TRANSPORTEAST

DRAFT TRANSPORT STRATEGY

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Contents

Foreword

Cllr Kevin Bentley
Chair Transport East

The East is a fantastic region with talented people, innovative businesses and a wealth of natural assets. It is no wonder more people want to live, work and learn here. But it's fair to say our transport networks hold us back. Through Transport East, local authorities, enterprise partnerships, business groups and wider partners are working hard to change this.

Our vision is of a thriving economy for the East, with fast, safe, reliable and resilient transport infrastructure driving forward a future of inclusive and sustainable growth for decades to come. This Transport Strategy sets out exactly how we are going to do it over the next 30 years.

Transport shapes our day-to-day lives in ways we rarely consider. And the travel choices we make affect our neighbours, places, country and world.

Transport in the East is the biggest contributor to our region's carbon emissions; 42% of carbon dioxide emissions, the driver of climate change, is generated by transport, with the vast majority by road travel. Reducing emissions from our transport to net zero, in line with national government commitments, is going to need action at all levels from local decision makers

and transport operators to businesses and every single one of our 3.5million residents. Which is why decarbonising travel is a core priority in this strategy and Transport East is committed to working with partners across the region to develop the solutions which will reduce our emissions as quickly as possible.

This Transport Strategy has been developed through the COVID-19 pandemic, which has had a profound impact on our society, economy and travel. Bus and rail travel plummeted; people rediscovered the benefits of walking and cycling; work, shopping, appointments and socialising all moved online. The long-term impacts of the COVID-19 pandemic on our transport networks are uncertain. Some of the changes we have witnessed may prove to be temporary, while others may stick.

The changes seen through the pandemic are only one part of the picture. We're expecting high growth across the region with new homes and new jobs planned to 2050. Our forecasts indicate that with the right investment in the right places, by 2050 our region could be contributing £119bn to the Treasury. But we have pockets of high deprivation in places which need levelling

up. The East is also crucial to the flow of goods between businesses across the UK and the rest of the world – a changing relationship following our exit from the EU. Increased and better focussed transport investment is essential to addressing all these issues.

Our work to develop the region's first overarching Transport Strategy, through hundreds of conversations, has resulted in a set of priorities unique to the East of England. This document sets out a pathway to deliver each of them.

Creating a net zero carbon transport network

Connecting our growing towns and cities

Energising our coastal and rural communities

Unlocking our global gateways

These strategic priorities align closely with national ambitions to meet net zero carbon, level up our communities through improved access to jobs, skills, training and services, and advance global Britain.

The Transport East partnership covers a wide area, from Cromer on the Norfolk coast to Tilbury on the Thames. Over 5,000 square miles of different places, including Areas of Outstanding Natural Beauty, productive agricultural land, bustling urban centres, attractive market towns, and commercial hubs around ports and airports.

Our strategy is sensitive to the characteristics of local areas and communities. Transport interventions that work in the centre of Chelmsford will be different from those that work in Breckland, and different again from those that work for Harwich International Port.

Whatever the future holds, the Transport East Strategy has been designed to be agile and resilient to change. I look forward to working together to strengthen our voice to make the case for increased investment and make transport in the East better for everyone.

Cllr Kevin Bentley
Chair Transport East

Executive summary

The East is a fantastic region with talented people, innovative businesses and a wealth of natural assets. It is no wonder more people want to live, work and learn here. But it's fair to say our transport networks hold us back. Through Transport East, local authorities, enterprise partnerships, business groups and wider partners are working hard to change this.

We have been tasked by the Transport East partnership and the Department for Transport to develop a Transport Strategy to set a single voice for the future transport investment in the East and identify a pipeline of priority projects for the region.

What is Transport East?

Transport East was set up in 2018 and is the sub-national transport body for Norfolk, Suffolk, Essex, Southend-on-Sea and Thurrock. We bring together councils, business leaders and the Government to identify the transport investment needed to support sustainable economic growth in the region and improve people's quality of life.

Our role is to develop a collective vision for the future of transport in the region and set out the investment priorities needed to deliver it.

The draft regional Transport Strategy and supporting Investment and Delivery Programme set out our approach. These strategic documents will help us embed the region's priorities in the delivery plans of Government, Network Rail, National Highways, partners within the private sector and transport providers.

By enabling a single voice for the region's transport priorities, we aim to boost the region's capacity, capability, technical expertise and resources to help develop an improved, integrated and future-proofed transport network for everyone.

Together with our partners, we are working to make sure funding and policy decisions are informed by local knowledge, evidence and requirements so the region reaches its full potential.

The East's unique contribution to the UK

The East helps drive the UK economy. It is home to 3.5 million people and 1.7 million jobs. The region prides itself on providing a strong and diverse economy including manufacturing, agriculture, information and communications technology (ICT), clean energy production, financial services and tourism.

Some of our towns and cities are among the fastest growing in the country. The region's population is forecast to increase by up to half a million by 2041, with up to 566,000 new homes and 295,000 new jobs predicted by 2050.

The region is also essential for the UK's global trade, with 13 ports and 3 international airports. Half of the UK's freight containers are moved through the region and there are plans to grow these gateways. For example, the Government has designated two Freeports in the region; Thames Freeport at London Gateway and the Port of Tilbury, and Freeport East at the ports of Felixstowe and Harwich.

In the energy sector, some of the world's largest wind farms are being built off the region's coastline. Following planned investment in renewables and nuclear power generation at Sizewell and Bradwell, the region will also be the leading supplier of renewable energy to the UK.

The East is crucial to delivering Government ambitions to level up the country, achieve net zero and drive global Britain forward.

Transport challenges

The region covers a large area, with no major hub city. This means our transport networks are particularly important in supporting the regional economy, by getting people to work and goods to businesses.

Many journeys made within the region are difficult to make other than by car. This results in high transport related emissions – 42% of all carbon emissions in the region. Affecting people's health and contributing to climate change. The Government has clear commitments to cut transport related carbon emissions to net zero and the East is committed to leading the way on decarbonisation.

Poor connections are a particular challenge for many people living in our rural and coastal areas, making it difficult to access jobs, education and essential services. Two thirds of our rural residents live in a 'transport desert' where there is no realistic alternative to the private car. With communities cut off further by poor broadband and mobile provision.

Not only is the movement of people complex, so is the movement of goods. Our ports connect Britain to the rest of the world, but constraints in connections to these hubs slow deliveries, add cost and ultimately make it harder for businesses to trade internationally.

Major investment is needed in our transport networks to meet current and future challenges and to allow the region to fulfil its potential.

A regional Transport Strategy

An improved transport network can bring about much-needed change to the region, connecting people to opportunities for work, education and leisure, and supporting local economies. An improved transport network would also reduce emissions and improve the health of our residents. Key to this is a regional Transport Strategy to guide investment in the East over the next 30 years.

Through this strategy, we aim to overcome some of the transport challenges experienced, while also delivering a fit for purpose, high quality, inclusive and sustainable transport network that will be able to accommodate future growth in the area.

We began developing this in 2020 and we have been talking to the public and our partners to make sure it aligns with local ambitions and needs. We have also undertaken a detailed programme of technical work, including an Integrated Sustainability Appraisal (ISA), to inform the strategy. How we will deliver the Transport Strategy is set out in our draft Investment and Delivery Programme.

The strategy covers a wide area and reflects the diverse nature of the East and everyone who lives here.

Structure of the Transport Strategy

Vision

A vision of the future of transport in the East

Priorities

Four strategic priority pathways

Goals

Each pathway is made up of a series of goals

Actions

What Transport East will do to progress the pathway

Investment and Delivery Programme

Our strategic framework for prioritising current investment proposals and future iniatives to deliver the Transport Strategy focusing on six core movement corridors, and our urban, rural and coastal places

Our Vision

A thriving economy for the East, with fast, safe, reliable, and resilient transport infrastructure driving forward a future of inclusive and sustainable growth for decades to come.

Our vision has been developed together with councils, business leaders and other partners.

If we succeed, what will be different about our transport networks in 2050?:

- Better public transport connections accessible to everyone

- Places that make it easy and attractive for people to move around sustainably

- More reliable business and freight journeys, due to less congestion and fewer incidents

- A healthier, more active population – by making it easier to walk and cycle more often

- Cleaner, greener transport, helping to protect our local environment and the world for future generations

- Fewer journeys being made, partly due to better online connections bringing services into our homes

Strategic priorities

Our draft Transport Strategy sets out a series of four pathways to follow to deliver the vision.

Decarbonisation to net-zero
Working to achieve net zero carbon emissions from transport, building on our status as the UK's premier renewable energy region. Our decarbonisation pathway underpins the other three pathways in the Strategy.

Connecting growing towns and cities
Providing enhanced links between our fastest growing places and business clusters. Improving access for people to jobs, suppliers, services, and learning; enabling the area to function as a coherent economy and improving productivity.

Energising coastal and rural communities
A reinvented sustainable coast for the 21st century which powers the UK through energy generation. Supporting our productive rural communities and attracting visitors all year round.

Unlocking international gateways
Better connected ports and airports to help UK businesses thrive, boosting the nation's economy through better access to international markets and facilitating foreign investment.

Decarbonisation to net zero

Working to achieve net zero carbon emissions from transport, building on our status as the UK's premier renewable energy region.

By decarbonising transport, we can make life better for everyone in the region. We have set an ambitious target of reaching net zero transport by 2040, which is ahead of Government targets.

Goal 1:
Zero carbon growth by supporting authorities and developers to plan, locate and design new development that reduces the need for people to make carbon-intensive trips

Goal 2:
Reduce demand for carbon intensive trips through local living; making it easier for people to access jobs and services locally or by digital means

Goal 3:
Shift modes by supporting people to switch from private car to active and passenger transport, and goods to more sustainable modes like rail

Goal 4:
Switch fuels with all private, passenger transport, fleet and freight vehicles switching to net zero carbon fuels at the earliest opportunity

Connecting growing towns and cities

Enhanced links between and within our fastest growing places and business clusters. Improving access for people to jobs, supplies, services, and learning; enabling the area to function as a coherent economy and improving productivity

Strategic transport networks in the East are slow, congested and overcrowded. Some of our towns among the most congested in the country. Links between our towns by road and rail are also slow and can be unreliable. Onward connections to the rest of the UK are also poor, stifling the region's economy.

With the growth planned over the next 15 years, this will only become worse unless action is taken to tackle it.

Goal 5:
Improve connections and access within our urban centres through better walking, cycling and passenger transport, supporting sustainable access to services, education, training, jobs and leisure

Goal 6:
Deliver faster and more reliable connections between our growing places and to the rest of the UK, to support business growth, skills development and employment.

Goal 7:
Fully integrate transport networks, services and operations across the Transport East region, through a customer-focused approach, enabling seamless and safe end-to-end journeys by sustainable modes that are attractive to all

Energising coastal and rural communities

A reinvented sustainable coast for the 21st century which powers the UK through energy generation. Supporting our productive rural communities and attracting visitors all year round.

Across the Transport East region, 21% of people live on the coast and 33% live in rural areas, both much higher than the national average. Two thirds of our rural residents live in a 'transport desert' where there is no realistic alternative to the private car. Poor transport connections are exacerbated by poor digital connections.

With the right investment, transport can play a key role to level up our rural and coastal areas.

Goal 8:
Increase accessibility for rural communities to education, training, services and jobs through; better ways of taking people to places sustainably, supporting more local trips through closer provision of goods and services, supporting regional partners and the digital sector to pride alternative options to travel

Goal 9:
Improve connections along our 500miles of coastline, and connect our coastal communities to the rest of the region and the UK, supporting levelling-up and boosting our coastal industries

Unlocking international gateways

Better connected ports and airports to help UK businesses thrive, boosting the nation's economy through better access to international markets and facilitating foreign direct investment.

Ports

Our 13 ports are of international significance and collectively carry half of the UK's freight containers. They also move agricultural products and support the North Sea energy industry. Food, goods and energy are important to us all.

The reliability of journey times to key destinations is vital to ports and their customers.

Goal 10:
Improve capacity, journey time and reliability for freight and passenger surface access to ports

Goal 11:
Support our ports and the freight sector to switch to greener fuels through supporting infrastructure, electrified/ hydrogen-powered rail routes and road vehicles and supporting innovation in new fuel technology

Goal 12:
Modal shift of freight from road to rail or short-sea shipping and increase sustainable mode share of employees and passengers to and from ports

Airports

Airports have similar challenges to ports in terms of sustainable connections to and from both terminals and surrounding businesses.

The East is home to three international airports. Stansted Airport alone carries 10% of the nation's air passengers and is the third largest airport in the country for air freight. Southend and Norwich airports also provide important connections for regional markets, supporting business and leisure travel.

Located away from town centres, the airports need dedicated connections from many directions to maximise the opportunities for sustainable travel.

Goal 13:
Improve passenger and employee connections to airports through better and more sustainable surface access options

Goal 14:
Support the delivery of net zero aviation by 2050 through the government's Jet Zero approach and other mechanisms

Goal 15:
Shift modes by supporting people and employees to switch from private car to passenger and active transport to access international airports

Image: Stansted Airport, MAG

Core corridors

We have identified six core corridors which play a vital role in the movement of people and goods in the region. These corridors are the road and rail links between the region's growing urban areas, ports and airports, and the rest of the UK.

Further investment in the corridors is needed if the region is to reach its potential as a thriving, connected and multi-centred economy. As well as cross-region initiatives, we will be looking to deliver the four strategic priorities along these core corridors as part of our framework for future transport investment in the East.

Investment and Delivery Programme

We are responsible for identifying the region's strategic transport investment priorities through an Investment and Delivery Programme (IDP). This will be an evolving programme of schemes and initiatives to deliver the strategy. It sets out a pipeline of investment priorities to Government. This pipeline will identify gaps to accelerate a new generation of projects to speed funding and delivery e.g. active travel, electric vehicle infrastructure, passenger transport.

Our local transport authority members will continue to develop local projects through their Local Transport Plans.

Our Investment and Delivery Programme also outlines how we will assess our performance.

Integrated Sustainability Appraisal

An Integrated Sustainability Appraisal (ISA) has been carried out to inform and improve the Transport Strategy.

ISA is a statutory process for assessing social, economic and environmental impacts of strategies and projects. It helps make sure sustainable development principles underpin the strategy to protect the environment, people's health and equality.

Image: Peter Kindersley, Centre for Aging Better

Next steps

We will review the draft Transport Strategy and Investment and Delivery Programme in light of the feedback we receive through this consultation, along with recommendations from the Integrated Sustainability Appraisal. We will then seek approval from the Transport East Forum, our political leadership group, before submitting to the Department for Transport.

Once adopted, the Transport Strategy and Investment and Delivery Programme will set our future work programme and inform the plans of the Government, local authorities, operators and partners across the region. We will regularly update the Investment and Delivery Programme to reflect the delivery of projects and the evolving transport challenges the region faces.

This flexible approach will make sure the region continues to improve the quality of life for everyone, alongside supporting the Government in achieving wider national aspirations for new jobs and homes, levelling up, boosting international trade, and achieving net zero as we recover from the COVID-19 pandemic
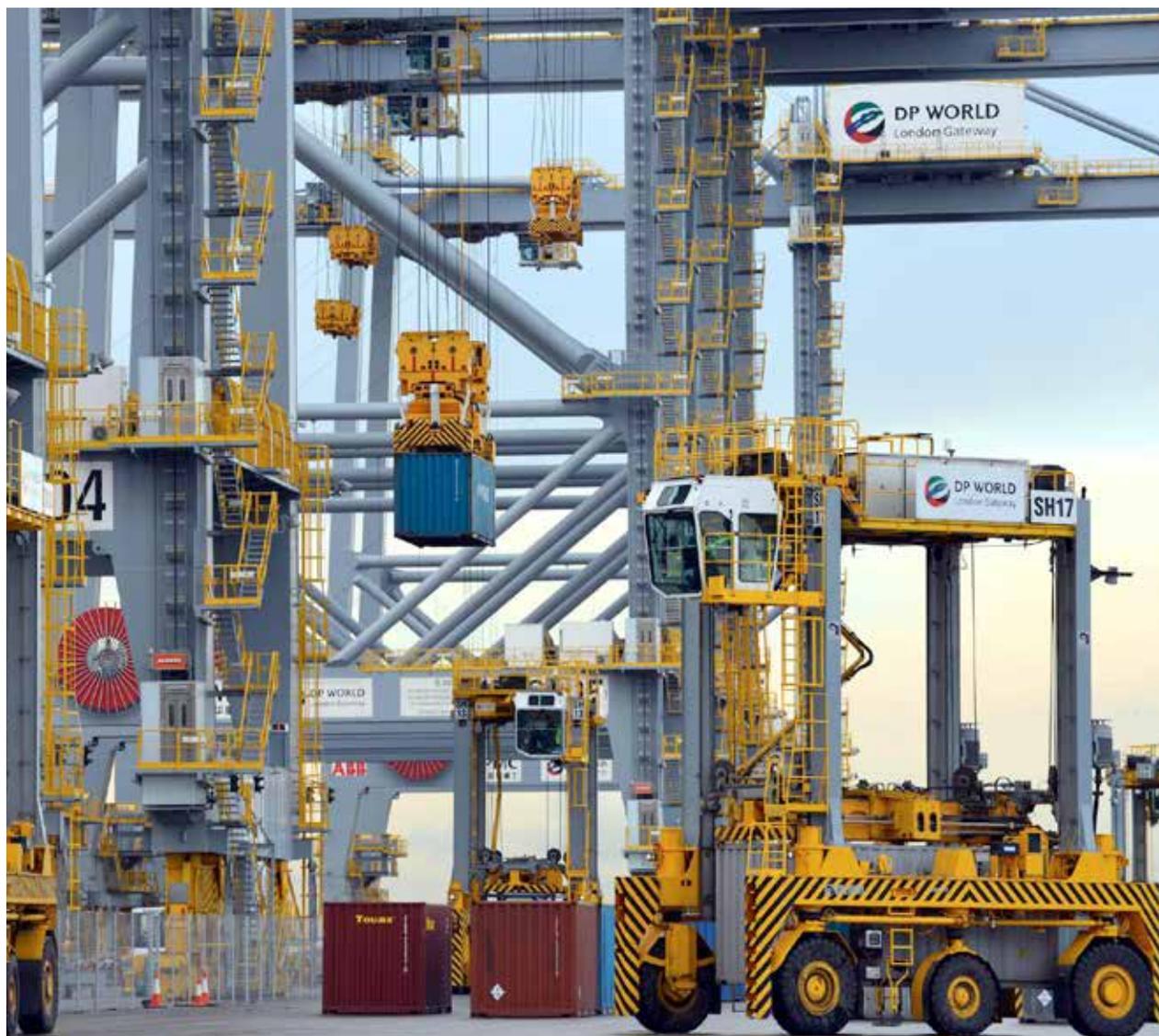
Image: DP World London Gateway

1.0
INTRODUCTION

1.1 Overview

This is the Transport Strategy for Essex, Norfolk, Suffolk, Southend-on-Sea and Thurrock setting the direction for transport in the region to 2050. It has been prepared by Transport East, a partnership that provides a single voice on transport for our residents, businesses, councils and partners, working in close collaboration with the Government and the rest of the UK.

The Transport East region is of huge importance to the UK. It is home to 3.5 million people and 1.7 million jobs. With a vibrant economy worth £73 billion, it is already one of the fastest growing regions in the UK outside of London.

It is only one of three regions to be a net contributor to the UK. Our forecasts indicate that with the right investment in the right places, by 2050 our region could be worth £119bn. It is strong in multiple economic sectors including agriculture and food, clean energy, logistics and distribution, digital and ICT. It has 13 ports and three airports, and is a leader in green energy production.

However, significant transport challenges must be overcome for the region to maintain productivity and fulfil its potential. The region covers a large geographic area and is multi-centred with no single dominant city. This means our transport networks are particularly important in supporting the regional economy.

Many of these journeys are difficult to take other than by car. This car-dependency contributes significantly to high transport emissions and localised poor air quality, with emissions well above the national average. The government has set a clear commitment to decarbonising transport and the East will need to play its part in reaching net-zero targets over the next 20 years.

Poor connections are a particular challenge in many rural and coastal areas, making it difficult to access jobs, education and essential services. This transport isolation is compounded by a relative lack of access to super-fast broadband. Both contribute to high levels of economic deprivation, with people experiencing poorer health and difficulty accessing high-quality, affordable housing. Urgent action is needed to level up these areas through better connections, enabling deprived areas to prosper.

Fast-growing urban areas are already heavily congested, contributing to poor air quality and restricting economic growth in town centres. Attracting people to public transport services in towns and cities is difficult when the whole system is not joined up – different operators, fares, connections and services make planning journeys and navigating the network hard for customers.

Connections between our main towns and cities also suffer from capacity constraints. Delays across our strategic 'A' roads are commonplace and significant, hindering the movement of people, and goods to and from nationally significant international gateways like the ports of Felixstowe, Tilbury and London Gateway – constricting the growth of global Britain.

This Strategy seeks to overcome these challenges and deliver a high-quality, sustainable transport network for people in the Transport East region, resilient to the demands of future growth. A network that increases access to jobs, education, essential services and leisure. A network that connects businesses with their customers, supply chain and employees. And a network that reduces the significant environmental impacts of travel that are evident today, helping to deliver net zero by 2040.

This Strategy has been developed following extensive engagement with hundreds of partners across the region, and a detailed programme of technical work including an Integrated Sustainability Appraisal (ISA). This appraisal assesses our Strategy against key environmental, social, economic and public health objectives. It brings together for the first time a wide range of initiatives already being developed and implemented by government agencies through existing programmes such as the Roads Investment Strategy, and local authorities through their Local Transport Plans. It has also been aligned with wider economic, growth, health and tourism strategies for the region.

Our Strategy recognises good transport is a means to an end, and not an end itself. It will lead to a better quality of life for people in the region, levelling up by providing better access to more opportunities for work, learning and leisure. It will support businesses and drive economic growth by reducing costs, increasing productivity, and providing access to more markets and workers. Finally, it will enable desperately needed new development and housing.

1.2 | **About Transport East**

Transport East was established in 2018 as a new Sub-national Transport Body to provide a single voice for the future of transport in Norfolk, Suffolk, Essex, Southend-on-Sea and Thurrock. As a partnership, we bring together local transport and planning authorities and business leaders with Government and infrastructure agencies to identify the transport investment needed to fully support our members' shared ambitions for the region. We also drive value for money by improving the planning and delivery of interventions.

Transport East is:

- Developing and communicating a single regional Transport Strategy and strategic Investment and Delivery Programme (IDP), embedding our priorities in the delivery plans of government, Network Rail, National Highways, the private sector, and other transport providers.

- Elevating the work of local transport authorities, delivery bodies and Local Enterprise Partnerships by ensuring funding and strategy decisions are informed by local knowledge, outcomes and requirements.

- Providing leadership and oversight on strategic transport priorities which cross local authority or regional boundaries. Demonstrating investment decisions are locally supported, evidence-led, joined-up and made within the context of a long-term strategy.

