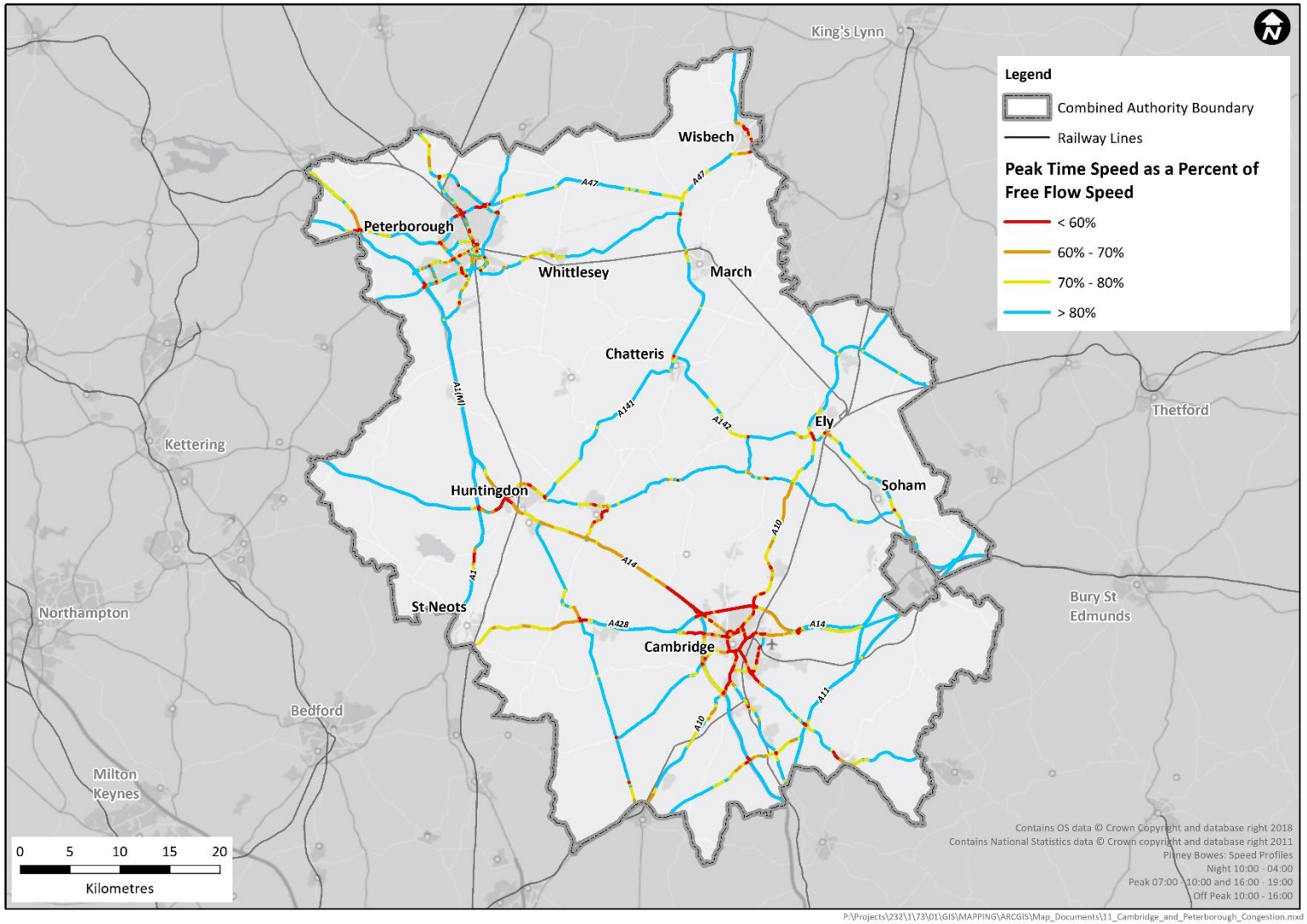
[32] The 'Strategic' road network consists of the most significant roads in the country, which are managed by Highways England. All other roads in England are managed by local and regional authorities.

2.105 Future development will only serve to put the network under more pressure, for example, significant development is planned around the city of Cambridge (including some 'new towns'). The new inputs these add to the transport network will require creative solutions, to ensure that the network is not overloaded. Promoting public transport, greater use of park and ride, the provision of 'on demand' transport solutions, and encouraging ride sharing may help to ameliorate some of the impacts of these changes. However, congestion is most severe within urban areas, in particular in Cambridge.

Implications for the Local Transport Plan

The Local Transport Plan will need to carefully consider how best to relieve pressure at key 'pinch points', such as the A14, to better make use of current strategic connectivity. Improvements in 'smart motorway' technology and future developments such as 'platooning' of freight vehicles has the potential to make markedly better use of available road space. Together, infrastructure improvements and new technologies should help to make the highway network much more effective for all users.

Figure 2.14: Key congestion hotspots across Cambridgeshire and Peterborough region



Cambridge

2.106 The radial routes leading into Cambridge have particularly high levels of congestion, such as on the A14 and A10. This issue worsens as road users continue into the historic centre of Cambridge, with the traffic flow becoming increasingly slower on roads such as the A1303 and A1307. Congestion is also an issue on ring roads around the city, as vehicles move in and out of the city at peak times and compete with inter-urban traffic for space. The five Park-and-Ride sites in Cambridge are in or on the edge of highly congested roads. This means users often must endure slow-moving traffic on their way into the city. This limits the attractiveness of using the service.

Peterborough

2.107 Although congestion is less severe within Peterborough, peak-time congestion is an issue on the radial routes leading into the city, particularly on the A47. Hotspots of slow-moving traffic appear around Peterborough station and at junctions and roundabouts on the A47 and A1139. The orbital Parkway Network has also experienced growing capacity issues and the route it follows has high levels of peak congestion.