- Enabling a 'single voice' for the region with the Department for Transport, infrastructure agencies (such as National Highways and Network Rail), service providers, and the region's major ports and airports.

- Enhancing regional capacity and capability through technical expertise and resources to help develop a coherent, integrated and future-proofed transport network.

The roles of the Transport East partnership in delivering this strategy are outlined in Table 1.2.1 However, we acknowledge the successful delivery of the Transport Strategy ultimately relies on local authorities, national agencies and private sector partners to deliver the infrastructure and services on the ground.

Table 1.2.1: Roles of Transport East

Lead Strategic Thinking	Strategic Co-Ordinator	Elevate work of partners	Influencer	Intelligence
Strategic direction and thought leadership for the East Lead regionally wide studies and strategies People centric approach: • Integrated • Multi Modal • Accessible Lead national and regional STB thinking on specific topics	Coordinate strategic investment pipeline • Assessing and prioritising schemes/projects • Monitoring scheme/projects delivery • Challenging outcomes where necessary to deliver strategic outcomes • Lead business case development for sub-national scale projects Coordinate partners on regional and national priority issues	Enable local partners to deliver at the local level Enable strategic bodies to deliver better strategic projects Accelerate outcomes by unblocking / speeding progress Adding capacity and capability to partners	Champion the East and Transport East Partnership Listening and understanding across local, sub-national and national partners Make the case for investment in the East Influence delivery bodies (Government, NH, NR) Single regional voice at a national level Collaborate to shift behavior across the region	Strategic transport expertise and capacity / capability Monitoring industry trends and innovation Lead a robust regional data, analysis, and monitoring function Sets standard and outcomes

1.3 | A region of opportunity

The potential for growth in the Transport East region is huge. The region has a strong and diverse economic base, with key strengths in distribution, manufacturing, information and communications technology (ICT), agri-technology, biosciences, clean energy production, financial services and tourism. Partners across the East of England region are committed to leading an inclusive, green recovery from the COVID-19 pandemic, capitalising on these strengths and delivering. By 2036 up to 140,000 new homes are planned in Norfolk and Suffolk and 179,000 are planned in Essex, Southend and Thurrock. Forecasting beyond this period is challenging, but our analysis indicates the Transport East region would need to accommodate up to another 247,000 new homes.

There are many international gateways of national importance in the region which are critical to the UK's economy and trade. These are planning for significant growth. The region is home to Felixstowe, the largest container port in the UK and London Stansted, the third largest airport. London Gateway and the Port of Tilbury, and the ports of Felixstowe and Harwich will also drive growth, innovation and decarbonisation through their designation as Freeports in the March 2021 Budget.

In the energy sector, some of the world's largest wind farms are being built off the region's coastline. Following planned investment in renewables and nuclear power generation, the region will be the leading supplier of renewable energy, providing power to 58% of the UK's homes.

Significant investment in transport is now needed to support future growth and level up the region by:

- Increasing the quality of life and prosperity for residents through reduced congestion and emissions, and improved access to jobs, education and essential services.

- Helping the area attract and retain skilled workers, by making the area a more attractive and a better-connected place to live.

- Better connecting businesses and workers across and beyond the region, creating a more integrated economy.

- Improving UK business efficiency and reducing the costs of shipping and travel, better connecting firms across the nation to global markets and suppliers, helping local firms to grow and encouraging firms to locate to and remain in the area.

Our forecasts indicate that with the right investment in the right places, Gross Value Added (GVA) generated by the region could increase to £119bn in 2050, and productivity could increase by over 50% from 2020 levels.

Regional wider outcomes our Transport Strategy will help deliver:

1. reducing carbon emissions to net zero by 2040

2. promoting active, healthy and safe lives for all

3. promoting and supporting a productive, sustainable and diverse economy

4. supporting access to education, training and employment opportunities for all;

5. facilitating the sustainable energy sector

6. helping our growing areas to develop sustainably to create high quality, inclusive, distinctive and resilient places to live, work and visit

7. protecting and enhancing the built and natural environment.

1.4 | A place-based approach

This strategy covers a wide area, from Cromer on the north Norfolk coast to Tilbury on the Thames, stretching inland as far as Waltham Abbey on the M25. Over 5,000 square miles encompassing areas with markedly different characteristics, including sparsely populated coastal Areas of Outstanding Natural Beauty, bustling urban centres like Norwich, Ipswich, Colchester and Southend, market towns like Bury St Edmunds and Wymondham, commercial hubs around major ports such as Felixstowe and London Gateway and Port of Tilbury in Thurrock, and airports in Southend, Norwich and Stansted.

The countryside in between is hugely diverse, home to important agricultural land, forest, heathland, areas of conservation, and the unique Norfolk and Suffolk Broads National Park; Britain's largest protected wetland.

Our Strategy reflects our unique places. It is sensitive to the characteristics of local areas and communities and recognises the drawbacks of 'one-size-fits-all'. The transport interventions that work in the centre of Chelmsford will be different from those that work in Breckland, and different again from those that work for Harwich International Port.

This ethos infuses a fundamental pillar of our strategy: decarbonising transport as part of the

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Impact of Covid-19 pandemic on transport
(average of daily percentage change between 24 March 2020 and 30 June 2021)

Rail travel	Bus travel	Car travel	HGV and vans	Cycling	Home working
DOWN 73%	DOWN 59%	DOWN 23%	DOWN 23%	UP 28%	UP x9
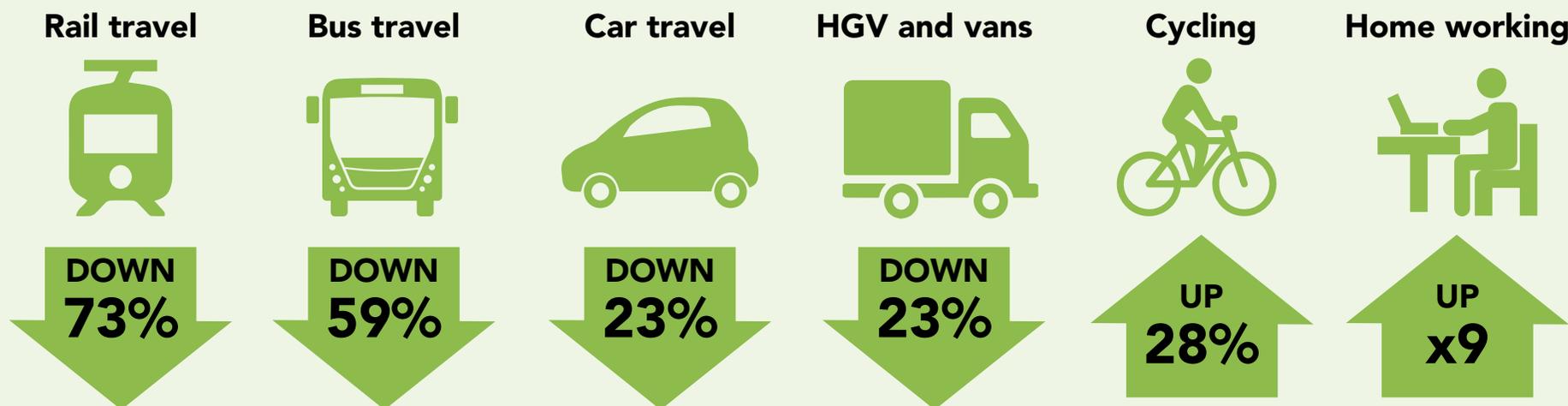
Ref: www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic

national drive to achieve Net Zero by 2050. This goal must be achieved through an approach that recognises the differing roles that transport plays in knitting together the community and the economy in different areas of the region.

The role of transport in unlocking new development and supporting the levelling up of deprived communities is a core element of the Strategy. Integrating spatial and transport planning and targeting transport investment in growth areas can help to facilitate development and lock-in sustainable travel behaviour at the outset.

Equally, transport investment can revitalise local communities and economies, improving access to jobs, education and essential services, helping businesses connect with customers and each other, and making places healthier, greener and more attractive to live, work and learn.

In urban centres significant investment in public transport, active travel and complementary constraints on car use will be an important part of the decarbonisation solution, where targeted investment is likely to deliver value for money. However, in rural and coastal areas, although active travel and public transport will have a significant role to play, good road transport is and will remain a vital cog underpinning economic activity and social cohesion. Here, driving the transition to electric vehicles, developing new demand responsive and mass transit public

transport and dovetailing transport interventions with initiatives such as the roll-out of super-fast broadband and digital services will be a critical part of the solution.

We recognise it would be unrealistic to deliver the same level of transport connectivity in every part of the region, it is important to focus on securing a threshold level of local connectivity; identifying and filling transport network gaps, addressing pinch-points, and encouraging targeted solutions to deliver wide benefits and value for money.

While we will also make the case for major investment in the strategic transport corridors connecting our region with other parts of the UK, this Strategy also recognises the benefits to communities and the environment of improving access to local jobs, education and essential services, and the negative impacts that regular long-distance journeys can have on local economies.

The extensive analysis undertaken to support the Strategy development considered in detail the unique characteristics of different areas within the region. This provided a robust platform for the development of a strategy that will make transport better for all our residents and businesses, regardless of where they are based in our region.

1.5 | A resilient and robust strategy

The Transport Strategy has been developed during the COVID-19 pandemic, which at the height of restrictions had a profound impact on society, the economy, and travel behaviour across the UK and beyond.

The longer-term impacts of the COVID-19 pandemic on our transport networks are uncertain. Some of the changes that we have witnessed since early in 2020 may only prove to be temporary, while others may lead to more fundamental, longer-lasting effects. The pandemic has also demonstrated the need to increase the resiliency of our networks to bolster against future economic shocks, the impact of climate change and other future risks.

This uncertainty adds to the complexity of developing a strategy, but it does not create an insurmountable challenge. Rather than creating new transport trends, the COVID-19 pandemic has served to accelerate existing trends (both positive and negative). Working from home[1] was already gaining popularity before the pandemic with trips per person per year decreasing by 20% between 1995 and 2019. Similar trends were also evident for Light Goods Vehicle (LGV) growth linked to online shopping and falling bus patronage, with the COVID-19 pandemic accelerating respective growth and decline.

These changes emphasise the need for an agile Transport Strategy. While rail travel demand is still some way below pre-pandemic levels, the bounce-back in road demand has been much more notable, with 29% of people likely or very likely to use their car more in the future[2]. An ongoing reluctance among some people to use public transport due to concerns about contagion risks 'locking in' unsustainable future travel behaviour focused on increasing use of the private car.

In contrast, in some areas the COVID-19 pandemic has resulted in a shift to more sustainable forms of transport, with 30% of people likely or very likely to walk more in the future[3].

With the right investment, this behaviour can be sustained. Local authorities in the region responded rapidly to initial changes in travel behaviour when the pandemic hit, implementing flexible infrastructure to support active travel. Building on this strengthens the future transport network and locks in sustainable travel behaviour.

The role of transport is closely tied to housing and job growth in the region. The impact of 12 different future scenarios were tested during Strategy development. These scenarios included varying levels of economic growth (High, Central, and Low), different spatial development strategies (Centralised and Dispersed), and alternative assumptions about future travel behaviour

(increased propensity for working at home and returning to traditional patterns of commuting to work).

Testing these scenarios has given Transport East confidence that the vision and strategic priorities set out in Chapter 2 are the most appropriate for the region, and flexible to adjust to any of the 12 scenarios arising.

Whatever the future holds, the Transport East Transport Strategy has been designed to be agile and resilient to uncertainty.

1.4.1: Results of Transport East's bespoke travel perceptions survey (December 2020 - January 2021, 652 responses)

How do you expect your travel patterns will change in the future?	Fewer journeys	Work from home more	Will use car more	Walk more
Likely or Very Likely	57%	52%	29%	30%
Unlikely or Very unlikely	23%	25%	47%	47%
Undecided	12%	7%	13%	10%
No Answer	6%	16%	11%	13%

2.0
THE CASE FOR ACTION

2.1 | The East's unique contribution to the UK

The Transport East region makes a significant, unique contribution to the UK economy, summarised in Figure 3.11. It is home to 3.5 million people and 1.7 million jobs.

It is essential for the UK's global trade with more international gateways than any other region: 13 ports and 3 international airports. Half of the UK's containerised goods are moved through the region, with port operations alone contributing over £7.6 billion in GVA in 2015. Stansted Airport carries 10% of the nation's air passengers, and the air freight sector in the region is worth £8.1 billion in GVA. This activity is critical to the national economy, to supply chains and to hundreds of thousands of businesses based across the UK.

The region also has a nationally significant clean energy sector, generating 60% of the UK's offshore wind energy, and is home to the Sizewell nuclear power station.

The tourist industry, centred largely around rural and coastal areas and including the Norfolk & Suffolk Broads National Park, is worth £8.8 billion and supports 240,000 jobs. The region also has major strengths in distribution, manufacturing, information and communications technology (ICT), life-sciences, digital and creative industries, financial services, construction, agriculture and food. It also provides a significant labour market for external business hubs like London and Cambridge.

Image: Tom Juggins from Unsplash

TRANSPORT EAST'S **SIGNIFICANT FEATURES**

A rapidly growing region with a vibrant economy.
We are crucial to a sustainable and outward-looking future for the UK.

1.67M jobs from **140,000** enterprises

Key Sectors

- Manufacturing
- Distribution
- ICT
- Agri-tech
- Biosciences
- Green Energy production
- Financial Industries
- Visitor economy

£73.5bn

GVA to UK economy

19% of the UK's freight tonnage in **2017** including over

50% of UK container traffic

3.5M residents

500 MILES of coastline

3 Airports
5 major ports
6 regional ports
2 free ports

1,000 wind turbines generating

£2bn Bioenergy industry

60% of UK's offshore wind energy
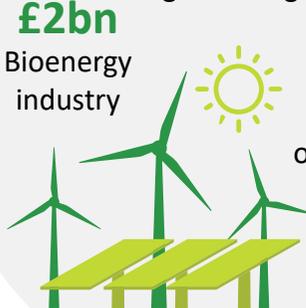
19,000 people **directly employed** in the East's energy sector

6,300 jobs in shipping contributing **£540m** GVA (2015)

£10bn tourism industry with **240,000** jobs

FIRST TWO Electric Vehicle forecourts in the UK

£727m agriculture economy

15% of farmed land in England is in the Eastern Region

22% of the rural population is over 65 years old

Significant growth is expected in the coming years, with the population forecast to increase by up to half a million by 2041, and 319,000 new homes and 167,000 new jobs planned for delivery in the next 15 years.

Some of our towns and cities are among the fastest growing in the country. Ipswich is ranked 7th of 46 towns and cities by the 2020 UK Powerhouse rankings in terms of GVA growth[1]. Norwich is part of the Centre for Cities Fast Growth Cities group and increased its local share of skilled residents at twice the rate of the UK as a whole between 2014 - 2018[2]. Basildon is ranked 9th in the country for number of businesses per 10,000 residents and is the fastest growing economy in Essex[3/4] with a long history of providing a base for international advanced engineering and manufacturing firms. Major development is taking place to drive growth along the Cambridge-Norwich Tech Corridor and the UK Innovation Corridor between Cambridge and London. The Thames Estuary area is also earmarked for substantial homes and

jobs growth, with extended links to Kent via the proposed Lower Thames Crossing.

In recognition of the region's long-standing role as a gateway between the UK and the world, we have two designated Freeports – Thames Freeport and Freeport East. The Freeports will support innovative, net zero technologies and clean energy generation through support for capital investment, skills development and regulatory flexibility. Their status will help to drive economic growth and regeneration around the ports, boosting business activity and creating skilled, high-paying jobs.

The region can therefore play a major role in helping the Government deliver its ambitions to level up the country, achieve net zero, and drive global Britain forward. Increasing our contribution to the Treasury at the same time. However, without critical investment in our transport networks, current challenges will worsen and prevent the region, and country, from reaching its full potential, environmentally, socially, and economically.

These challenges are set out in the remainder of this chapter, which is structured around the four strategic priorities highlighted in Chapter 2:

Decarbonisation to net-zero

Connecting growing towns and cities

Energising coastal and rural communities

Unlocking international gateways

1 Irwin Mitchell UK Powerhouse Table 2020: https://irwinmitchell.turtl.co/story/uk-powerhouse-january-2020/page/6/4 (accessed August 2021)

2 Centre for Cities Fastest Growing Cities 2021: https://www.centreforcities.org/wp-content/uploads/2021/03/fast-growth-cities-2021-and-beyond.pdf (accessed August 2021)

3 Basildon for Business Why Businesses Chose Basildon: https://www.basildon.gov.uk/article/6386/Basildon-For-Business-Why-Businesses-Choose-Basildon (accessed August 2021)

4 Basildon Economic Growth Plan 2020 – 2024: https://basildon.gov.uk/media/10297/Basildon-Council-Draft-Economic-Growth-Plan-BEGP-2020-24/pdf/Basildon_Council_-_Draft_Economic_Growth_Plan_(BEGP)__2020-24.pdf?m=637395816147700000 (accessed August 2021)

Figure 2.1.2: Transport East Sub-National Area: Key Features

To the North and Scotland

To northern Europe and rest of world via northern sea routes

To the Midlands Wales and the West Country

To London and the South

To mainland Europe

To the Mediterranean, Africa and rest of world

London

Peterborough

Huntingdon

Ely

Wisbech

Downham Market

King's Lynn

Port of King's Lynn

Dereham

North Walsham

Norwich

Norwich Airport

Great Yarmouth

Port of Great Yarmouth

Lowestoft

Port of Lowestoft

Thetford

Diss

Newmarket

Bury St Edmunds

Stowmarket

Cambridge

Haverhill

Sudbury

Ipswich

Port of Ipswich

Felixstowe

Port of Felixstowe

Harwich

Harwich International

Saffron Walden

Letchworth Garden City

Stevenage

Bishop's Stortford

London Stansted Airport

Braintree

Colchester

Clacton-on-Sea

Welwyn Garden City

Harlow

Chelmsford

Maldon

St Albans

Epping

Brentwood

Basildon

London Southend Airport

Southend-on-Sea

Grays

Tilbury

Port of Tilbury

Purfleet Thames Terminal

London Gateway Port

Key

Transport East Study Area	
Regionally significant hubs	
Rail	
Roads (SRN/MRN)	
Housing growth	
Jobs growth	
Economic asset	
Airport	
Port	
University	
Nuclear power station - operational	
Nuclear power station - planned	
Offshore wind - operational	
Offshore wind - proposed/planned	

0   20 Kilometers

N

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Esri UK, Esri, HERE, Garmin, FAO, METI/NASA, USGS

2.2 | The decarbonisation challenge

Action is required across the UK to meet the Government's ambition for net zero carbon emissions by 2050. Without it, the impact of climate change will be acutely felt. Extreme heat and heavy rainfall are likely to become more frequent and sea levels will continue to rise. The disruption is likely to be significant, particularly for our low-lying and coastal areas that are highly susceptible to flooding.

Growth in the Transport East region means carbon emissions are heading in the wrong direction, increasing by around 200 kilo-tonnes per year before the pandemic. Transport is responsible for 42% of CO2 emissions in the region (well above the national average), with 96% of those emissions generated on our roads.

The root cause is three-fold. First, partly due to its dispersed geography and low population density, the region is dependent on private transport: 67% of commutes are made by car or van, and bus commuting is only half the national average.

Second, the take-up of zero emission vehicles has lagged behind other regions, in part because the infrastructure is not yet in place to effectively support a transition. Finally the region's roads also carry a disproportionate volume of freight traffic due the presence of nationally significant ports and logistics businesses along with a constrained rail network. Additionally, zero emission technology for Heavy Goods Vehicles is less advanced than it is for smaller vehicles.

Figure 2.2.1 and 2.2.2: Graphs showing the reduction in CO2 emissions needed to reach net zero transport and the cumulative CO2 saved depending on how quickly we reach net zero transport
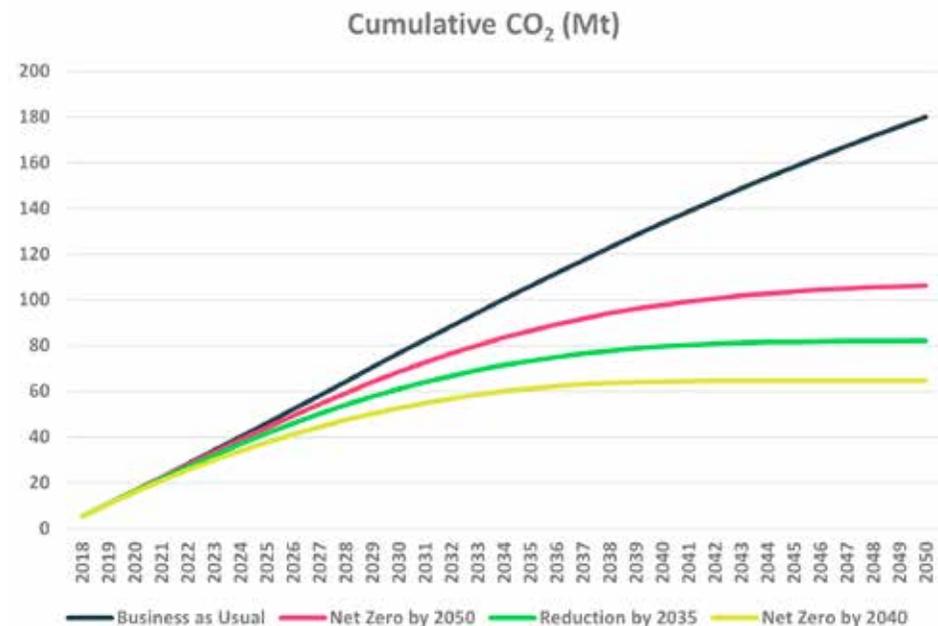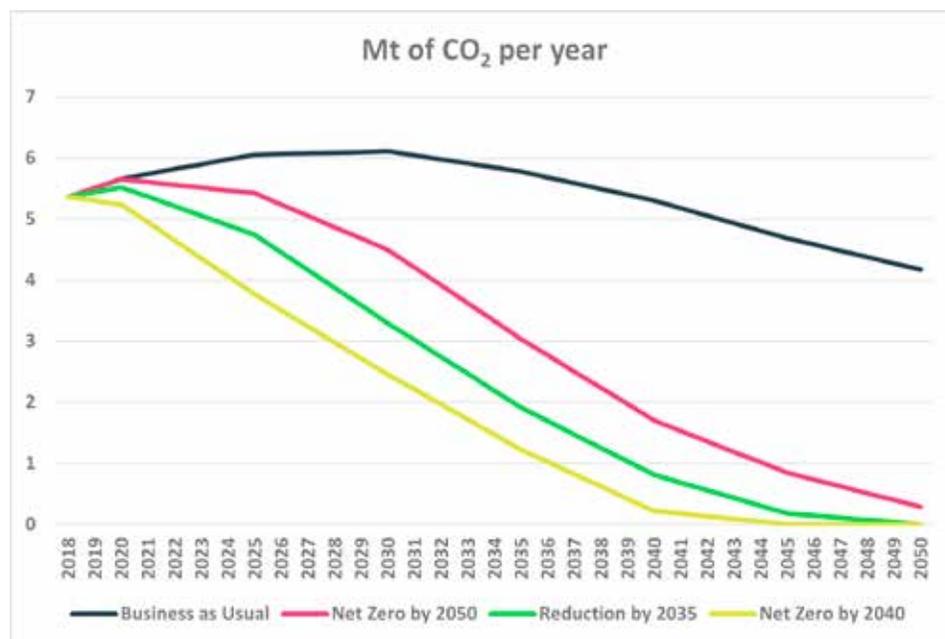

Image: Energy Systems Catapult

Image: Mike from Pexels

Transport East commissioned Energy Systems Catapult to understand the path to net zero transport for the region more clearly. They established a baseline of CO2 emissions and modelled the reduction in emissions required to achieve net zero by 2040 and 2050, and a reduction of 78% by 2035 (compared to 1990).

The work also looked at the differences in the production of carbon emissions in urban areas, rural areas and market/ coastal / larger rural towns.

The overall conclusion is we need a rapid and substantial change in our transport systems if we are to reach net zero in the next 30 years. The faster we can bring down transport carbon emissions the bigger the reduction in mega-tonnes of carbon released. (Figures 2.2.1 and 2.2.2)

Getting to net zero transport by 2040 is a huge challenge and will take commitment and action from everyone and at every level in the region. This strategy sets out a pathway for the region to follow.

2.3 | Growing towns and cities

Dependence on the private car causes other problems beyond carbon emissions. Many of our growing towns and cities suffer from severe traffic congestion - Southend, Ipswich, Norwich, Chelmsford, Colchester, King's Lynn and Grays are among the most heavily congested urban areas in the country outside London, according to the National Infrastructure Commission. While they may be growing, the size and density of our towns and cities are much smaller than major metropolitan areas like Birmingham or even Nottingham, where creating strong walking, cycling and public transport networks is more straight forward.

Growth in these towns and cities has occurred in parallel with a decline in the use of more sustainable forms of transport. Between 2009/10 and 2017/18, the total number of bus journeys made in the region fell by 6%. Bus operating costs have also been rising and the commercial viability of many services was an increasing challenge even before the pandemic reduced passenger numbers further.

A downward spiral is occurring, with increasing journey times leading to more passengers abandoning the bus for the car, which in turn increases congestion, reduces operator revenues, and leads to bus service reductions. Before the

EV chargers per person

East of England*
1 per 3,900 residents

London
1 per 1,200 residents

Scotland
1 per 2,100 residents

South-East
1 per 2,800 residents

*Transport East region plus Cambridgeshire, Bedfordshire and Hertfordshire
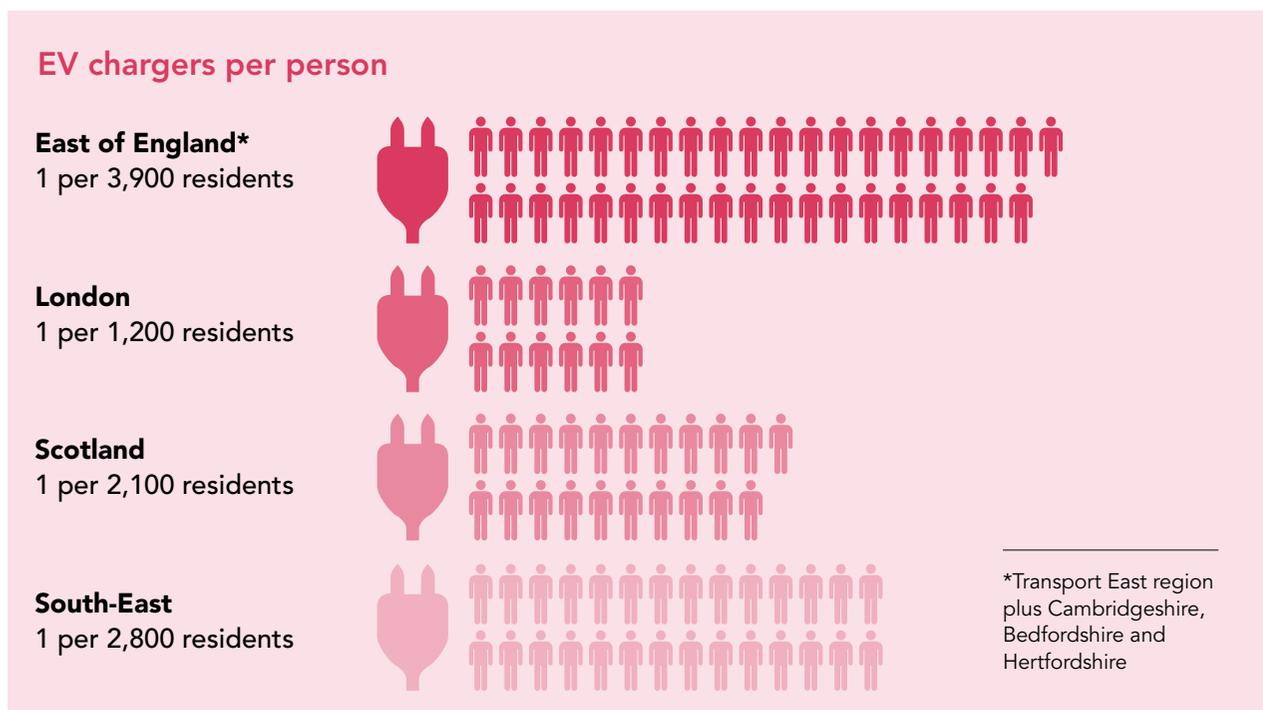
pandemic, 28% of people in urban areas in the region did not have an hourly or better weekday daytime bus service within 500 metres of their home.

The picture is similar across the county and the government has recognised the need for fundamental reform of bus services, setting out a new approach in *Bus Back Better* – a national bus strategy.

The pandemic has created opportunities to improve sustainable transport in our congested urban areas. On some days during the first COVID-19 lockdown levels of cycling increased by over 300% as motorised vehicles stayed off the roads. However, significant investment is needed, to lock in that shift.

Our growing towns and cities are also limited by pinch-points on connecting roads. Significant congestion hotspots are evident on motorways and main A-roads. In 2019, an average delay of 11.3 seconds per vehicle mile was recorded on the Strategic Road Network in the East of England, significantly higher than the national average of 9.5 seconds . Over half-a-dozen coastal towns in Essex, including Southend, are among the 10% worst connected urban areas in the UK by road .

Figure 2.3.1

Case Study: **Growing towns sustainably - Norwich**

An example of our many growing urban areas is Norwich and its surrounds. The Greater Norwich area has a population of 409,000 (2018), and 50,000 new homes planned by 2038. The city of Norwich draws on a large hinterland for its economic success, a pattern similar to many of the region's major towns and cities.

The city has a labour-market catchment of over 30 miles, including rural areas and market towns. Cars are the dominant mode of transport and over 90% of cars in the morning rush hour are single occupancy, resulting in congestion, noise and air pollution in the centre and on key access routes.

Norwich has already taken positive and innovative steps to tackle this challenge including a bike hire scheme, new bridges and routes for people walking and cycling, and bus priority schemes. Norwich City and Norfolk County Councils are committed to transforming the city's transport.

Image: Suzy Hazelwood from Pexels

The emerging Transport for Norwich Strategy includes a vision for an integrated transport system to support all residents and businesses with making sustainable travel choices, reducing congestion, improving health and supporting growth. Significant transport investment will be required in Norwich, and other major growing areas such as Ipswich, Chelmsford, Colchester, Southend and Thurrock, to realise their potential as major growth hubs in the East, and make sure this growth is zero carbon.

Rail networks were also at capacity before the pandemic. At peak times, the Great Eastern Main Line (GEML) operated at maximum capacity without the ability to run any additional trains into London Liverpool Street. C2C trains on the Essex Thameside Line were similarly busy and there are significant signalling constraints on the line between Upminster and London Fenchurch Street, severely restricting the opportunity to increase capacity. Network Rail is currently developing an in-depth study of the West Anglia Main Line (WAML) to address significant constraints on that line.

Limited east-west rail connections across the region adds a further challenge. The Ipswich–Ely Line via Bury St. Edmunds currently carries a passenger service that runs every two hours. The Norwich-Cambridge route via Thetford is hourly. These services link some of our major economic centres with key business destinations. Further south, there is a gap in cross country rail routes.

High levels of urban congestion and constraints on the transport networks between urban centres contribute to social and economic challenges in our towns and cities. One specific challenge is attracting and retaining businesses and highly-skilled residents to drive economic growth and boost productivity. The graduate retention rate across the region is just 53.3%, one of the lowest in England.

2.4 | Challenges in our rural and coastal areas

Transport constraints are also a significant challenge for rural and coastal areas. Over 38% of the population within the region live in rural areas and 21% live on the coast, both significantly higher than the national average. Car dependency is particularly high in these areas. The proportion of the rural population who can access employment and services by walking, cycling or public transport is lower than the rural average for England. A disproportionately high number of people in these areas are over 65 years, creating challenges around isolation and access to healthcare for those who do not have easy access to a vehicle.

Limited transport connections in rural areas are compounded by limited digital connections. Only a small proportion of rural areas currently have access to ultrafast broadband, which contributes to the levels of people who can work remotely - just 33% of the region's residents can work from home, compared to 46% nationally. As well as hindering people's access to the jobs market, this also restricts the potential for bringing services and goods to them, adding to traffic congestion.

While some coastal areas in the region are relatively affluent, poor connectivity is a significant contributor to high levels of embedded deprivation in other coastal places. High unemployment, low wages, low productivity and poor health are prevalent in these areas and can all be linked to inadequate transport, exemplified by towns like Jaywick on the Essex coast (see Figure 2.4.1). These challenges in some coastal areas have been exacerbated by the impact of the pandemic on important economic sectors such as tourism.

Figure 2.4.1

Case Study: **Transport challenges on the coast**

Jaywick, a coastal town in Essex, has been identified as England's most deprived neighbourhood. 57% of residents are either not in employment or require benefits to top up low wages. The town also ranks poorly in terms of health deprivation.

Poor transport is a factor driving these outcomes. The town does not have the economic strength to support local jobs, so residents must travel outside for work and services. The nearest rail station is in Clacton-on-Sea, accessible only by road. 33% of households have no access to a car and only two bus services operate in the town. Journey time to the nearest hospital is over an hour.

So poor transport limits residents' opportunities to access education, training and employment.

Image: Essex County Council

2.5 | Constraints at our international gateways

Many of the challenges affecting our growing towns and cities (as set out in section 2.3) also restrict the movement of goods and people to nationally significant ports and airports in the region.

On the road network, the A13 experiences some of the worst delays in the region, of 40 seconds per vehicle mile. This is a major artery serving the Port of Tilbury, London Gateway, and London Southend Airport (via A127). The A12, A120 and A14 are the main roads between the ports of Felixstowe and Harwich and distribution hubs in the Midlands and around London. All suffer notable congestion. Poor capacity on these routes is compounded by a lack of network resilience, with few viable alternative routes for Heavy Goods Vehicles.

Rail freight services travelling to and from major ports such as Felixstowe, Harwich, Tilbury and London Gateway also suffer from constrained capacity. While there have been some capacity improvements on the Felixstowe Branch Line, there remain significant constraints on the Felixstowe to the Midlands and North route outside the Transport East region, which forces trains to travel to and from the Midlands via north London adding unnecessary freight services onto the North London Line.

Our ports at Ipswich and King's Lynn play a crucial role in moving non-containerised cargo especially for the agricultural industry. The ports of Great Yarmouth and Lowestoft are well-established major centres for serving the offshore energy industry including the large concentration of offshore wind projects in the North Sea. Both are reliant on the A47 which there has been a long campaign to upgrade junctions and dual to increase safety and provide more reliable journeys.

UK container and roll-on/roll-off freight are both expected to grow by 130% between 2016 and 2050, which will place further strain on the transport networks serving our ports. Our expanding offshore wind farms power 1.8m homes with commitments to 40GW by 2030. The designation of two Freeports in the region will stimulate significant economic activity (see Figure 2.5.1) but will require further transport investment in the very near future for capacity to accommodate the additional demands.

If global Britain is to thrive, an ambitious plan is needed to address these challenges and allow our gateways to reach their potential as catalysts for international trade and foreign investment.

Figure 2.5.1

Case Study: **Unlocking transport access to our Freeports**

In March 2021, the Government announced two Freeports in the Transport East region: Freeport East (Felixstowe and Harwich) and Thames Freeport (London Gateway, Port of Tilbury and Ford Dagenham site). Freeports will provide businesses in the zone with tax and rates reductions, and a streamlined planning environment. This will help to drive economic growth and regeneration around the ports, boosting business activity and creating skilled, high-paying jobs.

However, while of huge benefit to the regional economy, the additional activity needs to be accompanied with better surface access to markets across the UK. Significant transport challenges already exist in connecting the ports.

Road access to Felixstowe and Harwich is hindered by significant bottlenecks on the A12, A120 and A14 and a lack of resilience.

In terms of rail, there are significant capacity constraints on the Felixstowe to the Midlands and North route both within and outside the Transport East region, including Haughley Junction and around Ely.

Access to London Gateway and Tilbury is reliant on the A13 and M25. Both routes are heavily congested with unreliable journey time.

Both ports have rail freight terminals, but these link into the Essex Thameside Line which is at capacity and heavily used by passenger trains, limiting the potential to move freight by rail. Investment is needed to electrify the spur to London Gateway and at Ripple Lane Yard to manage train paths through north London. Finally, current plans for the Lower Thames Crossing do not include the Tilbury Link Road, hindering connectivity to the Freeport and constraining the economic growth potential for the region.

Image: Port of Felixstowe

3.0
OUR VISION

A thriving economy for the East, with fast, safe, reliable, and resilient transport infrastructure driving forward a future of inclusive and sustainable growth for decades to come.

3.1 | Our vision

Our vision for this Transport Strategy was developed following a comprehensive review to identify current and future opportunities and challenges faced by the region up to 2050. This review, which is set out in Chapter 3, along with conversations with local authorities, business leaders and other partners, identified important wider outcomes that the Strategy should contribute to delivering, our four strategic priorities and six core movement corridors. Resulting in this full strategy and single voice for the investment needed for the region to deliver for its communities and the wider UK.

3.2 | Strategic priorities

The Strategy sets out a series of pathways to follow to deliver this vision, focused on the following four strategic priorities for transport, unique to the Transport East region.

Priorities

Decarbonisation to net-zero

Working to achieve net zero carbon emissions from transport by 2040, building on our status as the UK's premier renewable energy region.

Connecting growing towns and cities

Enhanced links between our fastest growing places and business clusters. Improving access for people to jobs, supplies, services, and learning; enabling the area to function as a coherent economy and improving productivity.

Energising coastal and rural communities

A reinvented sustainable coast for the 21st century which powers the UK through energy generation. Supporting our productive rural communities and attracting visitors all year round.

Unlocking international gateways

Better connected ports and airports to help UK businesses thrive, boosting the nation's economy and helping to level up communities through better access to international markets and facilitating foreign direct investment.

3.3 | Core Corridors

To apply the strategic approach to our unique region, our partnership has identified six core corridors crucial to the movement of people and goods, shown in Figure 3.3.1. These road and rail corridors linking growing urban areas, ports, airports with each other and the rest of the UK, will remain critical throughout the life of this strategy. Further investment will be needed along these if the region is to reach its potential as a thriving, connected, multi-centred economy, whilst reducing carbon emissions.

The strategic priorities and core corridors set the framework for the Strategy. Our strategic approach is set out in Chapter 4.

Figure 3.3.1: Strategic corridors in the Transport East region

Strategic corridors

Midlands - King's Lynn - Norwich - Great Yarmouth

London - Chelmsford - Colchester - Ipswich - Norwich - Suffolk Coast

Norfolk and Suffolk to Cambridge - Midlands - South West

Stansted - Braintree - Colchester - Harwich and Clacton

King's Lynn - Cambridge - Harlow - London

South Essex - London - Thurrock - Basildon - Southend
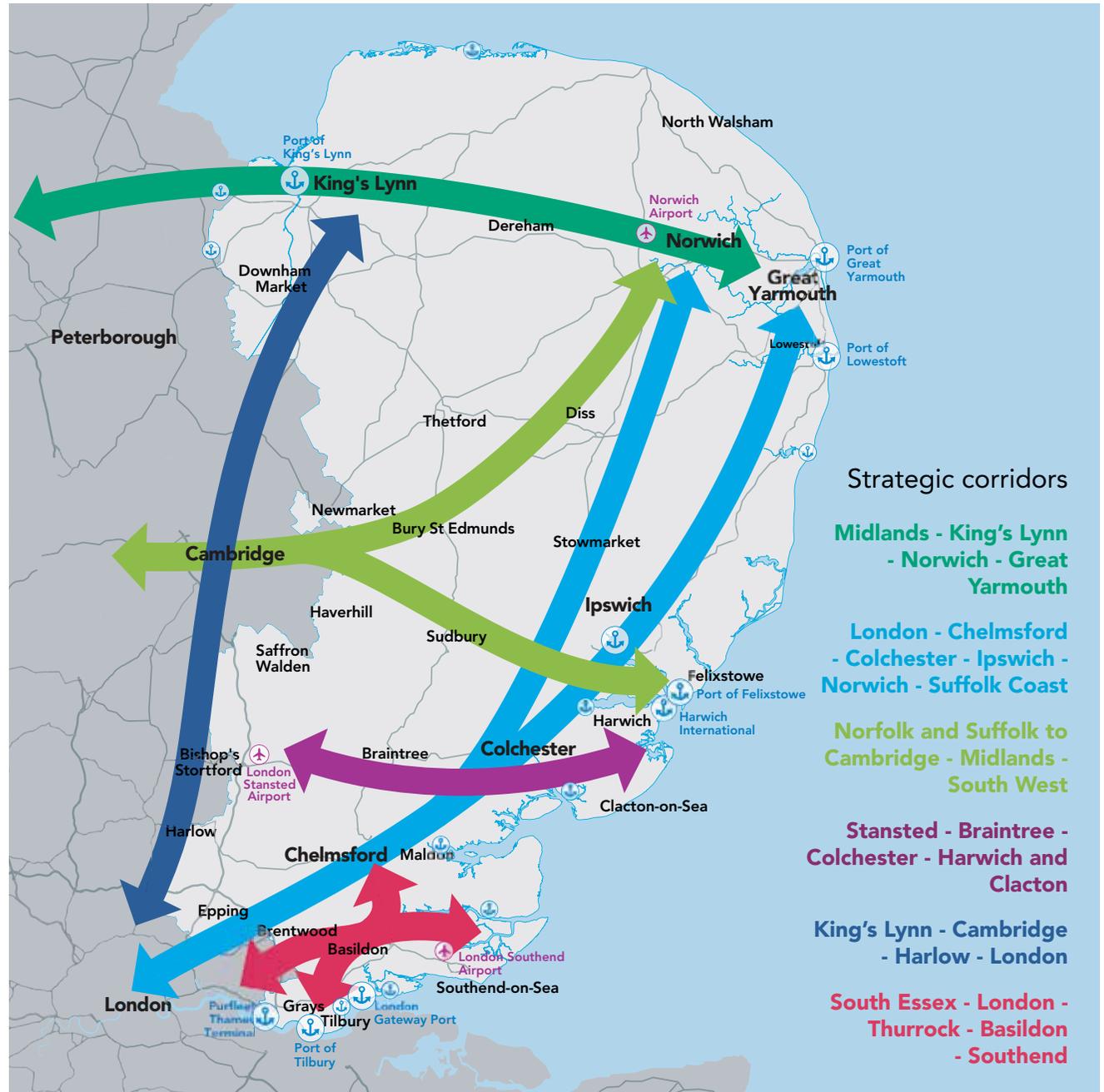
3.4 | Delivering the Strategy across the region

Delivering the Strategy will require a tailored approach sensitive to the unique characteristics of different areas of the region, as set out in section 1.4. Examples of what our vision and the strategic priorities mean for people in different parts of the region are set out in Figure 3.4.1

Figure 3.4.1: How our vision will be experienced by people and businesses in different parts of the Transport East region

Rural and coastal communities

- A comprehensive electric vehicle charging network.
- A flexible public transport network providing accessible, reliable connections to the nearest urban centres.
- An efficient, safe and well-maintained local road network providing good connections to important local destinations.
- High-quality, inclusive walking and cycling networks to local centres, public transport hubs and for leisure purposes.
- A high-quality public realm in and around villages, town centres and visitor attractions.
- Ultra-fast broadband and 4/5G mobile connections for all.

Larger urban areas

- High quality, accessible, fast and efficient urban public transport networks, e.g. buses, supported by dedicated infrastructure.
- Comprehensive, safe, high-quality, inclusive urban walking and cycling networks.
- Seamless interchanges to sustainable modes for 'last mile' trips into and out of urban areas (e.g. Park and Ride/ Park and Pedal).
- Faster, more reliable, road and rail links between towns and cities within the region and with important external destinations.
- Places and streets in towns and cities focussed on the needs of people rather than vehicles.
- Sustainable development concentrated around existing and new public transport hubs.

Ports and airports

- High speed, high-capacity strategic road and rail links providing reliable freight journeys between gateways and major distribution centres.
- Faster, accessible and more reliable road and public transport links for passengers between gateways, major urban centres within the region, and important external destinations.
- Efficient and well-maintained local transport networks connecting to nearby urban areas and local tourist attractions, providing access to local labour markets and encouraging visitors to stay in the region.
- Infrastructure to decarbonise the movement of goods.

4.0
STRATEGIC APPROACH

4.1 | Overview

This chapter sets a strategic approach to deliver the vision and objectives over the next 30 years. This approach is informed by our technical evidence base and engagement with hundreds of our regional partners, allowing us to understand the region's transport challenges and how we should tackle them.

Our approach is fully aligned with Government priorities to promote global Britain, deliver net zero and level up our country after the COVID-19 pandemic. It will boost the economy by increasing productivity and support the delivery of new housing. And it will do so in a way that preserves our unique built and natural assets for future generations.

This chapter sets out four pathways to deliver our strategic priorities:

- Decarbonisation to net zero;

- Connecting growing towns and cities;

- Energising rural and coastal communities; and

- Unlocking international gateways

The four pathways overlap and together form an integrated strategy for the region. The projects required to deliver this strategy will be developed through our investment pipeline and delivered by Transport East, Local Transport Authorities and national partners.

Our approach to managing this process is set out in the Investment and Delivery Programme document. This is a live and agile process to develop a continuous portfolio of projects to deliver our outcomes. Allowing us to remain flexible to changing circumstances, and embed new technologies and innovations as they emerge.

Our local authorities, businesses groups and regional partners have been with us every step of the way towards developing the pathways and the Investment and Delivery Programme.