Implications for the Local Transport Plan

In major urban areas the Local Transport Plan must aim to develop intelligent solutions to congestion, flexing capacity to deal with variations in daily need. Improvement and expansion of park and ride sites is one potential option. Intelligent route planning should also ensure more effective use of the road network. Additionally, reducing the demand for car use and encouraging transfer to other modes, such as walking and cycling, will help to ensure that the road system becomes more effective in what are already constrained spaces.

Road Safety

2.108 In 2016, there were 39 fatal road incidents in Cambridgeshire, 38 of which occurred on rural roads. In Peterborough, there were 6 fatal incidents, 5 of which occurred on rural roads[33]. Improving road safety therefore remains a key priority, especially on rural roads where high traffic speeds and sub-standard road alignments act to increase the frequency and severity of accidents.

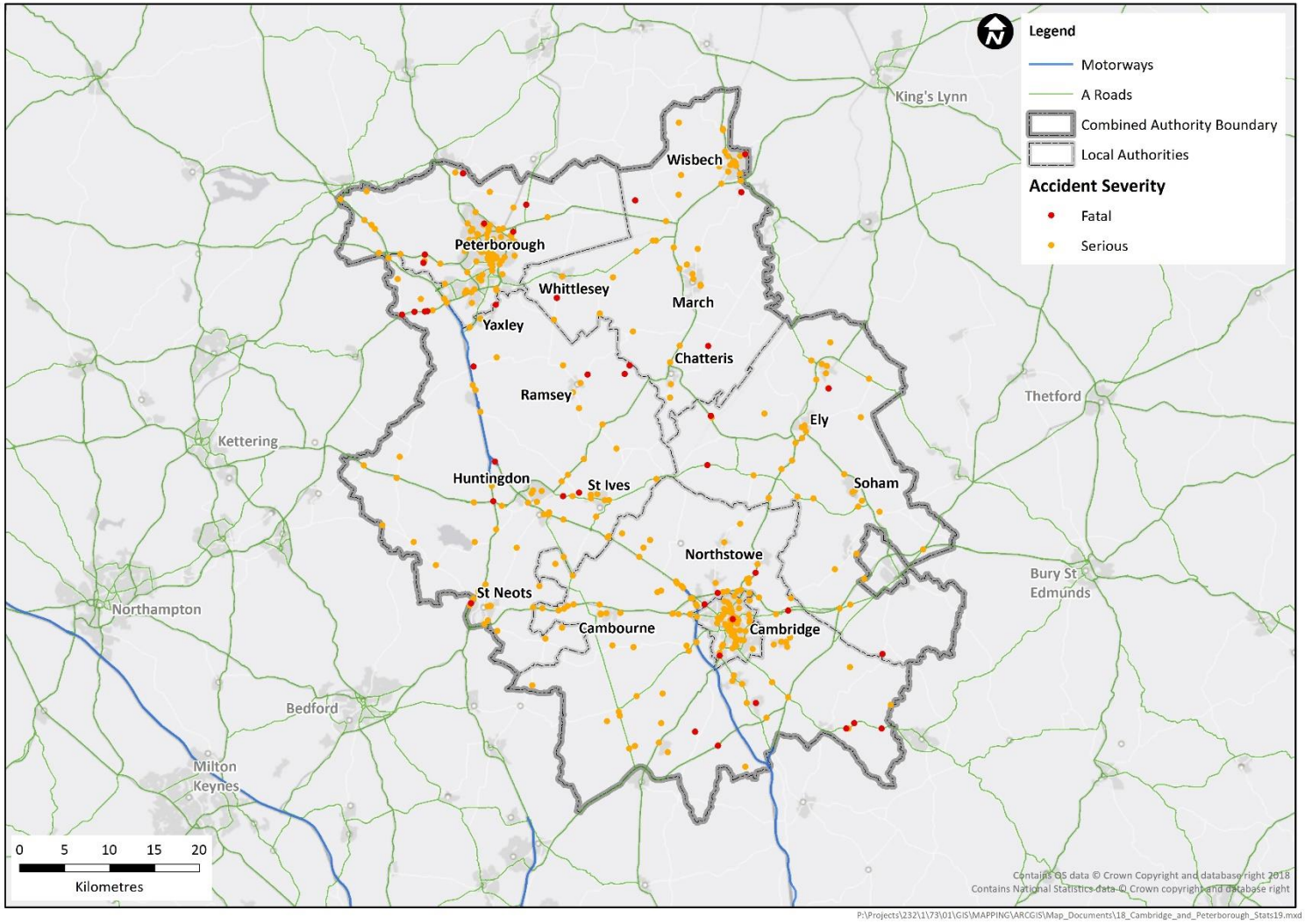
2.109 Figure 2.15 shows the serious and fatal accidents across the Cambridgeshire and Peterborough area in 2017. As the map highlights there are higher numbers of serious accidents in the main urban areas, due to the higher concentration of vehicles. However fatal accidents are relatively evenly distributed across the area. Therefore, fatal accidents make up a higher proportion of accidents in rural areas than in urban areas, likely due to higher driving speeds and more dangerous driving conditions. A key accident 'black spot' is present on the A1139 to the Northwest of Yaxley, where three deaths were recorded in close proximity. However, the wide geographical dispersion of these accidents shows that it is only region-wide, rather than 'spot specific' interventions that overall will make the roads safer.

[33] Source: **Road accidents and Safety Statistics** (Department for Transport, 2018)

Implications for the Local Transport Plan

The Local Transport Plan must take on a 'safe systems' approach to road design. It should aim to put the human being at the centre of all future road developments, accepting that human beings make mistakes and aiming to minimize the consequences when they do. Broadly this approach considers life and health more important than any other factor, such as faster travel times, when designing roads. The setting of ambitious targets such as a 'vision zero' (zero road safety deaths) would help to focus attention on these issues.

Figure 2.15: Location of killed and seriously injured road users (2017)



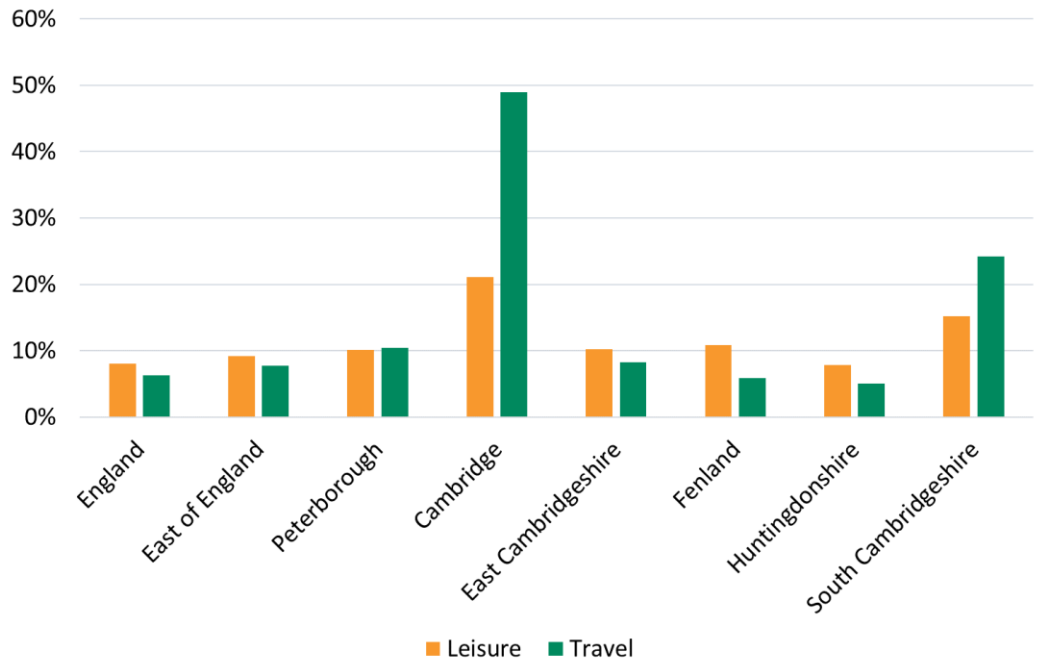
Cycling

2.110 Cambridgeshire is one of the best places in the country to cycle. Cambridge city boasts the highest mode share of cycling in the country with approximately one in three residents cycling to work. With a relatively flat landscape, over 80 miles of cycle lanes in Cambridge alone, and high-quality scenery and architecture, it is easy to understand why the propensity to cycle is so high.

2.111 Approximately £16 per resident is now spent on cycling in Cambridge each year, greater than anywhere else in the UK[34]. Cambridge has previously funded best-in-class infrastructure such as a multi-story, 2,850-space bike park at Cambridge station. Further investment of up to £17.4 million in dedicated cycling facilities, such as the Chisholm Trail, is being led by the Greater Cambridge Partnership.

2.112 As illustrated by Figure 2.16, in Cambridge, the proportion of people who cycle regularly is more than five times higher than the national average. Rates of cycling within Cambridgeshire and Peterborough are greater than the national average, except within Fenland. Unsurprisingly, cycle rates are lower in rural districts where a combination of increased travel distances and a lack of cycling infrastructure acts to deter travel by bike.

Figure 2.16: Regular cyclists in Cambridgeshire and Peterborough as % of local population.



Source: Department for Transport, Walking and Cycling statistics. *Note: "Travel" is considered any journey where a bicycle is used solely as a means to reach a particular destination whereas "Leisure" is considered any journey where cycling is a key component of, or the only reason for, a journey.*

[34] Source: **Greater Cambridge Partnership, 2015-2018** (Greater Cambridge Partnership, accessed May 2019)

2.113 Peterborough has a network of central routes and rural rides, including the 45-mile Green Wheel that loops around the city. While cycling mode share (to work) is greater than the national average, at 6% it is significantly lower than within Cambridge, and hence the provision of improved infrastructure offers the opportunity to increase cycling usage further.

Implications for the Local Transport Plan

The broad benefits of cycling as a transport method are increasingly recognised; both for the individual and society. Maintaining the already extensive cycling network at a high standard and encouraging the spread of cycling across the region should be an important focus for the Local Transport Plan. Linking the cycling network to other forms of public transport to encourage 'multi-modal' trips should allow cycling to become a more feasible transport method for longer journeys.

3 Cambridgeshire and Peterborough to 2050

Our future economy

3.1 Economic growth underpins the Devolution Deal between central government and the Combined Authority area. There are ambitious visions for the Cambridgeshire and Peterborough economy, with an aspiration to double Gross Value Added in the next 25 years. To fully unlock this potential multiple challenges and opportunities need to be addressed.

New employment sites

3.2 Businesses thrive in the Cambridgeshire and Peterborough region. As set out in the Cambridgeshire and Peterborough Independent Economic Review, indigenous companies (those which started in the area, or which have been in the area for more than fifty years) are growing considerably faster than the average. Designing an integrated transport and land-use plan that continues to encourage business growth is a key priority.

3.3 Employees want to work in locations that are well connected to their homes, public spaces and amenities. Ensuring that these new employment sites are accessible and integrated into the transport network will support the growth of businesses, by allowing them to attract a wide pool of employees. Shorter commute times will improve the quality of life for employees at these new sites.

3.4 Local plans across the region are supportive of new employment and housing development to encourage economic growth. For example, in Huntingdonshire a major new mixed-use housing and employment site is planned at Alconbury Weald. In Cambridge major development of the Biomedical Campus is planned and in Peterborough the University Campus Peterborough is expected to have 12,500 students by 2035.

3.5 Insights from the Cambridge Futures study suggest that there is a discrepancy between existing plans for infrastructure and housing development and employment growth. If current trends continue, the additional housing and commuting costs which arise from high employment growth will begin to deter businesses from locating in the area. Businesses will shrink and move away from the as costs soar. Preventing this from occurring is evidently critical to ensuring the region's future success.