A Strategy for everyone

Throughout this Strategy we have conscientiously considered the needs of people with protected characteristics under the Equality Act and those who suffer deprivation. Those with protected characteristics include:

- age

- disability

- gender reassignment

- marriage and civil partnership

- pregnancy and maternity

- race

- religion or belief

- sex

- sexual orientation

People do not experience the transport network and services equally, and we are committed to implementing changes across the region to make accessing and using our networks more equitable.

4.2 | Decarbonisation to Net Zero

Net zero carbon emissions from transport by 2040, building on our status as the UK's premier renewable energy region

Transport is responsible for 42% of all carbon dioxide emissions in the Transport East, well above the national average. Decarbonising our whole society is crucial to minimise climate change and we need urgent action to decarbonise our transport network. Our decarbonisation pathway underpins the other three pathways in the Strategy.

By decarbonising transport, we can make life better for everyone in the region. By reducing emissions we can improve people's health, as poor air is linked to asthma, strokes and dementia. Streets designed for people rather than vehicles will make it safer, and more pleasant for everyone to move around. Increasing people's activity through more walking and cycling can rapidly improve people's health and wellbeing. Reducing congestion will speed business journeys and deliveries, and make it easier for emergency services to get to people who need them.

The Government's *Transport Decarbonisation Plan* sets clear direction for everyone in the transport industry to meet net zero carbon. Locally, many authorities in the region have declared a climate emergency and have committed to council operations being carbon neutral by 2030. However, more needs to be done if net zero is to be delivered.

Our decarbonisation pathway sets out an overall aim of achieving net zero transport emissions by 2040. It promotes a four-step approach, building on the Royal Town Planning Institute's framework, interpreted for the East of England's unique situation. For the movement of both people and goods it applies the principles of:

1. plan for zero carbon
2. reduce demand for trips
3. shift modes
4. switch fuels

Image: Mike from Pexels

Figure 4.2.1

Decarbonisation Pathway

Achieving net zero emissions from our transport system at the earliest opportunity

Goal 1
Zero Carbon Growth

by supporting authorities and developers to plan, locate and design new development that reduces the need for people to make carbonintensive transport trips in the future

Goal 2
Reduce demand for carbon intensive transport trips

through local living by making it easier for people to access services locally or by digital means

Goal 3
Shift Modes

by supporting people to switch from private car to active and passenger transport, and goods to more sustainable modes like rail

Goal 4
Switch Fuels

with all private, passenger transport, fleet and freight vehicles switching to net zero carbon fuels at the earliest opportunity

Net Zero emissions from the regios's surface transport system by 2040

Decarbonisation Pathway

Goal 1

Zero carbon growth

Where people live in relation to their place of work, education or the services they regularly access, is a major factor in how they chose to travel and how goods get delivered to them. The Transport East region is planning 319,000 new homes and 167,000 new jobs over the next 15 years. If our goal to decarbonise the transport system is to be achieved, new developments must prioritise sustainable transport choices.

Building homes in places that help people travel sustainably

We will work to provide planning authorities with evidence needed to support new development in areas with the most potential to support sustainable travel, for example urban areas and locations around existing public transport hubs or in other areas where access to local jobs can reduce the need for longer distance commutes. This approach is supported by our scenario testing which indicates the location of regional development has a notable impact on the ability to decarbonise the transport system.

Through a transport decarbonisation framework, we will work with local authorities and national government to strengthen the evidence, guidance, funding structures and assessments to make sure planned new developments lock-in sustainable travel behaviour from day one.

This evidence framework will support local authorities to create robust Local Plans, Local Transport Plans (LTPs), Local Cycling and Walking Infrastructure Plans (LCWIPs) and public transport plans.

This strengthens planning guidance for developers, making sure they create robust plans to deliver ambitious and quantifiable carbon reduction measures, including reducing conventional private vehicle use and promoting sustainable modes of transport. These plans should be clearly set out in Transport Assessments and Travel Plans supporting planning applications. Our work will help strengthen national and local guidance for these documents so net zero is a central factor in decisions to grant planning permission.

Where new homes and places of employment are located also drives the movement of goods. We will work with partners to increase the efficiency of freight trips, for example through consolidation centres and shared vehicles for deliveries.

Designing places to encourage people to walk, cycle and use passenger transport

Integrating sustainable transport hubs should be a core element of the design of new developments. The design of the public realm should maximise opportunities for people to walk or cycle to sustainable transport hubs and local destinations. This means making sure routes are direct, inclusive, safe and secure at all times, a pleasant environment, provide plenty of space for prams and wheelchairs, and prioritise people walking and cycling over people driving including restricting through traffic.

High-quality and secure cycle parking should be provided, integrated with sustainable transport hubs. Parking for motor vehicles should be limited in places that are easily accessed by public transport. Infrastructure to support electric vehicle charging should be provided in new developments from day one, with on-site parking provision for alternative fuelled vehicles prioritised.

To help our partners deliver zero carbon transport developments, Transport East will:

- Create an East of England 'future network plan' and lead 'strategic corridor connectivity studies' to support local authorities with new evidence to:

  - Deliver new housing close to local jobs and essential services, and in areas with high levels of sustainable transport accessibility.

  - Complete reviews of planning applications to make sure associated transport proposals maximise opportunities supporting the use of alternatives to conventional motor vehicles, including electric vehicles and sustainable modes.

- Deliver a Future of Freight Plan for the East, to inform planning authorities, logistics businesses and their supply chains of the potential for consolidating freight transport at a strategic scale.

- Through our Decarbonisation Pathway and analytical framework, provide evidence and guidance to support local authorities and national government to strengthen carbon reduction requirements of Transport Assessments and Travel Plans for new developments in the East, including measures to reduce car dependency.

Decarbonisation Pathway

Goal 2

Reduce demand

Reducing the need for people to travel or dramatically shortening their journey is an important lever in decarbonising transport. The greenest journey is one that is not made. Here we focus on reducing the need to regularly travel long distances by encouraging a switch to more localised trips, through closer services or via digital means.

Providing digital connectivity as an alternative to travel

While not within Transport East's remit, we fully support local authorities, government, Ofcom and telecoms providers' existing strategies for all homes and workplaces in the region to have access to ultra-fast broadband and comprehensive, reliable 5G mobile coverage. This includes rural and coastal areas where good sustainable transport connections are more challenging to provide. Our partnership will work with these bodies to align their plans and this transport strategy, and support plans for digital connectivity to be built into new developments from the outset.

Digital highways

We will also work with government agencies, including National Highways and Network Rail, to embed digital connectivity in transport infrastructure and new transport schemes. This can boost productivity by helping people to work on the move and future-proof our transport network for emerging technology such as connected and autonomous vehicles.

Digital technology can also be harnessed to discourage travel at certain times of day, reducing pressure on transport networks at peak times. Private sector innovation should be encouraged to further develop existing applications that support optimal use of transport networks; for example, those that provide real-time travel information highlighting disruption, crowding, and congestion. These platforms can be used by individuals to travel at less congested times and by logistics businesses to plan freight transport.

Bringing services closer to people

Enabled by digital technology, local authorities are exploring innovative ways of bringing essential services closer to the people who need them. We support this approach as it reduces demand for transport and will work with councils to facilitate new approaches, for example, village clusters or community hubs which also improve access to transport.

To reduce the demand for travel, Transport East will:

- Work in partnership with government, National Highways and Network Rail to improve digital connectivity along main roads and railways, using evidence from our strategic network and corridor studies.

- Partner with the region's private sector to foster digital innovation, to make the best use of transport networks and discourage unnecessary travel at peak times.

- Coordinate with partners to make sure our Transport Strategy and Investment Programme fully aligns with and supports:

  - the Government and telecommunications providers' plans to roll-out ultra-fast broadband and 5G mobile in the region.

  - the work of our local authorities, developers, and telecommunications providers to embed improved digital connections in new developments across the region.

Decarbonisation Pathway

Goal 3

Shift modes

One of the biggest areas we can influence is creating a transport network that encourages people to walk, cycle and use public and shared transport instead of the private car (particularly single occupancy). Better services and infrastructure would mean more people can travel sustainably more often.

While we recognise not everyone will be able to shift to more sustainable modes of transport, more people using public transport, walking and cycling will also make journeys easier, safer and more reliable for people who have no other option than to travel by car.

Breaking down barriers to sustainable travel

We want our communities and visitors to feel safe, secure and confident in using low carbon modes, and to experience the economic, health and social advantages from doing so. This requires a unique approach in traditionally car-dependent region such as the East, tailored to our urban, rural and coastal places and the diverse needs of our residents and visitors.

Understanding our residents and businesses' challenges and barriers to mode shift will be critical to helping them reduce dependency on the private car. Our public survey in 2021 showed our residents need frequency, affordability, connectivity and safety to be addressed before they can realistically consider alternatives.

Our approach puts people at the centre, prioritising the efficient, safe, inclusive and sustainable movement of people, rather than the traditional focus on vehicle movements.

Supporting behaviour change

Changing mass behaviour is challenging as it requires individuals to be willing to change and for the wider environment to facilitate the change. Different groups of people respond to different environmental factors, based on their own circumstances. We must look at the transport system as a whole to support and empower people to choose journeys by low carbon modes.

For example, commuting by car accounts for a significant proportion of transport emissions in our region, and despite a shift to working at home through the COVID-19 pandemic, over 70% of people cannot do their job at home. A central component of our behaviour change approach will be delivery of the national Commute Zero programme with leading companies and large employers, promoting the use of sustainable modes being delivered and increasing initiatives such as car-sharing schemes to reduce single occupancy private vehicle trips.

These positive measures will encourage more people in the region to use sustainable modes of transport. However, delivering meaningful change will in some cases require a 'carrot and stick' approach. In larger urban areas, schemes to deliver improved infrastructure and services for people walking, cycling and using public should be developed in tandem with plans to reduce traffic volumes.

Re-balancing car use can take many forms, from reallocating road space to prioritise low-carbon modes of transport, to changing the price of parking or the number of parking spaces available, to charging to access particular areas at particular times of day. Holistic multi-modal strategies will be required, taking account of the unique characteristics of individual places and considering how new development can support a transition away from private car use.

To encourage people to shift modes Transport East will:

- Lead sub-national Active Travel, Bus and Rail action groups, and implement the recommendations of our bus and active travel strategies, to make sustainable transport easier to use and more attractive to people.

- Work with local authorities, government and businesses to deliver effective regional level public travel behaviour change campaigns, including Commute Zero.

- Create a new regional level analytical and modelling function to enhance the region's understanding of the barriers our communities face in shifting modes, where there is greatest potential for shift, and test new solutions.

- Lead the East's input into the future UK national approach to paying for transport so it delivers the best outcomes for the region. Build an evidence base and co-ordinate a regional level approach to traffic demand management measures to reduce private car use.

Decarbonisation Pathway

Goal 4

Switch fuel

We need to rapidly increase the proportion of net zero carbon vehicles on our roads at the earliest opportunity. Equally, we need to transition the rail network to clean fuels. Agriculture is also an important sector for the region which has unique and notable challenges in cleaning fuel. As the UK's leading clean energy region, but one of the highest emitting carbon regions, we have a unique opportunity to lead by example, using our own clean energy production to power our future transport. Reducing emissions from fuel not just reduces carbon but will also dramatically improve air quality in our 46 Air Quality Management Areas.

An electric car revolution

The public take-up of Electric Vehicles (EVs) is accelerating but the Transport East region continues to lag behind others in the UK. Our region is large and regular journeys take longer than in other parts of the UK, plus we also have relatively fewer charging stations. These both contribute to range anxiety for many drivers.

There needs to be a step-change in the provision of electric charging infrastructure in the places where people need it – at home, at work, in depots and on the road. There are many national, regional and local bodies that need to work together very closely to make sure the roll-out of charging infrastructure keeps pace with the take up of EVs, is equitable across communities and geographies and works for the customer.

Our region is at the forefront of clean energy generation but power supply is a constraint. Transport East has a strong role to play to align transport and energy infrastructure planning and delivery at the regional level. We will support National Grid, UK Power Networks and local energy suppliers to accelerate their improvement plans, so clean energy from our coastline can power EVs in the region.

As the take-up of EVs accelerates, we will work with local authorities to explore gradually increasing restrictions on carbon fuelled cars in larger urban areas and places with significant air quality issues, including the option for low emission zones.

Figure 4.2.2

Case Study: **Innovation in alternative fuels**

The Transport East region is leading the way in innovating to reduce carbon emissions from transport. The first electric vehicle charging forecourt in the UK – Gridserve – is in Braintree, Essex. It updates the traditional petrol station model for the EV age. The forecourt can charge 36 electric vehicles at the same time, with high-voltage charges delivering 200 miles of electricity in 20 minutes. The facility is powered exclusively by solar energy and includes food and drink outlets, a waiting lounge, toilets, a children's play area, a fitness centre and business meeting space.

The region is also home to Hydrogen East. At the forefront of hydrogen technology, this body focuses on bringing together organisations with an interest in hydrogen in the East of England. It researches new hydrogen markets, raises awareness of existing hydrogen opportunities in the region and promotes technology developments.

Image: Gridserve

It has identified Bacton on the Norfolk coast as a potential Energy Hub, harnessing its pipeline connections to Europe and to offshore gas and wind energy production sites. The site would have significant potential to provide hydrogen fuel for the transport sector as part of the drive towards net zero. Our Freeports are also exploring opportunities for expanding hydrogen production, storage and distribution.

Switching to cleaner passenger and fleet transport

Switching to electric cars is part of the strategy, but we must also clean all other vehicles. Our strategy embraces other fuels such as hydrogen, which could be a good solution for fleets and larger vehicles like buses and agricultural vehicles, for longer distance services in rural areas and for some rail lines.

We support our local authorities and businesses leading the way to accelerate plans to clean their vehicle fleets. We will also work with local authorities to develop regulation to support the transition of taxis and private hire vehicles in the region to zero emission technology.

Transport East is fully committed to working with local authorities and bus operators in the region to accelerate the transition to zero emission bus services. Greening the bus fleet in our region to zero emissions will play a key role in delivering net zero and should be cheaper to operate than petrol and diesel vehicles. They also create less engine noise and vibration, providing customers with a smoother ride. Plans for this transition should be included in Enhanced Partnerships and local Bus Service Improvement Plans (see section 4.3).

As with smaller vehicles, high upfront costs for zero emission buses presents a barrier to take-up.

We will collaborate with local authorities, bus operators and government to secure the financial support needed to adopt new zero emission buses, building on the promises in *Bus Back Better*.

On rail, electrifying lines is essential to decarbonising journeys. This can be done in stages with benefits to local areas being realised as sections of line are completed. Bi-mode trains which can switch between electric and diesel are already running in the region and coastal routes could be well suited to pilots of hydrogen trains.

The use of hydrogen for freight and port activities is also vital, and this is discussed in section 4.5 Unlocking international gateways.

To support the region to switch fuels Transport East will:

- Lead a region-wide Electric Vehicle infrastructure task force in collaboration with the Office for Zero Emission Vehicles, local authorities, neighbouring regions and other partners to accelerate the roll-out of inclusive charging infrastructure and identify the sub-regional actions need to unblock and speed delivery.

- Create a partnership with National Grid and UK Power Networks to make sure the roll-out of charging infrastructure in the East aligns with plans for upgrading electricity supply networks and is powered by clean energy sources.

- Coordinate partner organisations including Net Zero East, Hydrogen East, National Highways, Network Rail and local authorities to elevate and make the case for investment in the East to decarbonise vehicle fleets and networks, including operational fleets, buses, taxis, private hire, trains and freight.

- Accelerate the roll-out of ultra-rapid EV charging points on the Strategic Road Network, working with National Highways and using evidence from our strategic corridor connectivity studies.

- Work with government and partners to identify barriers to people and businesses switching fuels across our region and make the case for solutions that will work best in the East – potentially including plug-in grants for cars and financial incentives to support zero emission buses, taxis, private-hire and freight vehicles.

4.3 | Connecting growing towns and cities

Enhanced links between our fastest growing places and business clusters, improving access for people to jobs, suppliers, services and learning; and enabling the area to function as a coherent economy with improved productivity

The East has vibrant, successful places which attract people to live, work, learn, visit, invest, and do business. We want our growing towns and cities to be better places for people to do all this. To be easier to get between and around centres, to be safer and more pleasant for people, to be cleaner and help people live healthier lives.

Strategic transport networks in the East are slow, congested and overcrowded. Places like Southend, Ipswich, Norwich, Chelmsford, and Colchester are among the most heavily congested urban areas in the country outside London. With 319,000 new homes and 167,000 new jobs planned over the next 15 years, this will only get worse unless we work with government to tackle it.

We do not have one dominant metropolitan centre. Our £74bn economy functions through the connections between our 75 towns and cities, and neighbouring destinations such as London, Cambridge and the Midlands. Our market towns are also essential local hubs for surrounding rural areas. This means major roads and railways are critical arteries supporting the regional and national economy and are under significant pressure.

The region already has extensive infrastructure providing and supporting routes within and between towns and cities. This includes more than 645,000km of road, 17,000km of footways and shared paths, together with public rights of

Strategic Road Network
> 620Km

All other roads
> 25,500km

Footways/shared cycle paths
> 16,800km

Public ROW
> 12,200km

Bridges & structures
> 3,000

Street lighting
>21,800

Signals/controlled crossings
> 1,200
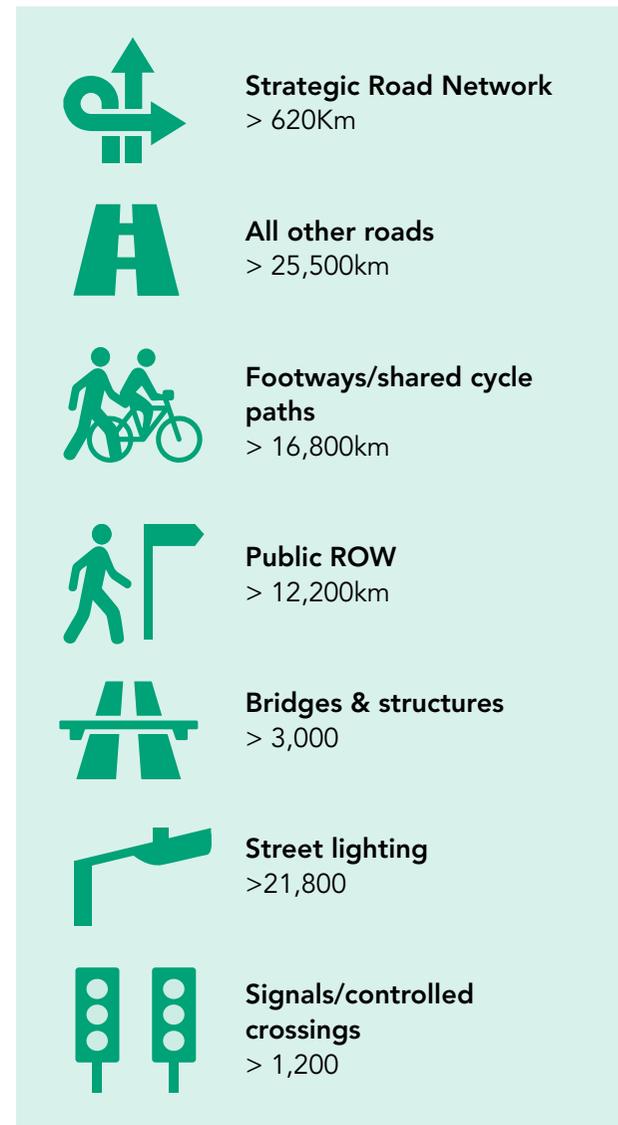
way, bridges and structures, street lighting. A sustainable approach to transport includes the need to look after these assets, to ensure they are maintained at a level that encourages people to walk and cycle and ensures that roads are safe to use.

Effective asset management needs funding certainty. A programme of work that delivers value for money, requires a multi-year approach to improvements, which can only be delivered with multi-year funding certainty. New infrastructure investment will also increase the level of assets to be maintained.

The Strategic Road Network (SRN) of motorways and main A-roads in the East of England has an average delay of 11.3 seconds per vehicle mile, significantly higher than the national average of 9.5 seconds. Journey times by rail are slow, for example train travel to Norwich from London takes nearly 2 hours, compared to London to Birmingham – a further distance - in 80 minutes.

Figure 4.3.1 set outs our current challenges, specifically high car mode share in urban areas and constraints on our major rail and road routes.

Figure 4.3.1 Urban Mode Share and Inter-Urban Transport Constraints

Key

| Transport East Study Area |
| Roads (SRN/MRN) |
| Rail |
| Road link capacity issue |
| Pinch point - Road |
| Pinch point - Rail |

Transport mode share levels (2011 Census data)
- Private transport
- Rail
- Bus
- Active travel
- Other

0 — 20 Kilometers

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Esri UK, Esri, HERE, Garmin, FAO, METI/NASA, USGS
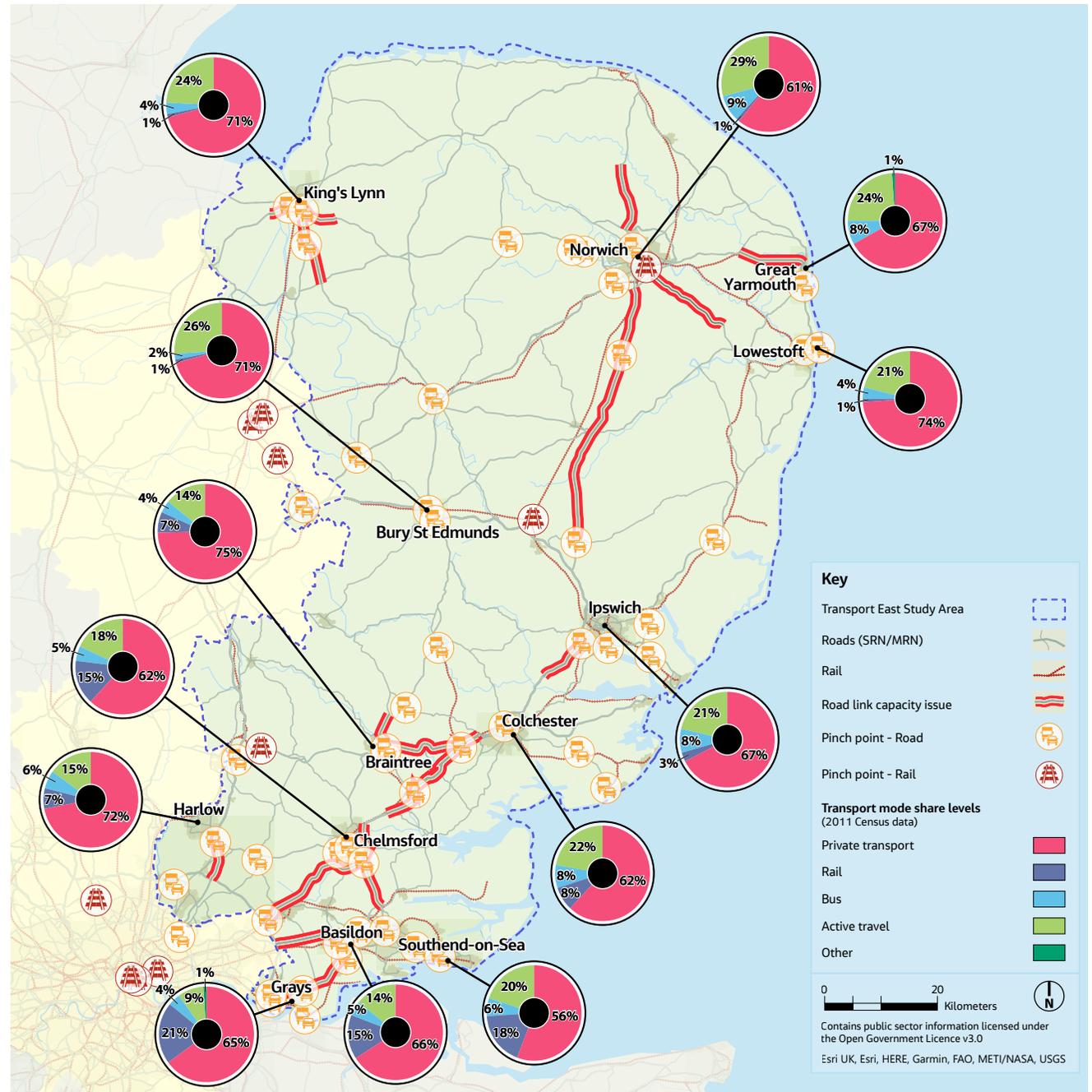
Figure 4.3.2

Connecting our growing towns and cities Pathway

Enhanced links within and between our fastest growing places and business clusters

Goal 5
Within our towns and cities

improve connectivity and accessibility for walking, cycling and passenger transport to support sustainable access to services, education, training, employment and leisure

Connected to the rest of the UK enabling the East to function as a coherent economy andimproving UK productivity and post-COVID recovery.