Implications for the Local Transport Plan

Investment in transport will alleviate the increase in costs to businesses both directly (through reducing the inconvenience of travel and improving the accessibility of the labour force) and indirectly (through providing links to new development sites and the capacity to accommodate the additional journeys generated by those sites). Doing so should ensure that economic growth is not stifled by rising costs.

"A failure to invest in the development of infrastructure in and around Cambridge is the single biggest endogenous risk to growth facing the area. In our view, this is because the growth witnessed to date has not been matched by basic infrastructure, particularly transport" (Cambridgeshire and Peterborough Independent Economic Review, 2018)

Business connectivity

3.6 There is a large body of evidence which suggests that connecting people, firms and places more closely generates benefits. Through sharing common resources, increased specialisation, better matching of firms and employees, and knowledge spill-overs, productivity benefits are generated. Over time, improvements to the transport system and the resulting productivity gains can attract more high-skilled workers to the region, encouraging local people to invest in education and skills, and stimulating business investment.

3.7 Businesses in Cambridgeshire and Peterborough are predominantly located in and around Cambridge, Peterborough and the market towns. Transport investment in these areas will therefore increase the proximity of firms and employees, and may trigger relocation of economic activity as firms and households respond to new opportunities. Together, these changes create potential sources of economic benefits through three main mechanisms:

- **Significantly better connectivity,** which can support the intensification of economic activity in towns and cities and in turn can amplify productivity gains. Proximity and relocation shape the effective density of economic activity, and thereby productivity. This arises because of the intense economic interaction that occurs in economically large and dense places and explains why cities and other agglomerations exist.
- **Attracting investment,** by offering access to larger labour markets and greater business opportunities. Clearly signalled connectivity enhancement can lead to greater Foreign Direct Investment. Investments include residential development of land, the development of office centres or retail parks, or the redevelopment and regeneration of city centres
- **Labour market impacts** by allowing workers to access a greater number and range of employers and conversely, employers to take advantage of a larger potential labour force from which to recruit.

Implications for the Local Transport Plan

There is a direct link between improving connectivity and enabling a region's economy to thrive. To improve this connectivity transport linkages must be examined at all level, from international connections to the 'last mile'. Doing so should ensure that future transport investment is effective and delivers significant 'per pound' benefit to the regional economy.

Distributing Success

3.8 An important aspiration for the region is to spread economic growth and quality of life more evenly. As outlined in Chapter 2, most of the benefits from recent growth have been centred upon Cambridge and South Cambridgeshire. Districts such as Peterborough and Fenland have fallen behind, with lower levels of employment, income, skills and education.

3.9 At present, survey evidence collected for the Cambridgeshire and Peterborough Independent Economic Review suggests only one-tenth of the value of supplies to knowledge-intensive businesses in Cambridgeshire and Peterborough is sourced from within thirty miles, with more than a quarter coming from overseas. Securing a larger proportion of the supply chain sourced by high-growth, knowledge-intensive sectors from firms based within the area will help to ensure indigenous growth remains strong and benefits the whole region in the long-term.

Implications for the Local Transport Plan

Better transport connections within the region will allow companies to more easily acquire their supplies from local sources. This will ensure that the economic benefits of this 'supply-chain' are retained within the Combined Authority area, and spread the benefits of growth to areas which specialise in fields other than 'Knowledge-intensive' jobs. Additionally, better connectivity will widen the geographical area across which employees can search for jobs ensuring that the 'right' people are matched to the 'right' jobs.

New development sites

3.10 A Non-Statutory Spatial Framework (NSSF) has been developed in parallel with the Local Transport Plan. This sets out the Combined Authority's plans for delivering the ambitious expansion of housing and commercial space that is needed to meet the goal of doubling the area's Gross Value Added by 2050. Phase 1 was approved in March 2018 and included proposals on how existing housing allocations could be accelerated. Phase 2, which sets out principles for spatial development and a vision for sustainable housing and employment growth to 2050, is being consulted on alongside this Local Transport Plan. In advance of this, this Evidence Base has been informed by currently adopted Local Plans and the Cambridge Futures study. Overall, Local plans include targets for over 100,000 new homes, by 2036, with the location of the strategic sites shown in Phase 1 of the Non-Statutory Spatial Framework (NSSF).

3.11 The Cambridge Local Plan states that accommodation will be made for not less than 14,000 new dwellings within the city council boundaries between 2011 and 2031. However, this may not be enough to accommodate the expected population increase (a predicted rise from 123,900 to 150,000 from 2011 to 2031). The Plan wants to ensure that the city remains compact and retains most of its green belt. Development outside the City Centre will occur on the 'fringe', for example, 'Southern fringe' development around Clay Farm, Trumpington Meadows, Bell School and Glebe Farm The council understands the importance of transport for connecting these sites to employment and leisure opportunities, and would like to do so by predominantly moving away from the private car towards public and sustainable methods.

3.12 The Cambridge Futures study adds context to the importance of housing supply for the City of Cambridge. By projecting current rates of housing development and growth it examines the impact that under-provision of housing would have on the local economy. The study finds that the increased costs for businesses and individuals incurred through higher costs of living will start slowing employment beyond 2021, and cause it to decline beyond 2031. Developing new housing and the corresponding infrastructure which connects it to employment sites will therefore be crucial for fostering sustainable growth throughout the city.

3.13 Peterborough City Centre currently relies heavily on the car as the chosen method of transport, something the Local Plan is aiming to change. The Plan therefore expresses a preference for housing development within and around the urban area. These areas are more sustainable, since they make use of 'brownfield' and are closer to the City Centre where key employment and leisure facilities are concentrated. Unlike Cambridge, Peterborough does not have a network of surrounding market towns; the closest urban developments are all under 4,500 population.