Goal 6
Deliver faster and more reliable transport connections

between our growing towns, cities and economic corridors, and to the rest of the UK, to support business growth, skills development and employment

Goal 7
Fully integrate transport

networks, services and operations across the Transport East region, through a customer focused approach, enabling seamless and safe end-to-end journeys by sustainable modes that are attractive to all people

Connections between our growing towns and cities that are as fast and frequent as all other regions in the UK.

A realistic sustainable option for every person for every trip.

Connecting our growing towns and cities Pathway

Goal 5

Better connections within towns and cities

Many of our towns and cities are built on historic foundations with limited road space, particularly in the centre. The forthcoming transition to

EVs will help reduce, but not eliminate, carbon emissions and improve air quality, but not reduce congestion, reduce road danger or improve people's health.

Tackling this needs a coordinated approach to deliver new infrastructure and services which encourage and prioritise walking, cycling and public transport, alongside measures to reduce traffic volumes in busy town and city centres. The benefits will not only be transport related - if we get this right, we can also boost local economies, and improve the quality of life of our 3.5 million people.

Physical inactivity is responsible for 1 in 6 deaths in the UK. Greater levels of regular exercise can reduce the impact of many health conditions relatively quickly. Building exercise into journeys through active travel like walking and cycling is one of the easiest ways people can increase their activity, improving health and quality of life and reducing the costs and resources required to treat poor health. The East has an older and aging population, so it is even more important that our transport systems and built environment make it as easy as possible for people to stay active as they get older.

What are the health benefits of physical activity?

Regular physical activity **REDUCES** your risk of....


| Dementia by up to **30%** | Hip fractures by up to **68%** | Depression by up to **30%** | Breast cancer by **20%** | Colon cancer by **30%** | Type 2 diabetes by up to **40%** | Cardiovascular disease by up to **35%** | All-cause mortality by **30%** |

Data: DfT Gear Change 2020

A walking and cycling revolution

Government has set a target of 50% of all trips in urban areas to be made by walking and cycling, and we share that ambition. There is significant potential for more people to walk and cycle in our towns and cities. However, they are prevented from doing so by safety and security concerns, lack of infrastructure, poor information, and other barriers. This results in people making a rational, or habitual choice to drive.

Successful walking and cycling improvements come from good data and analysis alongside meaningful community engagement. We must fully understand current walking and cycling activity and exactly where there are opportunities for more, to target future infrastructure investment. This should include harnessing new technology (for example using mobile phone data) to understand how people move, expanding conventional means of data collection including surveys, and using audits to understand the quality of existing routes and facilities.

All urban areas should have a Local Cycling and Walking Implementation Plan (LCWIP) to identify long-term urban walking and cycling networks and the supporting infrastructure and behaviour change activity required to create a transformation in the numbers of people walking and cycling. These will prioritise local investment tailored to the characteristics of the areas they cover. We will champion the development of these plans, ensuring a consistent quality standard across the region.

People will only walk and cycle if the facilities are safe and well maintained. We will work with local authorities in the region to develop a toolkit to help planners design roads and streets with a greater emphasis on accommodating sustainable modes. Transport for London's 'Healthy Streets' initiative and Streets Toolkit provides a potential starting point that can be tailored to the unique characteristics of towns and cities in the Transport East region. The public realm in urban areas should be designed inclusively, considering issues such as safety and security after dark and the needs of parents with pushchairs and people with mobility impairments.

Our urban areas should also accommodate emerging micro-mobility trends where it is safe to do so, for example the increasing popularity of e-scooters, e-bikes, and dockless bike hire schemes. Building on the existing schemes and trials in the region like the Beryl bike hire in Norwich and Spin scooter trials in Basildon, Chelmsford and Colchester, and Park and Pedal scheme in Ipswich.

Image: Visit East of England

Figure 4.3.3

A step-change in Active Travel

We share government's goal for doubling walking and cycling. For this to be successful it requires improvements to infrastructure which work for local places. Best practice in walking and cycling design tends to come from large metropolitan areas. We commissioned a study with Sustrans to demonstrate how government's ambitious targets could be achieved in a region like ours, with large rural and coastal areas as well as smaller towns and cities.

Image: Gemma Evans from Unsplash

Our local authority partners have a strong track record in developing and implementing plans across the region to create high-quality walking and cycling routes, making it easier, safer and more accessible for everyone to travel actively. Sustrans recommended the following priorities for investment:

- **Inclusive Design:** Active Travel infrastructure designed for all types of users

- **Urban Infrastructure:** Extensive Active Travel networks in all our towns and cities

- **Inter-Urban Infrastructure:** High-quality traffic-free network of routes between urban areas and market towns

- **Rural Infrastructure:** High-quality traffic-free rural network of routes between villages and their nearest urban centre

- **User-friendly support infrastructure:** Inclusive cycle parking, wayfinding, places to rest, Cycle Friendly Places

- **Data Collection:** Step-change in quality and quantity of data collected on Active Travel modes across the region

- **Supporting Policies:** All land-use, development planning and transportation policies across the region aligned with *Gear Change* and UK Government Local Transport Note 1/20 (LTN 1/20)

- **Governance and Funding:** Sustained, consistent funding and effective cross-boundary cooperation are vital to successfully deliver improvements for walking and cycling

- **Behaviour Change:** Extensive, wide-reaching programmes to lock-in benefits of new infrastructure investment

- **Maintenance:** Significant uplift in spend on maintenance of Active Travel infrastructure

- **Supporting Technologies:** Partnerships with private sector to develop integrated complementary technologies

Improving the urban bus network

Buses are a flexible and sustainable option, forming an important piece of the public transport network. However, bus services in large parts of the region are limited. Before the COVID-19 pandemic, 28% of people in urban areas still did not have an hourly or better weekday daytime bus service within 500 metres of their home. Dependency on the private car is exacerbated by uncertainty about fares and tickets, and unclear information on routes, services and operating hours. The bus network is a complicated patchwork of services run by different operators, each setting their own routes and fares.

The COVID-19 pandemic has made this situation worse, significantly reducing bus passenger numbers resulting in severe financial impacts on bus operators.

Aside from walking, the bus is the most space-efficient mode of urban transport and is an essential mode of transport for much of society including older people, those on lower incomes, women and students. It can carry the most people in the smallest amount of road space and caters for everyone. Buses are vital for solving urban congestion.

Transport East supports the approach set out in the government's *Bus Back Better* Strategy. This would see Enhanced Partnerships between local authorities and operators to set Bus Service Improvement Plans to improve customer experience, journey times and reliability locally.

At the regional level, Transport East can support local improvements by leading on strategic issues around integrating buses with other transport modes including customer information, fares and ticketing and cross-boundary services along our core movement corridors,

Within our towns and cities, buses will only be successful if priority measures are also provided to segregate buses from congested general traffic to make journeys quicker and more reliable, attracting people away from driving private cars. We will support local authorities to maximise the opportunities for bus travel by reviewing parking provision and cost within their areas, to make bus journeys as attractive as possible.

Image: Super Straho from Unsplash

Figure 4.3.4

Improving urban buses

Buses will play a crucial role in developing sustainable transport networks in urban areas. The national Bus Strategy *Bus Back Better* sets out a vision for improving bus services in England to encourage passengers back to buses. It defines the outcomes needed for passenger transport to become more accessible and a more attractive alternative to the car, including making services greener, cheaper, more frequent, more reliable, and faster. The strategy also identifies the need to improve passenger information and integration with other modes and enhance journey quality and accessibility for all.

The strategy requires local authorities and local bus operators to work together with their local communities to deliver fully integrated services. Bus Service Improvement Plans set out the vision, ambition and delivery for each local authority in delivering the step-change in bus services through Enhanced Partnerships or franchising.

Transport East partners are driving forward plans for Enhanced Partnerships with local bus operators to work towards ambitious networks able to compete with the car.

A report by Transport East into bus passenger transport in the region in 2021 set out several recommendations:

- Stable and increased government funding for bus services, particularly those in rural areas

- More flexibility for councils and operators to run new types of service, such as mini-buses booked on-demand through apps

- More coordination of different public transport options to make journeys easy to plan and take, including customer information and payment

- Prioritising bus services at congestion hotspots to keep journeys quick and reliable

- Work regionally to improve cross-boundary services
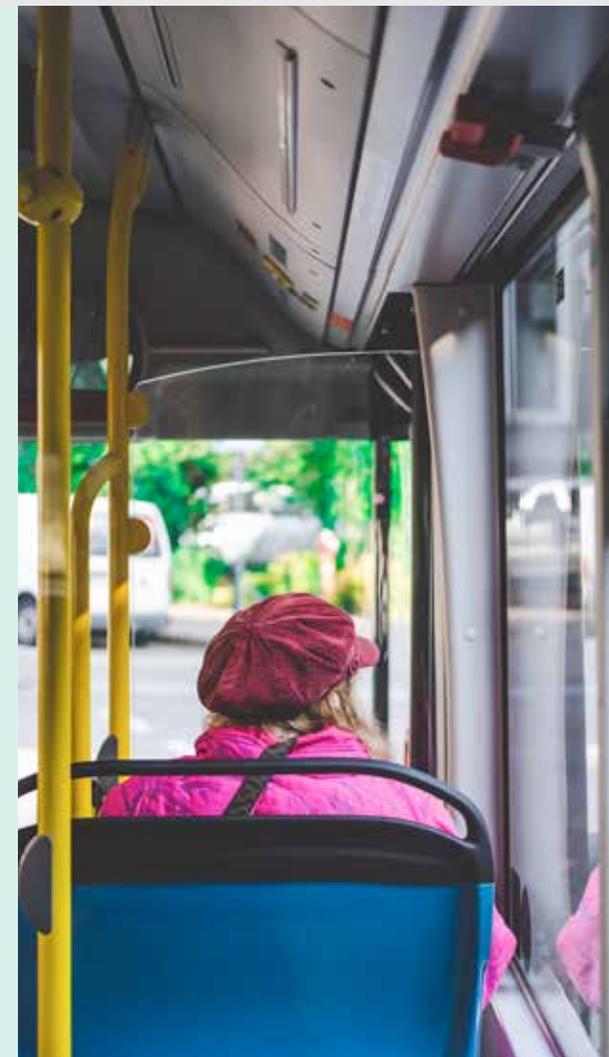
Image: VHS from Pexels

Prioritising sustainable modes in urban areas

Walking, cycling, buses and general traffic networks are all interconnected and cannot be planned separately. To enable people to choose walking, cycling and bus services in our space-constrained towns and cities, these routes should be planned together on a network, corridor or area basis, alongside measures to manage general traffic.

We will work with local authorities to promote measures that reduce traffic levels in urban areas and develop measures to restrict car use in crowded centres, in tandem with plans to improve access by sustainable modes. The right solutions will depend on the characteristics of each place, but could include working closely with schools, employers, businesses and other destinations to manage the demand for travel and adjustments to road space allocation, parking provision and pricing.

To provide better connections within towns and cities Transport East will:

- Increase the capacity and capability of local authorities in urban areas to deliver a step-change in urban connectivity through:

  - Commissioning and providing enhanced regional level data and evidence to strengthen co-ordinated multi-modal transport plans

  - Developing a toolkit to help planners in the East design urban roads and streets prioritising sustainable modes, reflecting our region's unique features

- Make the case for increased and stable funding for the development, construction, and maintenance of comprehensive walking and cycling networks in the East, supported by dedicated safe and inclusive infrastructure, high quality signage and wayfinding, and priority over traffic.

- Lead an action plan to identify and drive forward regional-level projects to complement Local Transport Authorities' local Bus Service Improvement Plans, accelerating the delivery of comprehensive networks of accessible, high frequency 'turn up and go' bus services supported by real-time information and integrated cashless ticketing.

- Lead our sub-national Active Travel, Bus and Rail action groups, and implement the regional recommendations of our bus and active travel strategies, to make sustainable transport more accessible, easier to use and more attractive to all people.

Connecting our growing towns and cities Pathway

Goal 6

Better connections between towns and cities

With 75 growing towns and cities spread across the region it is critical people can travel efficiently between places to access jobs, training and education, and businesses have reliable connections to their customers and supply chains.

Poor connectivity in the region is a significant barrier to attracting and retaining firms and workers and to overcoming issues such as lower than average skill levels. It is also an obstacle to maximising the potential of high-value business clusters that capitalise on the region's strengths.

We also need strong connections beyond our boundaries. London and Cambridge particularly, have strong economic and leisure centres which are supported by people, businesses and goods from across the East.

Building a world-class rail network

The rail network in the region is oriented towards London, based on three core radial routes; the West Anglia Main Line (WAML), Great Eastern Main Line (GEML) and Essex Thameside Line. East-West connections are provided from Cambridge to Ipswich and Norwich. Additional branch lines connect to our coastal communities, including Great Yarmouth, Lowestoft, Felixstowe and Harwich. The network in the Transport East region is summarised in Figure 4.3.5.

Our rail network is slow compared to other parts of the UK. Investment by Network Rail and the train operating companies has made incremental improvements over recent years. The new train carriages being rolled-out on the Greater Anglia managed routes increased capacity and improved customer experience. However, travel time on our constrained network is unacceptable when compared to journey times on similar routes elsewhere in the country.

Frequency of passenger services and the movement of freight is affected by constrained capacity on our rail lines across the region. This is exacerbated by a very significant number of level crossings and a need to expand digital signalling. Balancing the need to access local communities by road and improvements to safety, frequency, capacity and reliability for the railway

is challenging and we will work with Network Rail to strike that balance. Investment in rail is vital for decarbonisation and our contribution to UK prosperity and so is a core priority for this strategy.

Before the COVID-19 pandemic, passenger services on the main routes into London were heavily crowded during the peak. The longer-term implications of the pandemic on rail demand are uncertain, however, the extent of capacity constraints combined with the scale of development envisaged along parts of the network (particularly in the Thames Estuary) suggests even a modest rebound in rail usage over the next few years is likely to require major investment.

A further rail challenge in the region, evident from the plan in Figure 4.3.5, is that orbital east-west connections are very limited. The Ipswich-Ely Line via Bury St. Edmunds currently carries a passenger service that runs every two hours. The Norwich-Cambridge route via Thetford is hourly. These services link some of our major economic centres with key business destinations. Capacity improvements along these corridors, both inside and outside our boundaries are crucial to unlocking the potential of rail within the East.

Great Eastern Main Line
Cross countr y corridor via Ely
West Anglia Main Line
Orbital Routes
Essex Thamesid e

Our partners have produced detailed plans for improving our network and we are committed to working with local authorities, deliver bodies, business partners, and government to drive these forwards. We propose establishing a Transport East Rail Group to make sure the East is at the forefront of UK rail investment. Working with Network Rail and Great British Railways to create an overarching approach to strategic rail investment in the East, the Rail Group will support the excellent progress already made by our constituent Taskforces, and make sure the wider contribution of a world-class rail network in the East to UK prosperity can be fully understood.

Specific rail challenges have been identified in our Strategic Corridor chapter (5). Our strategy also supports the reopening of new lines and stations through the Restoring your Railway programme, including Maldon to Witham, Kings Lynn to Hunstanton, and Wymondham to Dereham.
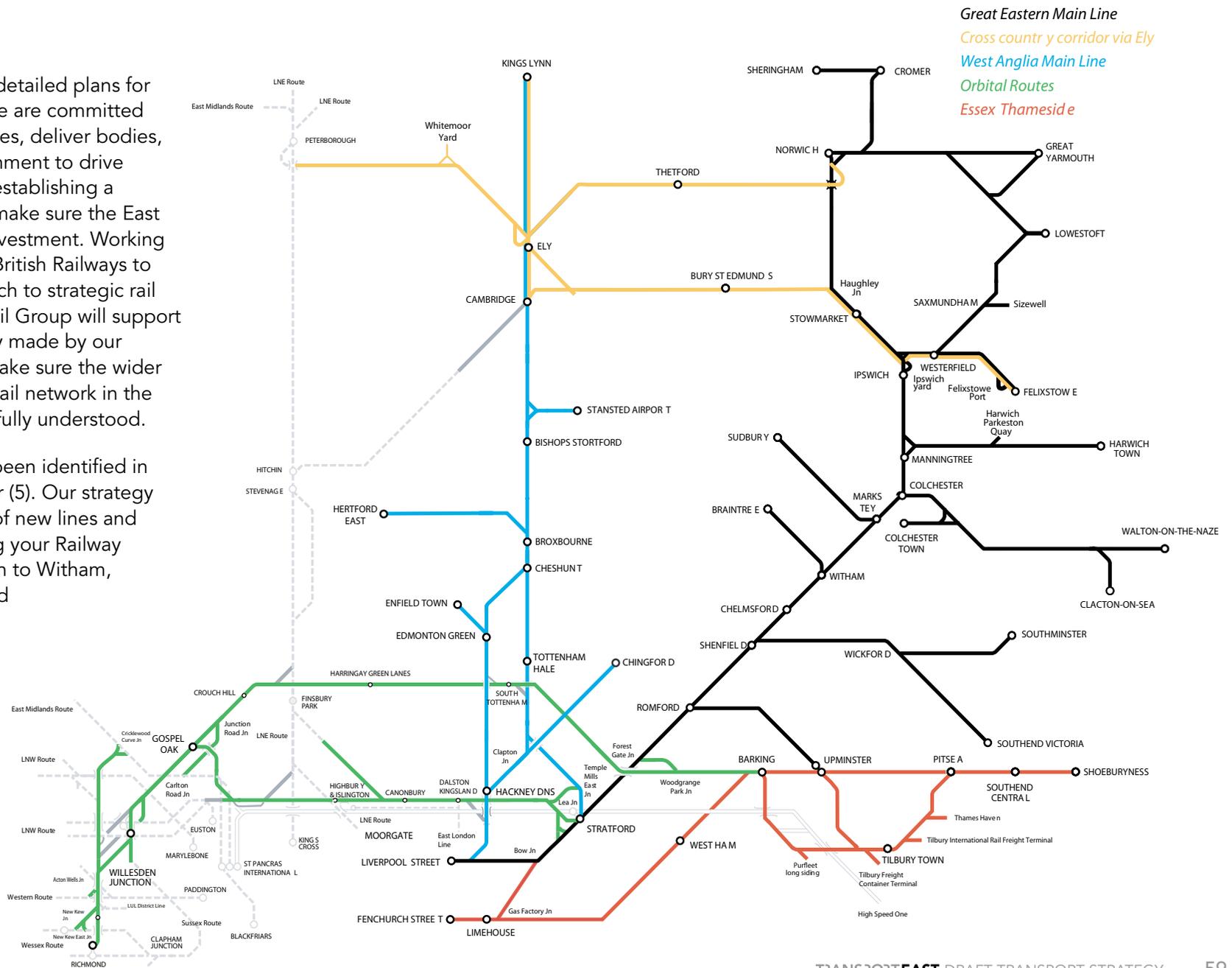
Figure 4.3.5: Anglia Route rail network

Source: Network Rail Anglia Route Study, 2016

Figure 4.3.6

Case Study: **East-West Rail**

East-West rail connections in the Transport East region are very limited, consisting of two branch lines. The Ipswich–Ely Line via Bury St. Edmunds currently carries a passenger service that runs only every two hours. The Norwich-Cambridge line via Thetford is hourly. Journey times are unacceptably slow, typically 75 minutes between Cambridge and Ipswich (around 45 miles as the crow flies) and 80 minutes between Cambridge and Norwich (57 miles).

Improving rail connections between Cambridge, Norwich and Ipswich would support the growth potential of these cities and development along key corridors such as the Norwich-Cambridge Tech Corridor and connect with wider UK economic centres.

There are well developed plans to improve East-West connections between Oxford and Cambridge

– known as East West Rail. Transport East strongly supports the proposal to extend East West Rail with an Eastern Section, connecting Norwich and Ipswich to growth centres at Cambridge, Milton Keynes, and Oxford, and onwards to Wales, Scotland, the South West and the North.

The EWR Eastern section would significantly reduce rail journey times between key urban areas, and relieve crowding on rail services

via London and congestion on the strategic road network. It would also unlock major development sites with sustainable transport connections to help the Government fulfil its ambition to deliver more homes across the UK.

The Eastern section could also open-up opportunities for direct connections to Stansted and Colchester along with onward improvements for coastal locations in Norfolk and Suffolk.
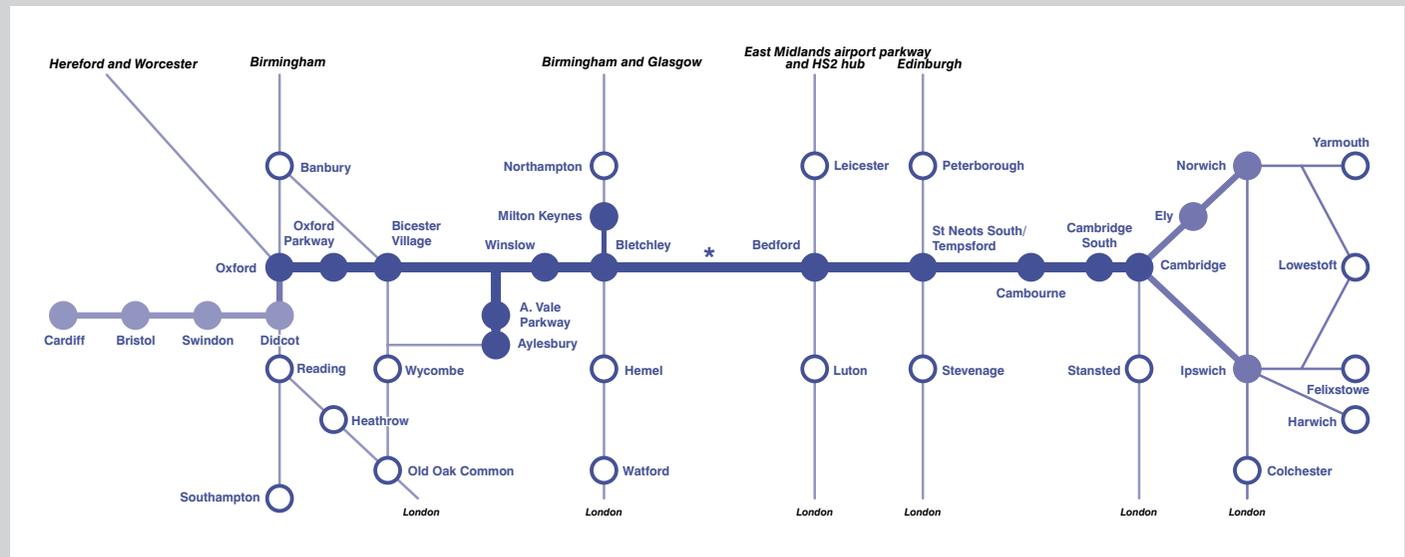
Source: East West Mail Line Partnership

Alongside rail infrastructure, Transport East will make the case to revolutionise the customer experience of public transport, working with operators to improve services, accessibility, ticketing and fare options for passengers. Integrating rail services with other modes is also vital, to ensure end-to-end customer journeys are easy and seamless.

The Rail Group will support the rail industry and local authorities to ensure sure major new developments are connected to the rail network through new stations where appropriate and better links to existing stations.

Finally, the electrification of the railway is vital – both in delivering additional capacity to support improved services, move increasing amounts of goods, as well as the drive towards net zero. We will fully support and make the case for the rapid rollout of Network Rail's Traction Decarbonisation Strategy in the East, including the use of hydrogen fuels on branch lines.

A new approach for our roads

The strategic road network has underpinned the Eastern region's economy for the last millennium by moving people and goods, and that fact will not change. What will change within the lifetime of this strategy is how roads are used by people.

Nearly 80% of all miles travelled by people in the East are made by car or van, and roads will continue to transport most people and goods between our towns and cities in future. Our challenge is to develop a zero-emissions road network fit for the 21st century that provides reliable, fast, safe and efficient connections between our growing places, offering a range of journey choices – bus, mass rapid transport, bike, coach, shared vehicle or electric car for people, or clean freight to move goods.

Starting with the infrastructure, this means improving both the Strategic Road Network (SRN) managed by National Highways and the Major Road Network (MRN) and local road network both managed by local authorities (shown in Figure 4.3.7). Our partners have identified core roads along our six strategic corridors that are vital to connect our region to the UK economy, including the A11, M11, A12, A13, A14, A47, A120 and A127.

We will work with local authorities, other sub-national transport bodies and National Highways to review priorities and develop plans to improve road connections between our growing towns and cities and key places outside the region, building on the projects already in the region's Road Investment Strategy and MRN investment programme. Our focus will be on providing fast, reliable, safe journeys and creating a well maintained and resilient network, while improving environmental outcomes and meeting the needs of all users.

A major proposed road link for the region is the Lower Thames Crossing which connects the M25 near South Ockendon through Thurrock, with the A2 south of Gravesend on the other side of the river. The primary objective for the scheme is to provide resilience to the M25 around the Dartford Crossing. While the scheme will improve onward connections into Kent, they do not include the Tilbury Link Road, hindering connectivity to the Thames Freeport and constraining the economic growth potential for the region.

We must explicitly tackle the challenge to deliver net zero carbon emissions. Roads create 96% of our region's transport carbon emissions. We must improve how we manage our roads and how people use them, integrating roads planning with our rail plans by focusing on strategic people movement.

Experience has shown that it is not always possible to build our way out of congestion problems. New roads can relieve congestion in the short-term but in the longer-term tend to result in more drivers wanting to use them. New links may be required in specific circumstances (for example to provide access to new developments in areas of high growth or to fix significant network gaps) but the overall approach should be to create reliable journeys by identifying existing congestion hotspots and pinch-points and developing targeted interventions to provide more consistent capacity.

We support the development of a mass rapid transit network using our road network and integrated with our rail network. The Government's *Bus Back Better* Strategy encourages the development of high frequency 'superbus' networks in areas with patchworks of small towns and large villages. There is significant potential for the development of this type of network in parts of the region.

Many of our local authorities are already leading the way on this, including proposals for the South Essex Bus Metro covering Southend, Thurrock and parts of South Essex (see Figure 4.3.8), the KenEx route connecting Kent and Essex, a North Essex Rapid Transit (NERT) connecting Braintree and Colchester, and proposals to connect with Hertfordshire via the Herts-Essex

Figure 4.3.7: The SRN and the MRN in the Transport East region

Source:
Transport East regional
evidence base, 2019

Rapid Transit (HERT). Together with emerging Enhanced Partnerships for buses and existing coach networks, the start of a regional passenger network is forming using strategic roads. The Transport East partnership will scope a sub-national passenger transport network further with our partners.

For people who need to use private vehicles, we will support the accelerated roll-out of ultra-fast EV charging infrastructure along the SRN and MRN to maximise the use of sustainable vehicles on our major roads.

Figure 4.3.8

Case Study: **South Essex Bus Metro**

The South Essex Bus Metro is a proposed state-of-the-art Bus Rapid Transit network connecting key destinations in Southend-on-Sea, Thurrock and south Essex.

Zero emission buses would run separated from general traffic and the network would be designed to attract a wide range of users, with real-time information, a tap-in payment system and accessible, safe stops. Planned alongside walking and cycling improvements to make it as easy as possible for people to use sustainable travel for their whole journey, it would be integrated with demand responsive services to connect with communities further afield.

The scheme is currently under development and an indicative network is illustrated below.
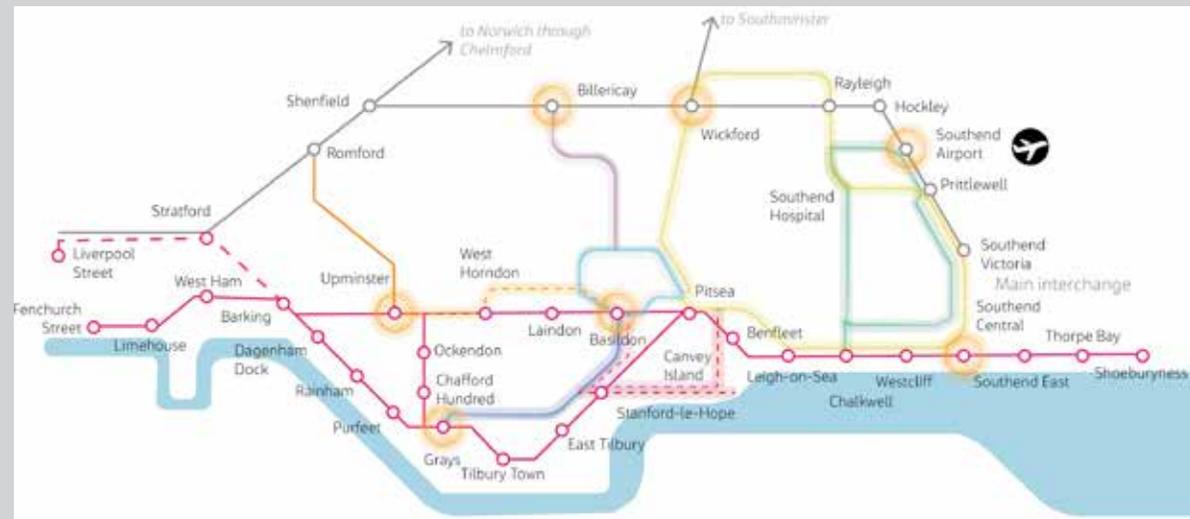

Image: Essex County Council

While our strategic roads can manage large numbers of vehicles, this is not true of streets within our towns and cities. We need to make sure trips made between our towns and cities do not contribute to congestion within urban areas. Initiatives such as Park & Ride and Park & Pedal are critical to intercepting journeys and supporting a smooth transition to sustainable modes of transport within our urban areas.

Longer-term measures to manage road demand

The take-up of electric vehicles will have significant consequences for how roads are managed and funded nationally in future. The upfront cost of an electric vehicle is currently higher than a petrol or diesel-powered vehicle, but this is changing rapidly as mass-production of electric vehicles accelerates. Electric vehicles are also already cheaper to run, partly because of the fuel duty paid at the pump when filling up with petrol or diesel.

As electric vehicle technology improves, the cost of motoring will reduce further and people are likely to use their EV more as cost of fuel becomes less of a factor. This means nationally that new demand management measures are likely to be required to reduce congestion and

delay at peak times. The government will also need to find new ways of raising revenue to invest in and maintain roads as fuel duty decreases.

We are committed to working with government to explore options for maintaining our road network and managing demand to use it in the age of the

electric vehicle. The implications of any national proposals would need to be carefully considered and consulted on widely to understand how any detailed policy would affect communities in the East.

To better connect our growing towns and cities with each other and the rest of the UK Transport East will:

- Lead regional network analysis and corridor connectivity studies to present a new and compelling case for investment in existing and future priorities on our strategic corridors.

- Lead strategic thinking on the enhanced role of rail in the East to 2050, through the formation of a Transport East Rail Task Group.

- Enhance the business cases for investment in our rail priorities in the East and accelerate delivery of our priorities, including proposals to deliver faster and more capacity on the Great Eastern Main Line, West Anglia Main Line, Thameside Line, and the Eastern Section of the East West Main Line between Oxford and the Transport East region.

- Work with National Highways and local authorities to enhance the case for investment in and maintenance of our high priority road network connections to deliver reliable, fast and safe journeys, including the A47, A14, A11, A120, A12, A13, A127, M25 and M11.

- Lead new thinking on the future use of roads in the region, including unlocking game-changing Rapid Passenger Transit networks, autonomous vehicles, shared transport and integration with other modes and technologies, to ensure users of our road network are collectively achieving our decarbonisation and economic growth goals..

Connecting our growing towns and cities Pathway

Goal 7

Integrated transport networks with customers at the heart

Here we focus on integrating our urban and inter-urban transport networks to provide a world-class customer experience, including ensuring a safe network and tackling road danger is at the heart of decision-making.

Putting the customer first

Our Strategy seeks to set an approach to transport planning and delivery with the user at the centre. This means understanding how, why and when people are making journeys in different parts of the region, considering the differing circumstances of everyone including school children, commuters, carers, visitors and older people. Recognising that door-to-door journey quality is as important as how long it takes.

Creating a transport network where sustainable journeys are the easiest choice for people requires interventions at every level. We have already set out many of the building blocks to

reducing people's car dependency – the provision of new infrastructure and services for sustainable modes of transport is in Goals 5 and 6 of this section. Goal 1 in decarbonisation also sets out the importance of an integrated approach to land-use and transport planning and the roll-out of improved digital connectivity as tools for encouraging the use of sustainable modes, as well as reducing people's overall need to travel. Goal 3 in decarbonisation highlights the importance of measures to encourage behaviour change.

Fundamentally, all modes of transport in the region need to be better integrated to deliver a truly user-centric Strategy. This applies both physically in the form of better and more accessible stations, bus stops and active travel facilities to allow smooth interchange; and through improved coordination of services, for example through real-time multi-modal travel information, integrated ticketing on public transport services, better payment options (including cashless ticketing), the alignment of timetables and ensuring our network is safe and harassment free.

Our user-centric Strategy also recognises the critical role transport plays in creating pleasant and attractive public spaces, supporting community cohesion, allowing businesses to thrive, and boosting the quality of life of our residents.

This approach represents a step change from 'business as usual' in the region and we recognise the importance of demonstrating its benefits. We will work with local authorities to identify suitable locations for pilot projects to showcase a user-centric and multi-modal approach to transport planning, involving the coordination of initiatives including Low Traffic Neighbourhoods, 'Dutch-style' cycle networks, and bus priority measures. In this context, we will also support the introduction of restrictions on car use in urban centres to demonstrate the benefits to the environment and the public realm, for example 'car free' days in market towns or seasonal restrictions to support sustainable tourism.

Eliminating road danger – the Vision Zero approach

In 2019, 1,611 people were killed or seriously injured on our transport network, with a further 4,312 suffering slight injuries. This is not acceptable, nor is it inevitable. Cities and regions around the world are taking a stand to end the toll of deaths and injury seen on their roads and transport networks by committing to Vision Zero.

When we leave our homes each day, we should feel safe and confident about the journey ahead. Our strategy seeks to eliminate deaths and serious injuries on the transport network by 2050. This ambition aligns with the 'Safer Systems' approach adopted by the National Police Chiefs' Council, our regional Road Safety Partnerships and our own local police services. The approach focuses on five areas:

1. **Safe speeds:** Encouraging speeds appropriate to the place and people living there, through the widespread introduction of new lower speed limits.

2. **Safe roads:** Designing an environment that is forgiving of mistakes by transforming junctions, which see the majority of collisions, and ensuring safety is at the forefront of scheme design.

3. **Safe vehicles:** Reducing risk posed by the most dangerous vehicles by introducing improved standards for Heavy Goods Vehicles, buses and other vehicles.

4. **Safe road users:** Reducing the likelihood of road users making mistakes or behaving in a way that is risky for themselves and other people through targeted enforcement, marketing campaigns, education programmes and safety training for cyclists, motorcycle and moped riders.

5. **Post-collision response:** Developing systematic information sharing and learning, along with improving justice and care for the victims of traffic incidents.

We also need to consider the needs of other emergency services regarding access to and issues around the transport network.

We will work with local authorities, the police, other emergency services and wider partners to deliver this vision.
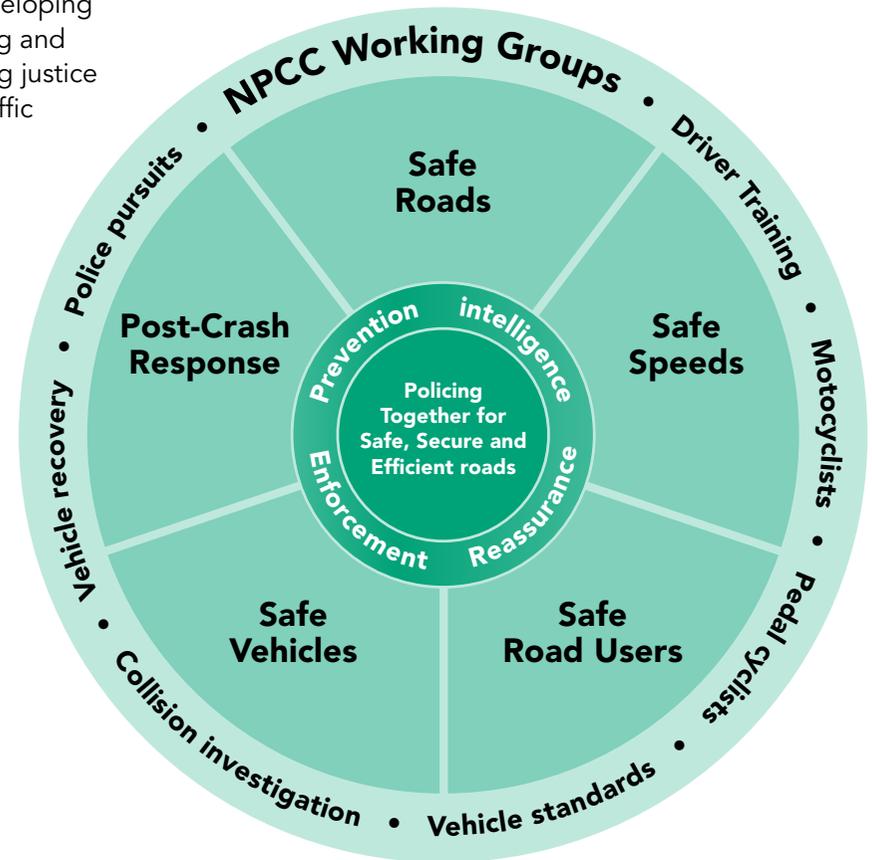
To create an integrated and customer focussed transport network in towns and cities, Transport East will:

- Work with local authorities to make sure their multi-modal transport plans are developed with users at the centre, considering the needs of different groups, provision of services, door-to-door journeys, and the role of transport in creating high-quality, safe public spaces.

- Coordinate with partners, including the police, to promote and make the case for greater investment in a Vision Zero 'safer systems' approach to eliminating road danger across the region.

- Lead our sub-national Active Travel, Bus and Rail action groups, and implement the regional recommendations of our bus and active travel strategies, to make sustainable transport easier to use, more accessible and more attractive to people.

4.4 | Energising rural and coastal communities

A reinvented sustainable coast for the 21st century which powers the UK through energy generation. Supporting our productive rural communities and attracting visitors all year round

Across the Transport East region, 21% of people live on the coast and 33% live in rural areas, both significantly higher than the national average. These areas are home to nationally significant agricultural, tourism, and energy sectors, alongside rich ecological and heritage landscapes.

We want everyone in rural and coastal areas to be able to do more, more easily. We want young people to be able to spend time with friends without worrying how to get home. We want older people to be able to travel independently for as long as possible. We want rural and coastal businesses to grow and thrive by accessing new markets and talent. We want people to be able to access skilled jobs without having to struggle with long, unreliable commutes.

Two thirds of our rural residents live in a 'transport desert' where there is no realistic alternative to the private car (see Figure 4.4.1). Digital connectivity is limited, as is public transport, reflecting the challenge of providing services to dispersed populations. People are highly dependent on the private car to get around, with long distances to access work and services. Limited electric charge points mean rural communities lag behind on the take up of EVs, adding to carbon emissions and increasing air quality issues.

The East's coastal communities are special places. Situated along 500 miles of our coastline, they host the UK's premier offshore renewable energy sector, 13 ports, attract millions of visitors each year and host a diverse economy. There are urban coastal communities, small towns and villages; there are areas of relative affluence and places suffering significant deprivation.

Rural and coastal areas in the region are home to a disproportionately high number of people over the age of 65, which creates challenges related to isolation and access to healthcare. Poor accessibility is also a key factor for those areas of embedded deprivation. Better connectivity both along and to our coast is vital.

This Strategy champions transports' contribution to levelling up our rural and coastal places. Figure 4.4.2 summarises our pathway for energising our rural and coastal communities, setting out overall aims of eliminating 'transport deserts', supporting access for every person to ultra-fast broadband, and improving connections to energise local economies.

Figure 4.4.1: Transport Deserts and Broadband Connectivity in the East of England

Key

Transport East Study Area

Regionally significant hubs

Transport desert areas

Transport desert area with between 50%-75% of premises not meeting Broadband Universal Service Obligation

Transport desert area & over 75% of premises not meeting Broadband Universal Service Obligation

0   20
Kilometers

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Esri UK, Esri, HERE, Garmin, FAO, METI/NASA, USGS

Figure 4.4.2

Energising rural and coastal communities Pathway

A reinvented, sustainable coast and thriving rural communities for the 21st century

Goal 8
Increase accessibility to education, training, services and employment for rural communities

Goal 9
Improve connectivity along our 500 miles of coastline

and connect our coastal towns and communities to the rest of the region and UK, to support levelling-up, and boost our coastal industries, including Energy, Shipping and Tourism

8A
Better ways of taking people to places sustainably through switching modes and utilising alternative fuels where rural trips need to be made by car

8B
Supporting local communities to make more trips locally by encouraging more local provision of goods and services

8C
Support regional partners and the digital sector to provide alternative options to travel for people through better digital communications

Delivering our ambition to become the UK's foremost all-energy coast. Levelling up the critical inequalities in our rural and coastal communities.

Eradicate all 'transport deserts' from the region. Every person to have access to ultra fast broadband. Faster connections from our coastal economies to the rest of the UK.

Goal 8

Increasing access for rural and coastal communities

With many people living and working in rural and coastal communities across the region, it is crucial to increase access to regular services and destinations by sustainable means. This can be done by shifting to more innovative types of transport and the use of cleaner vehicles, and reducing the need to travel via improved digital connectivity and switching to more local trips.

Improving sustainable access in our rural and coastal communities will require a mix of investment. Encouraging a significant mode shift in sparsely populated and dispersed rural and coastal communities will be challenging. Road transport is an important part of everyday life for many people and is likely to remain so in future.

A rural mobility Centre of Excellence for the East

Given the priority our partners place on tackling rural mobility, Transport East has taken the role as lead Sub-national Transport Body in England on Rural Mobility. We lead a national work programme to support better outcomes for rural areas, bringing together data, case studies, innovation and best practice across England, and developing a compelling case for investment in rural areas.

We propose to build on this to establish a Centre of Excellence for Rural Mobility, bringing together our partners, academia and interest groups to drive forward transport innovation in our rural region, to benefit the whole of the UK.

Decarbonising rural trips

The transition to Electric Vehicles needs to happen quickly in rural areas. Most people in rural locations do not have charging infrastructure and we should prioritise delivering EV infrastructure in these locations, given the immediate lack of alternatives.

Decarbonising business transport within rural economies is also vital, for example agriculture. Transport East will work with local authorities, the energy sector and bodies such as Hydrogen East to explore the potential for establishing pilot areas in rural and coastal locations to develop and test innovative transport decarbonisation solutions.

Reinventing rural passenger transport

Adopting clean fuels in rural areas will go a significant way towards reducing carbon emissions and air quality issues in the region. However, the dominance of the private car in rural and coastal areas creates other challenges related to traffic congestion, inequalities, social isolation and public health. Targeted investment to encourage other modes of transport will have a significant role to play.

An innovative approach to rural passenger transport is needed. Our partners know traditional models do not work for rural communities and are not financially viable for operators seeking to serve schools, colleges, major employment sites, tourist destinations and town centres.

As a strong advocate for enhanced bus services for rural people, Transport East will support our local authorities' Bus Service Improvement Plans (BSIPs) to deliver a high-quality approach in rural areas across the region. We will work with government to secure further investment, greater flexibility and the removal of regulatory and other constraints.

We will also work with local authorities, bus operators and the government to ensure bus fares are attractive to people and support measures to encourage disadvantaged groups to use services more frequently, recognising the critical 'lifeline' routes that serve many people in isolated areas but are not commercially viable.

Diversifying the customer base for rural bus services is vital. They should be integrated into tourism strategies and with urban and suburban bus networks, putting customers at the centre of improvements (as set out in Goal 7 in Connecting Towns and Cities), as well as providing seamless interchange between other transport services such as rail and walking networks.