3.14 New developments beyond these cities will have to carefully consider the impact that they have on the rural environment. This is something that has already been considered in local plans. For example, although 11,000 new homes are planned for the Fenland area, the local plan carefully notes that all new developments must be sustainable, not simply "growth for growths sake"[35]. The South Cambridgeshire local plan naturally reflects the fact that the district surrounds Cambridge, and recognises that much of its future development will be in order to facilitate development within the city. The development of New Towns on brownfield sites such as Waterbeach Barracks will form a key part of its spatial strategy. Ensuring that these towns are effectively connected to the city will be critical for ensuring their success as developments, and their potential to help solve housing shortages in the city. The East Cambridgeshire Local Plan aims to develop 11,500 new dwellings and maximise growth and job opportunities by providing a minimum of 9,200 new jobs across the region. Huntingdonshire is aiming to deliver over 20,000 new homes in the period from 2011-2036.

3.15 These new development sites will all be fundamental to ensuring future regional growth. However, failing to connect these sites to key amenities will render them ineffective. Further, poor connectivity will likely encourage use of the private car, worsening congestion on an already strained network and damaging the environmental quality. Encouraging users to make use of 'sustainable modes' will require careful consideration of how to best connect new developments to the current transport network.

Implications for the Local Transport Plan

Local plans across the region recognise the importance of new housing developments for ensuring their continued growth, and acknowledge that coherence between new transport plans and developments will be of high importance. All transport solutions linked to new developments should look to encourage movement away from 'car dependency' and encourage individuals to make better use of 'sustainable modes'. Several new developments already have 'sustainable transport plans' in place to encourage this mode shift. Ensuring coherence between the Local Transport Plan and these plans will make future development as sustainable as possible.

[35] Source: **Fenland Local Plan** (Fenland District Council, 2014)

Technological priorities

3.16 Technology will be a key 'enabler' for new transport development and Cambridgeshire and Peterborough are looking to be national leaders in this area. 'Smart Cambridge' are aiming to develop a digital platform to support the transport infrastructure investments taking place within Cambridgeshire and the wider area. They expect that key developments will occur in six main areas:

- Autonomy – This is a high-profile and complex area, where the technology is currently ahead of policy and regulation. The CAM (Cambridgeshire Autonomous Metro) concept is currently being developed and there are three companies involved with testing autonomous vehicles in the city. Potential areas for development include the development of 'shuttle' services to Park and Ride zones and linking main transport 'trunks' to surrounding areas.
- Connected vehicles – Developing the usage of real-time information generated by and shared across the transport network will help to improve decision-making by individuals and vehicles about the most efficient route for a given journey. Companies such as WAZE provide data on traffic information and in turn take users operations data and feed it back into their systems. The University of Cambridge have developed the platform for a similar system, but it has yet to be commercialised.
- Sharing – Cutting down on the amount of time vehicles spend unoccupied or used below capacity helps to reduce inefficiency in transport networks, and is being developed by providers such as 'Ofo bike' (a popular bike sharing service), and Ford Chariot (a minibus sharing service). Future developments may include options such as shared electric scooters.
- On Demand – Encouraging users away from the private vehicle, but still allowing them a high degree of flexibility should be enhanced by the growth of on demand technology. This is already employed by Uber, although they have not significantly penetrated the Cambridge market due to the pre-eminence of the Panther taxi company who have also made improvements in their use of technology.
- Integration – Allowing the transport network to function as one system will allow fluid movement of users from one mode to another. Ticketless travel technology is already available and widely used, for example the 'Oyster card' system in London. Advancements in this type of technology may involve the payment of monthly 'subscriptions', much like a mobile phone package, giving the user a pre-determined quantity of access to certain services.
- Electric vehicles – By encouraging the switch from fossil fuels to electric vehicles, the region should see a marked improvement in air quality and a reduction in road noise. Development of these technologies is well underway, the main limiting factors being affordability and battery life.

3.17 Many of these developments will only be possible if the appropriate infrastructure is put in place. Currently the electricity network does not have the capacity to accommodate a large fleet of electric vehicles. Developing 'smart grid' solutions will likely be important here, allowing charging of electric vehicles overnight, when power demand is already at its peak.

3.18 Mobile connectivity is widely variable across the region. In Cambridge, virtually all premises have 4G provided by three or more operators whilst in Fenland areas fewer than half of premises have this. Internet connectivity is increasingly important for personal transport planning; individuals are unable to effectively make use of networks if they are not provided with timely and accurate information. 'Connecting Cambridgeshire' is developing access to 4G networks, with county-wide accessibility predicted by 2022. Prompt development of a 5G network will also have a significant impact on travel opportunities. Automated vehicles will likely rely on 5G networks to make intelligent decisions, and Cambridgeshire and Peterborough are looking to develop this type of connectivity as soon as possible[36].

3.19 Policy will also have to be carefully designed to best make use of these new technologies., for instance, a policy stand point will need to be developed when autonomous vehicles start to arrive in the city centre.

3.20 These sorts of technologies are already developing within the Cambridgeshire and Peterborough region, for example, Echion technologies, a company linked to the university of Cambridge are current forerunners in battery technology which will be important for the development of electric cars.

Implications for the Local Transport Plan

Progressive policy and the construction of appropriate infrastructure will help to ensure that the whole region is poised to make use of future technology developments. In turn this will help to solve some of the issues brought by future growth. By making use of future technologies the region will ensure that its transport network becomes world-leading.

Our future society

3.21 The Cambridgeshire and Peterborough region is growing rapidly, and expects to see significant population growth by 2050. Peterborough is currently the fourth fastest growing city in the country. In parallel, the socio-demographic characteristics of residents are changing, meaning that expectations of the transport network and services may differ considerably from those which exist today. Since we cannot predict with total certainty all future travel trends the Local Transport Plan must put forward projects and policies which are resilient and flexible to accommodate different future scenarios.