A significant improvement will be the expansion of innovative solutions such as Digital Demand Responsive Transit (DDRT) to complement the conventional bus networks. Services like this (see Figure 4.4.3) will provide flexible accessibility for key groups including school children and students, older people, and shift workers.

Figure 4.4.3

Case Study: **Digital Demand Responsive Transport (DDRT) in Essex and Katch in Suffolk**

Local authorities and communities are pioneering innovative approaches to improve sustainable transport in rural areas, where large distances and low population density has resulted in challenges maintaining conventional bus services. Two examples include the development of Digital Demand Responsive Transport (DDRT) in Essex and Katch in Suffolk.

DDRT
Essex County Council (ECC) set up two Digital Demand Responsive Transport (DDRT) pilots in 2019-2020, focusing on home-to-school journeys. The 'Uber-style' transport service provided mini-bus journeys booked through a digital app.

These two pilots established a high level of confidence in the technology and helped refine the approach. ECC then secured £2.6million from the Department for Transport's Rural Mobility Fund in 2020

Image: Suffolk County Council

to roll-out two further schemes in the county. The aim is to provide a new, viable mode of public transport in rural areas and encourage people to use DDRT for the start or end of their journeys, leaving their cars behind.

Katch
Katch is a joint pilot scheme between Suffolk County Council and Cab/Cars Smart that operates electric vehicles as a shared taxi-service, serving Framlingham, Wickham Market and Wickham Market Railway Station which is about 2 miles away from the town. Similar to the Essex DDRT, Katch services can be booked over the phone or via a dedicated app where the service can also be tracked.

Promoting active travel in rural areas

Walking and cycling has a unique role to play in rural areas. Investment in rural and coastal areas can help people walk and cycle to key destinations, for example schools, colleges, village and town centres, business parks, and public transport hubs.

By filling gaps in existing strategic networks through the provision of footways alongside roads and dedicated road crossings; providing high-quality, secure cycle parking at key destinations; and considering requirements for emerging micro-mobility trends – the region can transform rural walking and cycling from largely leisure activities to day-to-day journeys. For example, schemes encouraging the use of e-bikes could provide a sustainable alternative to the private car for longer journeys that are more challenging to complete on a pedal bike.

The provision of a high-quality regional walking and cycling network building on existing routes and Public Rights of Way would help to support this ambition. The development of the National Cycle Network provides a model, with clear online route maps, distinctive branding, and a minimum standard of provision for wayfinding, signage and facilities.

Investment should also be targeted to reduce road danger where paths and cycle routes cross busy roads and provide seating to make it easier for older people and others who need regular breaks. Wherever possible, the network (both new and existing) should incorporate traffic-free paths or quiet-ways. Local authorities should make long-term plans to incrementally replace existing on-road provision where feasible and desirable.

Improving cycle and walking networks in the East could increase tourism to the region, including outside the summer peak. It would also help increase the access of our own communities to green and blue spaces, extending public health benefits. We support innovative and ambitious plans such as the SEE Park, connecting and greening space through Thurrock and Southend-on-Sea linking the Thames with enhanced parks by improved cycling and walking routes.

We will work with tourism bodies to integrate regional walking and cycling plans with tourism strategies so routes, facilities and destinations can be promoted through targeted visitor information.

Providing an alternative to transport in rural areas

This strategy does not aim to restrict the movement of people, however it does advocate providing alternatives to travel where appropriate.

A priority is the accelerated delivery of ultra-fast digital connectivity for all rural residents across the region, where people and businesses are dispersed and current provision is poor. Currently many people in rural and coastal locations have a double barrier of poor transport connections and poor digital connections.

Improved digital connections will give people greater opportunities for flexible and remote working and bring a wider range of online services (including healthcare, education, training, and shopping) into their home. It will also connect businesses with customers, supply chains and each other to drive economic growth. This should encourage people to remain in the area, breaking a cycle where younger people feel they must move to larger urban areas to access education and jobs.

It will also enable a wider range of Mobility as a Service (MaaS) options that can be booked through mobile applications, including Digital Demand Responsive Transport, car clubs, and delivery hubs from which businesses can coordinate deliveries using shared vehicles.

Transport East will engage with local authorities, businesses and key service providers in the region, including the NHS and higher education providers, to maximise the opportunities to align digital and transport connections to reduce need to travel, or the length of journeys. We will also support the development of digital training to help people in rural and coastal areas, particularly older people, to become digitally literate and make the most out of improved online connections.

To increase access for rural and coastal communities to education, training, essential services and employment, Transport East will:

- Create a Centre of Excellence for Rural Mobility in the East, to make the case for investment in our rural and coastal communities and tackle regional and national blockers to better, more inclusive rural transport services.

- Lead and co-ordinate the English Sub-national Transport Bodies to champion rural outcomes with national government.

- Establish a sub-national EV task force to support local authorities across the East to unblock and accelerate the roll-out of charging infrastructure in rural and coastal communities, powered by clean energy.

- Lead an action plan to drive forward regional projects to maximise the benefits from Local Transport Authorities' local Bus Service Improvement Plans – tackling integrated ticketing, cross-border travel, and financial sustainability.

- Showcase our local authorities' and LEP transport innovation in rural communities through a best practice guide and develop a strategic business case to scale-up, fund and roll-out more rural transport innovation across the region.

- Through our Sub-national Active Travel Strategy, set out the East's unique case for investment and investment in walking and cycling infrastructure for all people in rural and coastal areas, encouraging more active lifestyles and integrating with regional tourism and health strategies.

- Lead strategic co-ordination with local authorities to plan and make the case for investment in regional active travel networks (walking, cycling and rights of way).

Energising rural and coastal communities Pathway

Goal 9

Improving coastal connections

Coastal areas by their nature and history are often poorly connected by land. Improved coastal connections are required at the strategic and local level to help attract and retain businesses and highly skilled employees - high priorities for our partners. We must support the transport and connectivity needs of businesses and employees in key coastal sectors such as energy, agriculture and tourism.

Connecting our coast to the rest of the UK

Connecting coastal towns is a priority for the six regional strategic corridors set out in Goal 6 of Section 4.3 Connecting growing towns and cities. All six of our corridors have a start or end point at the coast. The A47, A12 and A14 / East-West Rail corridors are vital for connecting the coastal towns in the north of the region to the Midland. The A120, A13 and A127 / Thameside rail corridors are vital for connecting our coastal towns to the south into London and the rest of the south-east.

Connecting our coastal communities

Improving connections along the corridors also needs to be complemented with targeted schemes to better connect coastal areas together, tie them into strategic networks, and provide better links to nearby urban centres. This will include bringing the local road network up to a set standard and filling in gaps to reconnect communities.

Transport East supports a strategic approach to growing the rail network to coastal destinations. Building on the success of existing branch lines to coastal towns such as Great Yarmouth and Harwich, the reintroduction of further rail lines where the business case is strong would support mode shift. This includes potential locations from the Wash Coast, all the way round to Maldon where proposals are in place to revitalise railways to support communities and encourage sustainable tourism.

Our 500 miles of coastline and extensive network of waterways also creates the potential to expand water-based transport in the region to improve connections and reduce vehicle miles where severance is caused by natural geography. We will work with Local Authorities to explore the challenges and opportunities around water-based transport alongside complementary land transport routes, including the East of England coastal path.

To improve connections to our coastal communities Transport East will:

- Evaluate and promote the transport needs of our coastal towns as part of our strategic network plan and corridor studies, to improve sustainable connections from our coast with the rest of the region and the UK.

- Through our new Rail Group, work with government and Network Rail to prioritise investment in rail to better connect our coastal communities with the rest of our region and the UK.

- Co-ordinate our partners and local authorities to establish an investment programme to tackle severance and level-up communities along our 500-mile coastline, identifying the best value and most sustainable projects potentially including water-based transport for coastal communities and the East of England coastal path.

4.5 | Unlocking international gateways

Better connected ports and airports to help UK businesses thrive, boosting the nation's economy through better access to international markets and facilitating foreign direct investment

The Transport East region has more international gateways than any other region in the UK. Thirteen ports, including two Freeports, and three international airports. Ports in the region are of international significance and collectively carry over half of the UK's containerised freight Stansted Airport is the third largest airport in the country, and Southend and Norwich airports provide important connections for regional markets, supporting business and leisure travel across the region.

All international gateways have faced significant challenges in recent years. The COVID-19 pandemic grounded flights, dramatically reducing both air passenger numbers and airport revenue. This coincided with the end of the Brexit transition period, which required ports and airports to adapt to additional customs requirements for goods and passengers.

These challenges have added to pre-existing issues. Traffic congestion is a problem on many of our major roads, exacerbated by the lack of viable alternative options for HGVs. There are also significant pinch points on the rail network, limiting the potential for moving freight by rail. Local sustainable connections to airports are in need of improvements, with most routes carrying tourists directly out of the region rather than encouraging them to spend time here.

If global Britain is to thrive, we must enable our gateways to reach their potential as catalysts for international trade and foreign investment. Figure 4.5.1 sets out our pathway for unlocking our international ports (the pathway for airports is covered later in this section), including aims to improve capacity, journey times and reliability for freight and passengers travelling to and from ports, support the decarbonisation of port and freight transport activity, and encourage a mode shift of freight to more sustainable modes.

Image: Stansted airport, MAG

Figure 4.5.1

Unlocking international gateways Pathway: ports

Better connecting our 13 ports and 3 airports, helping UK businesses thrive and boosting the nation's economy

Goal 10
Improve capacity, journey time and reliability

for freight and passenger surface access to ports

Connecting the UK to international markets and attracting ForeignDirect Investment post-Brexit.

Goal 11
Support our ports and the freight sector to increase their use of alternative fuels

through supporting infrastructure, electrified / hydrogen-powered rail routes and road vehicles, and supporting innovation in new and emerging fuels

Goal 12
Modal shift of freight

from road to rail or short sea shipping, and increase sustainable mode share of employees and passenger using port facilities

100% electrification of all rail routes to ports in the East of England.

Zero carbon port side operations.

Improved journey time reliability for surface access to ports.
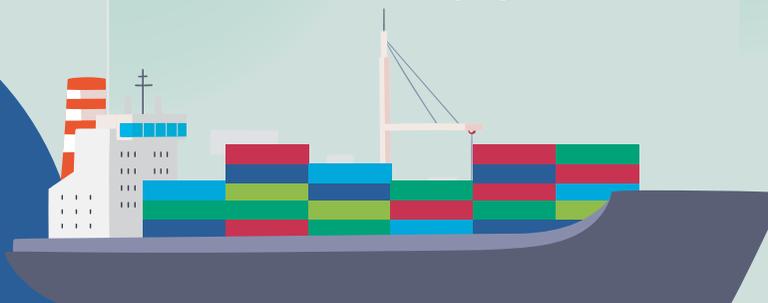
Goal 10

Improving capacity, journey time and reliability

The reliability of services and overall journey time to key destinations, notably distribution centres in the East Midlands and the North, is vital to ports and their customers. Freight to and from ports is particularly vulnerable to major delays and incidents which result in temporary road or rail closures. These can lead to missed slots inland or missed sailings at the ports, adding significant costs for hauliers and shippers. This challenge is exacerbated when there is a lack of suitable alternative freight routes.

Tackling road reliability for freight

The Transport East region's Strategic Road Network (SRN) and Major Road Network (MRN) are vulnerable to resilience and reliability issues particularly at peak times. Challenges are created by the varying levels of infrastructure, lack of hard shoulders, rest facilities and diversion options, with navigation limited through city centres and at capacity junctions. When incidents happen on our SRN, they have a notable impact on a wide area.

Through this Strategy, we propose to tackle journey time reliability by improving the resilience and reliability of major roads serving our ports, working with National Highways to ensure gaps, junctions and pinch-points on routes such as the A12, A13, A14, A47 and M25, are prioritised through programmes such as the Roads Investment Strategy.

We will also work with National Highways and policing partners to make sure the resourcing is in place to respond rapidly to incidents on our SRN, to keep the network moving and using the Safer Systems approach to reduce incidents, keep people safe and learn from every collision.

Image: Wolfgang Hass from Unsplash

Figure 4.5.2 Map showing international links, network constraints and airport transport mode share

Key
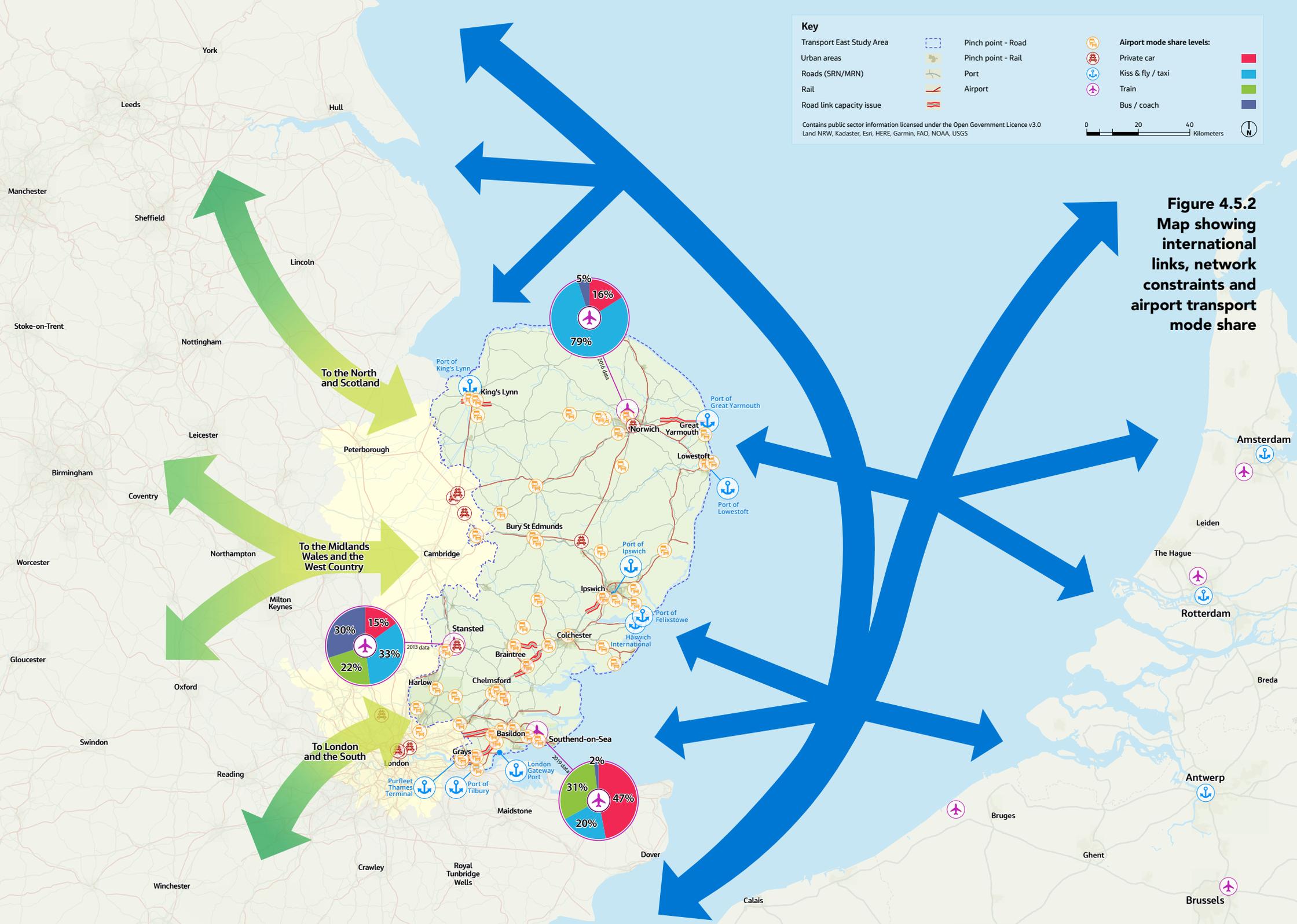
Transport East Study Area	Pinch point - Road	Airport mode share levels:
Urban areas	Pinch point - Rail	Private car
Roads (SRN/MRN)	Port	Kiss & fly / taxi
Rail	Airport	Train
Road link capacity issue		Bus / coach

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0   20   40
Kilometers
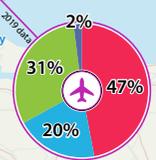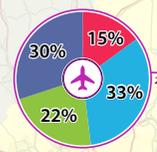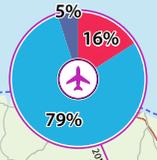
A joint freight plan for the East

More generally we will work with the freight industry and local authorities on a Future of Freight Plan for the East. Along with identifying improvements to the transport network for freight, this will tackle the availability of high-quality facilities for trucks and drivers along port access routes, and give recommendations on improving journey time, resilience, and diversionary routes for road and rail serving ports on a corridor basis.

The plan will also consider options for reducing freight demand on the road network, including the scope for digital technology to support more efficient logistics planning, and for planning policies including Local Plans to encourage more, and more coordinated, distribution activity in the region. Better digital connectivity will improve the transfer of accurate real-time traffic information, enabling logistics businesses to plan their operations more efficiently and deliver goods more quickly.

The requirement for additional border checks also creates the potential for congestion caused by HGV roll-on, roll-off cargo, particularly at ports such as Harwich. We will support ports to develop freight parks to better manage the flow of HGVs and reduce congestion on roads.

To improve capacity, journey times and reliability for freight and passenger services Transport East will:

- Make the case for investment to ensure road improvement projects facilitating freight flows are prioritised through programmes such as the Roads Investment Strategy.

- Lead the development of a regional Future of Freight plan to identify sustainable solutions for goods movement, high priority network improvements and options for reducing freight demand on the road network.

- Produce key corridor studies to support the development of freight parks to better manage the flow of HGVs and reduce congestion on roads.
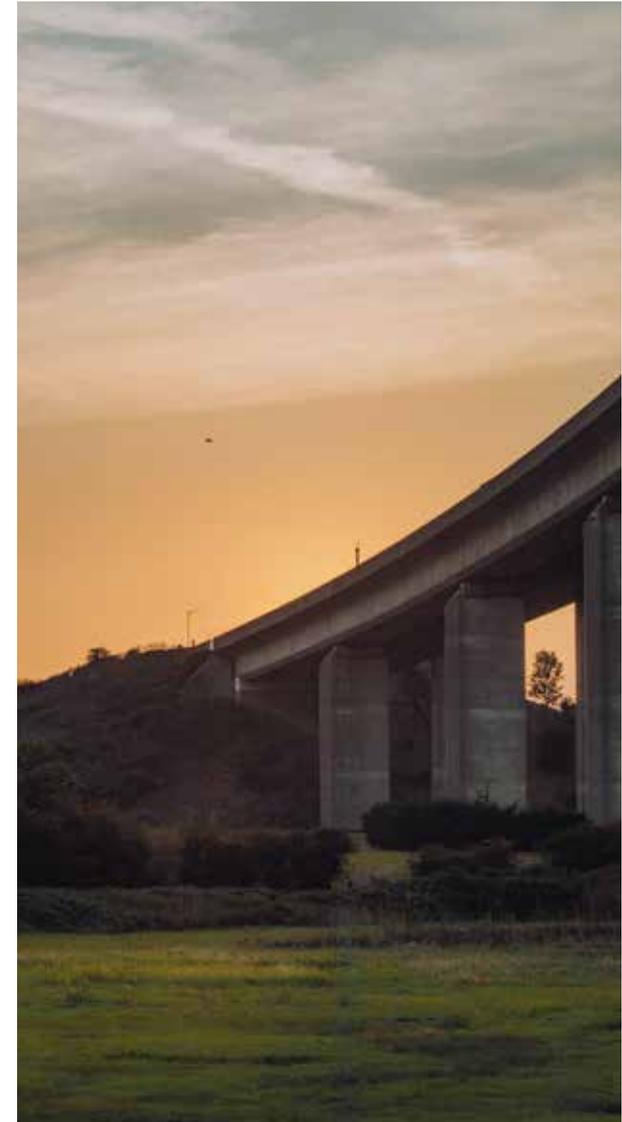
Image: Super Straho from Unsplash

Unlocking international gateways
Pathway: ports

Goal 11

Alternative fuel for freight vehicles and port operations

Heavy Goods Vehicles (HGVs) make a disproportionately high contribution to transport emissions in the region. The presence of nationally significant ports at Felixstowe, Tilbury and London Gateway creates very high HGV flows on roads such as the A12, A13 and A14, leading to localised but significant air quality issues.

Supporting our ports on the net zero journey

Through our freight plan, we will engage extensively with logistics businesses, port and airport owners, and other HGV operators to understand and tackle the barriers to decarbonising freight transport. We will work to identify the key infrastructure and incentives to encourage a transition to zero emission freight.

The freight plan will be integrated with wider energy infrastructure plans and will consider the best choice of zero emission technology for road freight in different circumstances. While hydrogen is emerging as a strong contender for the low-carbon HGV fuel solution, there is still a considerable amount of work to be done to develop the technology and infrastructure to support the transition away from diesel. Battery powered HGVs remain a potential solution our strategy for rolling out EV charging infrastructure across the region must not overlook charging requirements for larger vehicles. We will work closely with the industry to make sure the infrastructure needs of low-carbon freight are embedded into our transport networks.

High upfront costs for zero emission HGVs remain a barrier at present to take-up, as is the case with cars and buses. We will collaborate with local authorities, the freight industry, and government to secure further financial support to incentivise operators to transition to new zero emission vehicles.

We will also work with local partners to support innovation in the field of alternative fuels and promote trials and testbed projects for low carbon electricity, biomass and hydrogen, building on existing initiatives in the region. Supporting businesses with exporting best practice in this field to boost the regional economy will also be a priority, capitalising on our close links with European ports.

To increase the use and uptake of alternative fuels for port freight Transport East will:

- Lead strategic thinking and develop evidence to accelerate hydrogen and EV infrastructure across the East.

- Engage regionally and nationally with logistics businesses and HGV operators to promote the transition to low carbon freight.

- Collaborate with local authorities, the freight industry, and government to provide a regional voice at national level, to make the case for further financial support to incentivise operators to transition to new zero emission vehicles.

- Collaborate with local partners to promote the acceleration of research and development into alternative fuels for ports and freight transport, supporting the export of best practice to boost the regional economy.

Unlocking international gateways Pathway: ports

Goal 12

Moving passengers, employees and freight to sustainable modes

The location of ports on the edge of towns means it is often harder to access them by sustainable options. Improving transport services and routes to these locations is important to maximise employment opportunities along with delivering net zero.

Supporting a shift to rail freight

Rail freight must play a greater role in removing HGVs travelling to and from ports in our region. We will work in partnership with government and other Sub-national Transport Bodies to secure improvements to the rail network serving major ports (particularly the Haven and London ports) to allow more freight train paths to operate and to reduce journey times between the ports and key distribution centres.

Felixstowe, Ipswich, Harwich, London Gateway and Tilbury all have rail connections, with Felixstowe, Ipswich, London Gateway and Tilbury

having specific port rail infrastructure. The following constraints to these routes have been identified:

- Single track branch line between Felixstowe and Westerfield, Ipswich and junction with the East Suffolk Line is operating at capacity.