[36] Source: **Cambridgeshire and Peterborough Independent Economic Review** (Cambridgeshire and Peterborough Independent Economic Commission, 2018)

A growing population

3.22 A growing population combined with the lack of housing in and around Cambridge has resulted in Local Plan recommendations for housing in new areas across the region. New transport infrastructure will support and facilitate this population growth, ensuring that new residents enjoy a high quality of life with convenient commutes and easy access to a wide range of opportunities amenities. Local plans across the region express a desire to encourage new developments to be predominantly served by sustainable transport. The Peterborough Local Plan is aiming to develop housing sites predominantly on sites close to the city centre, which should be adequately served by walking and cycling. In Cambridge, more extensive development will need to occur on the city fringes. The Local Plan states that these sites must all be located within walking and cycling access of a public transport stop, with the aim of greater integrating the transport network across modes.

Changes in travel demand

3.23 The elderly population in the region is growing. Elderly people often have distinct transport needs and preferences, such as accessible and safe public transport. Services such as Dial-a-Ride, which offer door-to-door access for those less able to use public transport may also see an increase in demand. Developing these services in rural districts where a greater proportion of elderly residents are located, will allow easier access to leisure, health and social care amenities for elderly populations.

3.24 Changes in travel demand are also likely to arise from lower levels of car ownership. The number of young people driving cars has been slowly declining over the past 25 years, due to factors such as the high cost of driving and a rise in less secure jobs[37].

Implications for the Local Transport Plan

Well-connected public transport is increasingly seen as key for a high quality of life. Public transport allows good levels of accessibility for all members of society. Developing the public transport network will therefore be crucial to ensuring effective connectivity for a large range of people as regional demographics change.

Labour market

3.25 As outlined in Chapter 2, the availability of skilled labour is an important driver of economic prosperity across the region. Progressive transport planning will attract more skilled and educated individuals to the region. Ensuring that it remains an attractive place to live and work will have important implications for future regional growth.

[37] Source: **Young Peoples Travel – What's changed and why? Review and Analysis** (Chattergee et. al., 2018)

3.26 'Placemaking' will likely have a key role to play here. Rising incomes mean that quality of life becomes an increasingly important factor in determining where an individual chooses to live. Particularly important factors include; the presence of a variety of consumer services and goods, physical characteristics of a given space and the quality of public services[38]. Providing a range of public transport options will be therefore be important for ensuring a high quality of life across the region. Flagship projects such as the 'CAM, Cambridgeshire Autonomous Metro' will also have a significant role to play, driving global recognition that Cambridgeshire and Peterborough is a forward-thinking and progressive place to live, helping to attract workers to the area. Ensuring that workers across the region are connected to employment sites will ensure that the individuals with the 'right' skills have access to suitable jobs. This will mean a wider range of opportunities are available for all and the regional labour market is deployed as effectively as possible.

Implications for the Local Transport Plan

Providing an effective and diverse public transport network, which is efficient and allows consumers a wide range of choices when deciding how to make a journey will be critical for the region's future. Enhancing the 'quality of life' enjoyed by all across the region should ensure it is an attractive place for workers to live. Improving connectivity should allow the labour force to be deployed more efficiently.

Transport Priorities

3.27 With a larger population, increased housing developments and new employment sites, pressure will be put on the region's transport system as more individuals use it on a daily basis. Without interventions to increase the capacity and to improve the quality of transport infrastructure, journey times and crowding are likely to increase, creating a negative effect on the region's economy and the quality of life of its residents.

Future travel patterns

3.28 Across all modes of transport, the number of daily journeys in the region is estimated to increase by approximately 350,000 by 2031, a 20% increase from 2015. If no interventions are put into place to tackle this growth, average journey times could increase by up to 14%[39].

3.29 A large proportion of this growth comes from private car use, which is estimated to grow by 22% across the region. Congestion is already an issue (as set out in Chapter 2), with many major roads at peak capacity, particularly on the radial routes into cities and market towns. Car journey times in the PM peak are set to increase by up to 18%, particularly in Cambridge, East Cambridgeshire and South Cambridgeshire, where peak-time journeys are often already delayed[40].

[38] Source: **Consumer City** (Glaiser, Kolko and Saiz, 2000)

[39] Source: Cambridge Sub-Regional Model 2 (2031 Foundation Case)

[40]Source: Cambridge Sub-Regional Model 2 (2031 Foundation Case)

3.30 Figure 3.1 illustrates the current congestion on the highway network, and Figure 3.2 shows the predicted changes to congestion from 2015 to 2041, sourced from the South East Regional Transport Model (SERTM) and based on national growth forecasts. This model predicts that there will be significant growth in the number of commuting trips originating in the areas around the City of Cambridge (particularly to the North-East and South-West), and to the West of Peterborough, which will result in a consequent increase in traffic congestion. The A47 between Peterborough and Wisbech, together with radial routes serving Cambridge, all see notable rises in congestion between 2015 and 2041.

3.31 Congestion around Cambridge city is already at a high level, particularly on radial routes extending from the city centre. This congestion progressively worsens on all routes except the A14 to the North West of the city, where the A14 Cambridge – Huntingdon upgrade is expected to significantly reduce congestion levels. By contrast, the A14 to the east of the city, towards Newmarket, is expected to experience progressively worsening levels of congestion throughout the forecast period.

3.32 Increases in congestion within other urban areas are also seen, notably within Ely, Wisbech and Huntington. Despite forecast growth, the area in and around Peterborough has, and is forecasted to have, relatively low levels of congestion across the road network.

3.33 Proactively tackling congestion through a wide range of initiatives will be critical to ensure that congestion does not choke the road network. For example, in the Greater Cambridge Partnership has outlined a range of measures to tackle future congestion in Cambridge (where the congestion is currently most damaging) such as wider pedestrian and cycling infrastructure, a workplace parking levy and 'smarter' travel planning.

Implications for the Local Transport Plan

Targeting key congestion 'pinch points' with suitable schemes (such as A14 improvement works) is a start towards tackling congestion across the region. However, to make a significant difference to congestion more ambitious projects will be required such as the dualling of the A47. Ultimately giving users a wider range of viable, effective and enjoyable travel options beyond solely the private car will help to alleviate future pressure on the road network. Encouraging mode-shift to the 'active modes' and public transport will therefore be crucial for accommodating future travel behaviours.

Environmental Priorities

3.34 It is essential to maintain and enhance the outstanding landscapes and heritage of Cambridgeshire and Peterborough. Any new transport infrastructure must align with the objectives of the Strategic Environmental Assessment and avoid negative impacts on the built and natural environment.

3.35 Improvements to the A14 Cambridge to Huntingdon will include a major new bypass to the south of Huntingdon, an upgrade to 21 miles of the A14 and the removal of the viaduct in Huntingdon town centre, which currently dominates the skyline near the train station. Its removal will allow for a major redesign of the area, including urban realm improvements, a new public transport hub, and reduced noise and air pollution in the area.

3.36 Minimising congestion will reduce noise and air pollution, Cars idling in traffic lead damage air quality, with an idling engine being shown to produce up to twice as many exhaust emissions as an engine in motion. Reducing congestion will therefore not only reduce delays but help to improve the health of the region and its residents.

Implications for the Local Transport Plan

Transport infrastructure should benefit the environment in the long-run, by improving resilience to issues such as flooding and climate change. Careful planning should ensure that the development of any new infrastructure becomes a positive feature of, rather than damages, the local environment. Encouraging a shift towards 'active', 'sustainable' transport modes will markedly improve air quality across the region.

Figure 3.1: Congestion forecasting for 2015

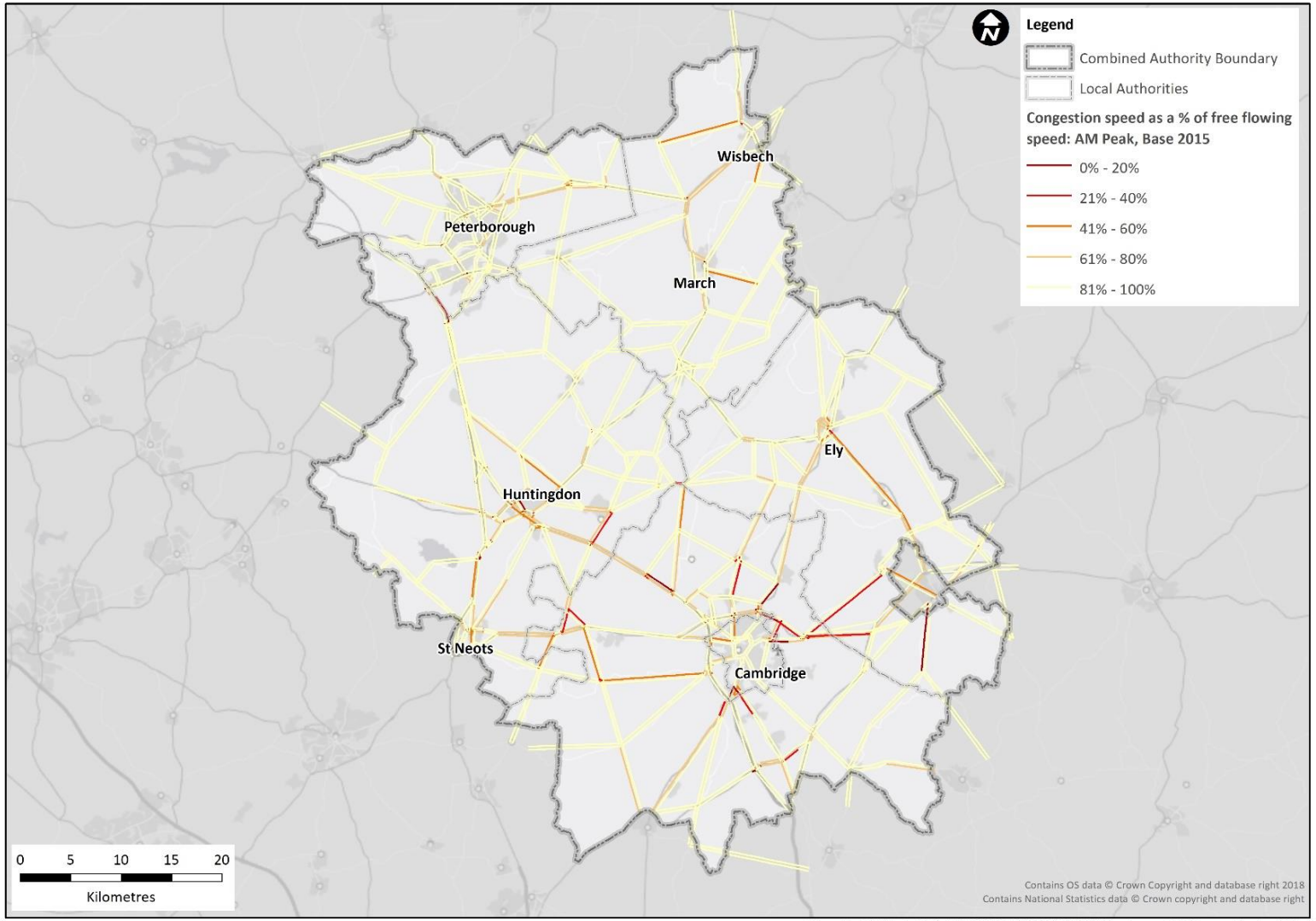
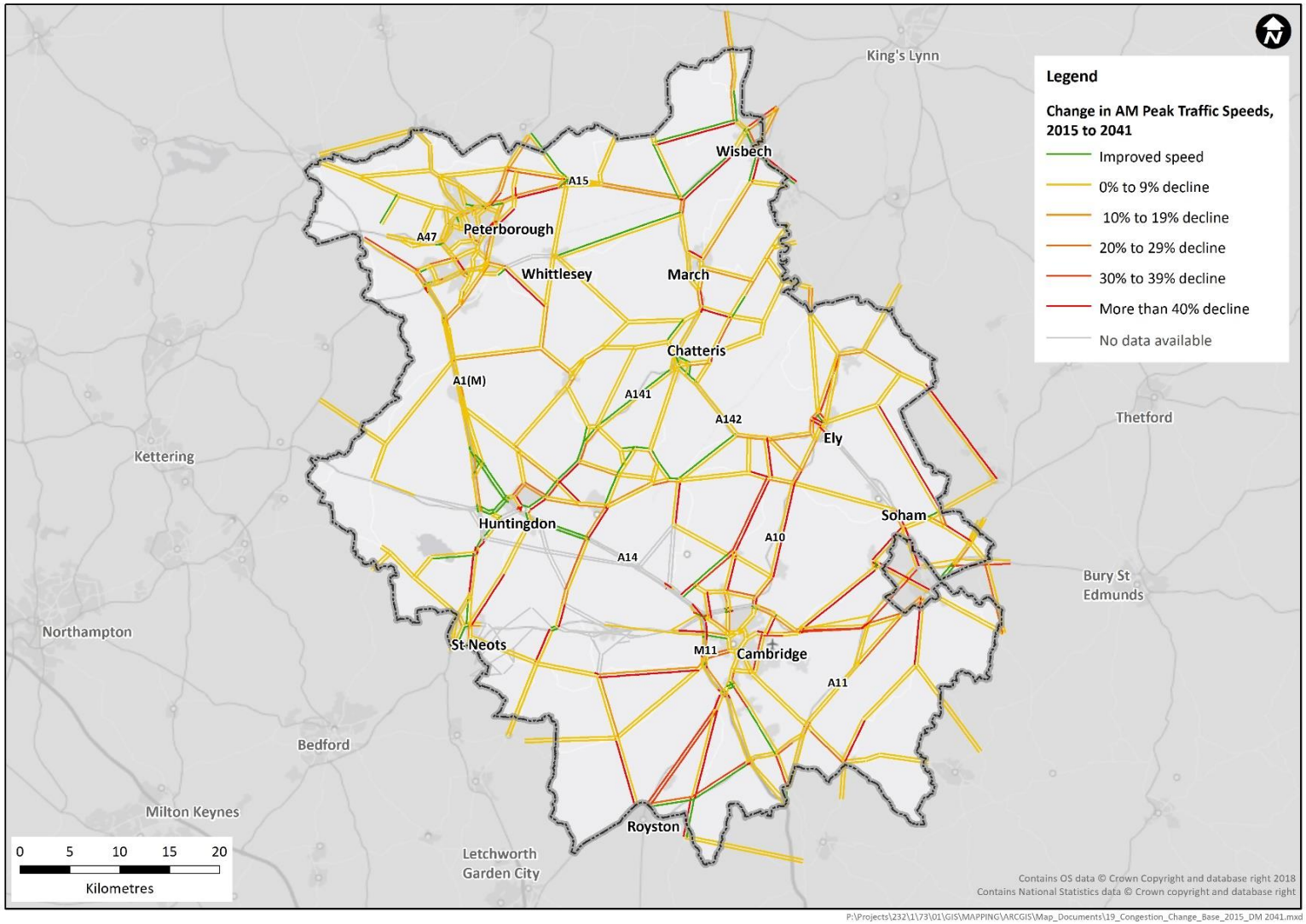


Figure 3.2: Change in congestion between 2015 and 2041



Conclusions

3.37 The recent growth observed across the Cambridgeshire and Peterborough Combined Authority area presents a range of future opportunities, but has also generated challenges, which must be effectively overcome if the region is to fulfil its future potential. Recent growth has been predominantly concentrated in the urban areas of Cambridge and Peterborough, bringing rises in living standards but laying the foundations for future issues. Congestion is rising in these cities, along with house prices, and if current trends continue these cities will become much less 'liveable' in the coming years.

3.38 Outside these urban areas, the 'third economy' of the Combined Authority has benefitted little from recent rises in prosperity. This widening disparity is increasingly visible, and steps must be taken now to tackle this issue. Failing to do so will exclude large sections of the population from enjoying the benefits of future prosperity, and ultimately hurt future growth.

3.39 These are large challenges and designing a clear and effective Local Transport Plan will have an important role to play in tackling them. Considering these issues, and the evidence provided in this document, the Local Transport Plan must focus on ten clear objectives. These objectives are all mutually supportive and will create a transport network that is efficient and reliable. However, the Local Transport Plan must look beyond simply improving the transport network and must aim to understand how transport impacts wider society. For the Combined Authority to continue growing it must remain an attractive place to live. As incomes rise, quality of life will become an increasingly important factor for determining where individuals and businesses choose to locate. The transport network will have a key role to play in ensuring that this quality of life remains high into the future despite future economic growth. To ensure that the transport network works effectively for residents, and fosters future development, the Local Transport Plan must:

- Support new housing and development to accommodate a growing population and workforce, and address housing affordability issues
- Connect all new and existing communities sustainably so residents can easily access a good job within 30 minutes, spreading the region's prosperity
- Ensure all of the region's businesses and tourist attractions are connected sustainably to our main transport hubs, ports and airports
- Build a transport network that is resilient and adaptive to human and environmental disruption, improving journey time reliability
- Embed a safe systems approach into all planning and transport operations to achieve Vision Zero – zero fatalities or serious injuries
- Promote social inclusion through the provision of a sustainable transport network that is affordable and accessible for all
- Provide 'healthy streets' and high-quality public realm that puts people first and promotes active lifestyles
- Ensure transport initiatives improve air quality across the region to exceed good practice standards
- Deliver a transport network that protects and enhances our natural, historic and built environments
- Reduce emissions to as close to zero as possible to minimise the impact of transport and travel on climate change

3.40 To achieve these objectives, the evidence in this document must be used to develop a clear and effective Local Transport Plan. Doing so will set a direction for future development and ensure that future growth and prosperity is realised across the Combined Authority.

Control Information

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