- Capacity constraints on the Felixstowe to the Midlands and North route including at Ely, Leicester, Haughley Junction and Ely to Soham.

- Sections in need of electrification including Felixstowe Branch Line, the Felixstowe to the Midlands and North route and the rail spur serving London Gateway, affecting acceleration of trains and increasing capital costs for transporting freight. Trains are often routed through London and back to the Midlands along an electrified route.

- Constraints along the North London Line to support continued efficient movement of freight, especially with growth expected.

- Bottlenecks and capacity constraints along the route from London ports along the Thames Haven Line and Essex Thameside corridor.

- Long journey times on all routes due to freight trains waiting for passenger services to pass.

- Freight services impacting on passenger service reliability due to capacity constraints on more direct freight routes.

- Transport East will work closely with Network Rail, local ports, the rail freight sector and government to tackle these as a priority. Unlocking these constraints will provide a catalyst for shifting]freight to rail, opening up economic opportunities for local businesses and removing freight from regional road routes. It would also provide an opportunity for the creation of rail freight hubs, supporting a network of smaller ports and businesses to access rail freight facilities.

Growing short-sea shipping

Small volumes of freight are already moved around the country and to smaller ports via short-sea and coastal shipping. The River Thames is also used extensively to transport freight and passengers to and from London.

Many of our partners support the growth in short-sea shipping, and we will work with ports and logistics businesses both within the region and around the UK (particularly along the north-east coast) to understand and promote an expansion of short-sea and coastal shipping as part of achieving a mode shift to sustainable modes through the freight strategy.

Sustainable passenger access to ports

The need to improve rail services is clearly set out in this strategy. This must include better access for ferry and cruise passengers to our ports, particularly at Tilbury and Harwich which have dedicated cruise terminals. As well as more frequent and faster services, we support initiatives such as integrated rail-sea ticketing to make rail access more attractive for customers.

Supporting our freight work force

Plans to improve walking, cycling and bus connectivity (set out in Goal 5 of Section 4.3 Connecting growing towns and cities) will also need to consider the requirements of staff travelling to and from ports. We will work with local authorities and port operators to support improved sustainable connections to ports for staff, alongside initiatives to encourage uptake among port employees and demand management measures to reduce traffic impacts on the local road network.

To support modal shift of port freight and passenger/staff access Transport East will:

- Through the Transport East Rail Task Group, work in partnership with government, Network Rail and other Sub-national Transport Bodies to secure improvements to the rail network serving major ports, tackling constraints affecting our region.

- Work with major ports with existing rail connections to establish rail freight hubs to help improve sustainable connections for local businesses and smaller ports to support mode shift.

- Work with ports and logistics businesses both within the region and around the UK (particularly along the north-east coast) to scope the case for, and promote, an expansion of short-sea and coastal shipping.

- Promote the improvement of passenger rail services to ports with significant ferry/cruise services including accessibility enhancements, and support initiatives to better integrate rail-sea travel.

- Work with local authorities and port operators to improve sustainable and inclusive connections to ports for staff, alongside initiatives to encourage take-up and manage demand on the local road network.

Figure 4.5.3

Unlocking international gateways Pathway: airports

**Better connecting our 13 ports and 3 airports, helping UK businesses thrive and boosting the nation's economy**

Goal 13
Improved passenger and employee connectivity to airports

through better connected and more sustainable surface access options

Connecting the UK to international markets and attracting Foreign Direct Investment post-Brexit.

Goal 14
Support the government

and aviation industry through the Jet Zero approach and other mechanisms to deliver net zero emissions from aviation by 2050

Goal 15
Shift modes

by supporting people and employees to switch from private car to passenger and active transport to access international airports

Significantly increase mode share by rail, bus, coach and other sustainable modes to and from our three international airports.

Achieve Net Zero carbon emissions from aviation in the East of England by 2050.

Goal 13

Better connections to airports

Airports have similar challenges to ports in terms of sustainable connections to and from both their terminals and surrounding businesses. Located away from town centres, they need dedicated connections from multiple directions to maximise the opportunities for sustainable travel.

Enhancing rail connections to our airports

Both Stansted and Southend Airports have dedicated rail stations providing direct services to and from London with relatively high frequencies during the day and journey times of less than an hour. However, rail connections to other parts of the region are very limited, as are early morning and late-night rail services to London, reducing sustainable options for passengers. Norwich Airport has no dedicated rail connection at all. This means many passengers and staff are dependent on cars and other road-based transport for access.

We will collaborate with government, airport operators and local authorities to strengthen

rail connections to both Stansted and Southend airports, considering the potential for increasing the hours of operation of services to cater for passengers catching early or late flights. We will also promote initiatives to realise the West Anglia Task Force aspiration to reduce journey times between London and Stansted to 40 minutes and improve rail connections between the airport and destinations to the north.

In the longer term, extending East West Rail to Norwich and Ipswich could create the potential to incorporate improved connections to both Stansted and Norwich airports. Options for this should be explored within the wider context of proposals to extend East West Rail.

Enhancing the network of buses and coaches

Good road connectivity to all three airports will remain important in future, not least to support better bus and coach connections. Stansted has a significant coach offer, with 20% of air passengers travelling to and from the airport by bus and coach. We will work with airport operators and local authorities to improve bus and coach networks to support staff and passenger trips to airports in our region, exploring the potential for fast, high-quality Rapid Transit or centre-to-centre bus connections. Road pinch-points

To improve the capacity and reliability for passengers, employees and freight to and from airports Transport East will:

- Collaborate with government, airport operators and local authorities to strengthen accessible rail connections to all our airports including upgrades to the West Anglia Main Line and extending East West Rail east of Cambridge.

- Work with airport operators and local authorities to improve bus and coach networks to support staff and passenger trips to and from airports.

- Support initiatives to address significant road network pinch-points around airports, exploring the potential for incorporating more bus priority in the process.

- Work with government, the airport operator and local partners to explore ways of improving rail freight capacity at Stansted Airport.

**Unlocking international gateways
Pathway: airports**

Goal 14

Net zero airports

Aviation is a very challenging area to decarbonise with the effort needing to come from airlines, airport operators, national and international governments. We will focus on increasing the use of alternative fuels for airport surface transport and ground operations to support the transition to net zero.

Electrified airport surface access

Our objectives to develop a regional EV strategy and freight decarbonisation plan are set out in Section 4.2 Decarbonisation to net zero. Through these plans we will support the decarbonisation of surface access to airports. This will involve working with airport operators and local authorities to ensure measures are in place at airports to encourage the use of EVs (both private cars and taxis), including providing charging facilities in parking and taxi-ranking areas. We will also work with bus and coach operators and logistics businesses through these plans to promote the use of clean fuels for vehicles serving airports.

Supporting net zero aviation

The government's net zero target includes decarbonising the aviation sector by 2050. The main responsibility for delivering this will rest with airport operators and airlines, with the government supporting the process through the Jet Zero programme. We will promote research and development of clean fuels in the region as part of our role in helping to deliver net zero. Research and development should cover aircraft and ground operations as well as innovations such as carbon capture and storage.

To increase the use and uptake of alternative fuels for airports Transport East will:

- Work with airport operators and local authorities to support measures at airports to encourage the use of EVs powered from clean energy sources.

- Work with bus and coach operators and logistics businesses to promote the use of alternative fuels for vehicles serving airports.

- Support the government's Jet Zero approach to eliminate carbon emissions from aviation, and promote research and development of alternative fuels in the region, including for aircraft and ground transport operations.

Unlocking international gateways Pathway: airports

Goal 15

Sustainable airport journeys

Shifting passengers, employees and airport operations to more sustainable modes of transport overlaps substantially with Goal 13, which focuses on improving sustainable connections to airports, including rail and bus services, and walking and cycling links for employees.

Supporting mode shift strategies for airports

All airports, through their Airport Transport Forums, are required to produce an Airport Surface Access Strategy (ASAS) in line with guidance set out in the Aviation Policy Framework 2013. The policy framework suggests that each ASAS sets out short and long-term targets for increasing the proportion of journeys made to the airport by sustainable modes by air passengers and employees.

We will work with airport operators and local partners to support the development of strategies that set ambitious targets for mode shift. These strategies should dovetail with regional tourist strategies to encourage a higher proportion of visitors to stay in the region, and with wider regional plans to improve walking, cycling, and public transport networks.

Airport strategies should seek to apply a wide range of measures to encourage mode shift among passengers alongside the provision of new connections. Including considering demand management measures such as car park pricing and forecourt charging to dissuade 'kiss and fly' pick-up and drop-off trips, which generate significant and disproportionate traffic impacts. Measures to better inform air passengers of the travel options available to them should also be considered, using digital technology. Options should also be explored for initiatives such as integrated air-rail or air-bus tickets to encourage passengers to make the switch.

We recognise that significantly influencing passenger mode share can be challenging given the wide catchments areas and dispersed origins of air passengers around airports, and the fact they are time limited and often carrying luggage. In many cases there is more scope to significantly reduce single occupancy private car use among airport employees through local walking, cycling and bus services (considering the needs of shift workers), the provision of active travel hubs, fare incentives, and car sharing schemes. Measures to reduce traffic impacts generated by employees should be given equal priority to those targeted at passengers in airport strategies.

These approaches would benefit from airports working closely with their surrounding networks of businesses to maximise the effectiveness and impact of interventions, recognising the 'hub' role the airport plays in connecting the business cluster with the wider transport network.

Fig 4.5.4 Improving surface access to airports

Case Study: **Improving surface access at Stansted**

London Stansted Airport provides a model for the successful implementation of an Airport Surface Access Strategy (ASAS) to increase the use of sustainable modes to and from the airport.

Initiatives to create partnerships with transport operators, develop a modern bus/coach facility, support the introduction of new public transport services, and introduce measures to manage car demand has resulted in 51% of air passengers travelling to and from the airport by rail, bus or coach (DfT 2018), one of the highest sustainable mode shares of any airport in the UK.

Further investment is required to support the airport with encouraging more passengers and employees to choose sustainable modes of transport as demand recovers after the pandemic. This includes measures to improve coach travel times and reliability on the strategic road network serving the airport, and improvements to the West Anglia Mail Line to increase capacity and reduce rail journey times.

Map showing public transport connections from Stansted airport

To support modal shift of passengers and employees to airports and surrounding businesses Transport East will:

- Promote the improvement of public transport services and infrastructure to and from our airports to provide more, and more accessible travel options for passengers.

- Work with local authorities and airport operators to provide better and inclusive active travel and low-emission bus routes connecting airports, and their business clusters, with nearby residential areas, to encourage employees to shift modes.

- Support airport operators with developing Airport Surface Access Strategies with ambitious mode share targets, considering the potential for complementary measures to encourage all people to shift mode.

Air freight mode shift

Stansted is ranked third in the country in terms of volume of air freight carried, and it has the potential to expand its air freight offering to better compete with East Midlands and Heathrow. In Goal 11 of the ports pathway we set out our approach to improving rail freight connectivity to ports. We will work with government, the airport operator and local partners to explore ways of improving rail freight capacity to Stansted to reduce reliance on road transport and important links like the M11 to move freight in and out of the airport.

Image: Visit East of England

5.0
PRIORITY CORRIDORS

5. Priority Corridors

Our Strategy sets out interventions across the whole region. However, to reflect our place-based approach, we have identified six core strategic corridors linking key destinations within, and beyond the Transport East region which require particular focus.

These corridors, essential for the movement of people and goods, are shown in Figure 5.1.1. They include our growing urban areas, ports, airports and the road and rail connections between them and the rest of the UK. They will remain critical throughout the life of this strategy, and further investment will be needed on these if the region is to reach its potential as a thriving, connected, multi-centred economy, whilst reducing carbon emissions.

Figure 5.1.1: Strategic corridors in the Transport East region

Strategic corridors

Midlands - King's Lynn - Norwich - Great Yarmouth

London - Chelmsford - Colchester - Ipswich - Norwich - Suffolk Coast

Norfolk and Suffolk to Cambridge - Midlands - South West

Stansted - Braintree - Colchester - Harwich and Clacton

King's Lynn - Cambridge - Harlow - London

**South Essex - London - Thurrock - Basildon - Southend**
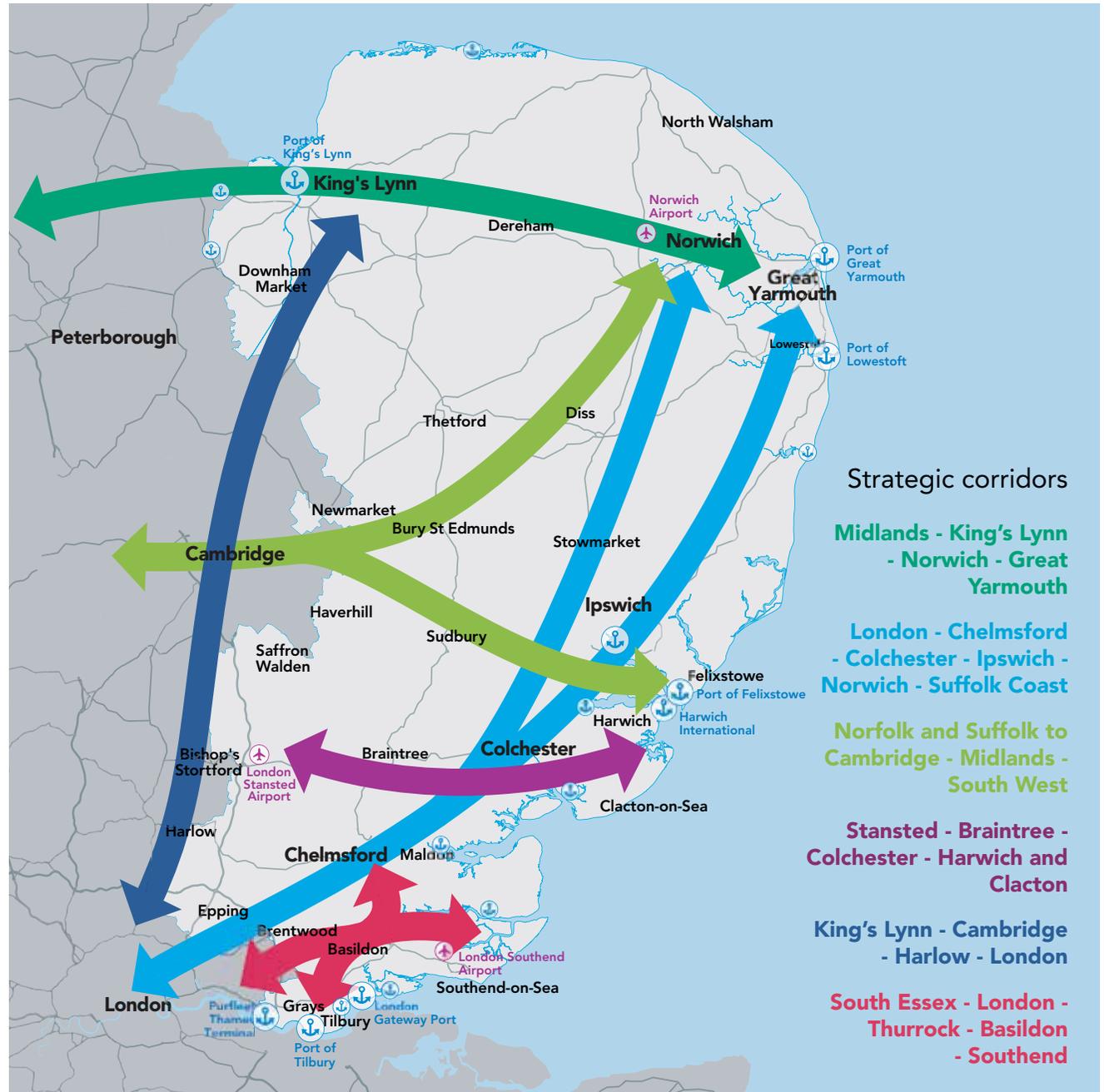
5.1 | Midlands – King's Lynn – Norwich – Great Yarmouth (B)

This corridor, focused on the A47 and with no direct rail alternative for much of its length, connects the Midlands to internationally significant offshore wind energy clusters at Great Yarmouth and Lowestoft, as well as connecting multiple growth centres at Norwich and King's Lynn. Norwich is one of the two fastest growing cities in the region and one of the three fastest expanding economic hubs in the country – together with Cambridge and Ipswich.

Currently, the remaining sections of single carriageway on the A47 are frequently blocked by congestion, slowing longer distance bus services, adding business freight transport costs each year estimated at £25m, creating a barrier to inward investment and economic development, and hampering progress on the 'levelling up' of deprived communities.

Delivering investment in a reliable and efficient way to tackle issues on the A47 corridor will support economic expansion, helping unlock over £50bn of inward investment over the next 20 years and creating of 9,000 jobs and a further 4,500 supply chain jobs in the Lowestoft and Great Yarmouth Enterprise Zone by 2025. It is critical to the expansion and regeneration of Norwich, King's Lynn Port, and coastal communities and visitor attractions including Cromer, Sheringham and the Norfolk and Suffolk Broads. In total, the corridor, extending into Cambridgeshire and Peterborough, will support 125,000 new homes and 75,000 new jobs.
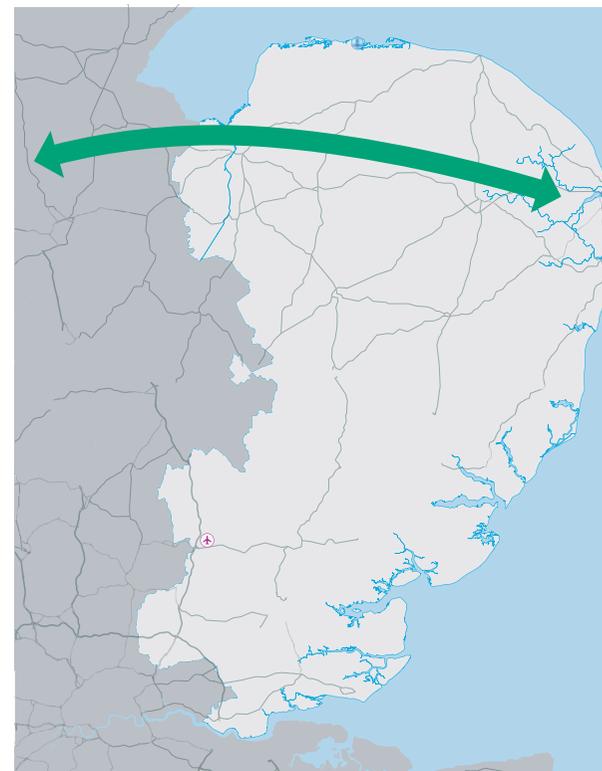
5.2 | London – Chelmsford – Colchester – Ipswich – Norwich & Suffolk Coast (C)

This corridor running north-south through the 'Heart of East Anglia' provides the connections to important and fastest-growing towns and cities and serves some of our major gateway ports. It includes onward connections by rail and road (specifically the A12 and A140) to the energy coast along East Essex, Suffolk and Norfolk and connects with our most important strategic corridors.

World-class connectivity on this corridor is essential to the projected £4bn growth and delivery of 10,000 jobs in the region. Rail and road improvements are both vital. For rail, unlocking constraints on the Great Eastern Main Line, both for passengers and freight are vital.

Currently, even with new rolling stock, passenger and station capacity are inadequate, limiting prospects for modal shift. Haughley Junction is a major pinch-point on the Felixstowe to Nuneaton freight corridor and Great Eastern Main Line. Trowse Bridge limits improvements to services

in and out of Norwich. Capacity enhancements including passing loops will be needed to enable higher line speeds and 90-minute Norwich to London journey times.

Similarly, on the roads, the A12 carries over 100,000 vehicles per day through Essex and suffers congestion at key points around its intersection with the M25 and between the M25, Colchester and Ipswich.

Delivering a multi-modal package will support the sustainable development of the Essex, Suffolk and Norfolk economies, providing cross-regional links and better connecting the region's towns and cities. The corridor will improve connections to the Suffolk and Essex coast, with improvements along the A12 road/rail corridor supporting the recovery of the visitor economies, local growth and delivery of energy projects such as Sizewell C.

5.3 | Norfolk and Suffolk to Cambridge – Midlands – South-West (D)

This 'forked' corridor includes Gateways at Felixstowe and Ipswich Ports, Norwich Airport and growing towns and cities at Norwich, Thetford, Bury St Edmunds and Ipswich. This is a gateway corridor of national importance for both rail and road.

For rail, the Ipswich Chord, completed in 2014, enabled the expansion of services between Felixstowe and the rest of the UK from just 28 trains per day in 2011 to 36 today. To maximise the contribution of our ports to post-Brexit UK economic growth, in addition to relieving the road network of 750,000 lorries by 2030 and supporting decarbonisation, we need to significantly enhance rail capacity further on what is Britain's premier rail freight corridor

The Ely area and Haughley railway junctions are the main constraints, where investment is needed. These essential junction capacity improvements, paired with double-tracking, electrification, resolving crossing issues and traction power increases are vital components of this package.

Passenger connectivity is also vital, and the East West Rail Eastern Section is a nationally significant project as part of the wider East West Rail (EWR) project linking our towns and cities to the Oxford to Cambridge Arc, directly connecting to the Central Section of EWR.

Strengthening infrastructure along the Cambridge to Norwich Tech Corridor, linking two of the UK's powerhouse cities, will help realise its full potential. For road, improvements to the A11 were completed in 2014 when the last single carriageway stretch between Thetford and Barton Mills was dualled by National Highways. However, the pinch point at the Mildenhall Fiveways Junction still acts as a constraint.

The A14 forms the road component of the UK's premier freight corridor but is not expressway standard along its length. There are already 5,000 lorry movements out of Felixstowe per day, and the corridor is constrained at seven pinch-points, the most notable at Bury St Edmunds and Ipswich, the A14/A12 Copdock interchange and poor resilience at Orwell Bridge.

5.4 | Connecting South Essex – London – Thurrock – Basildon – Southend (E)

Our South Essex corridor is a major location for economic growth, and existing proposals will unlock the further expansion of our global gateways. The corridor comprises growing urban areas across Thurrock, Southend and South Essex including Basildon, connecting to neighbouring areas including London and across the Thames to Kent. Transport East fully supports the work of the Thames Estuary Growth Board, Opportunity South Essex and the Association of South Essex Local Authorities to drive forward progress in this vital area for UK prosperity.

Thurrock is home to several major international ports of strategic national economic importance, including London Gateway and Tilbury (now Thames Freeport) and Purfleet.

Further east along the corridor is some of the most densely populated settlements in the region, featuring major high-value and expanding industries covering digital, creative, ICT, vehicle automation and aerospace sectors. Investment in this area will unlock expansion of growing towns, principally Southend-on-Sea and Basildon, and the important international gateway at Southend Airport, which handles 1.5 million passengers per year and has permission to grow.

Basildon has a local economy worth £3.7bn – the largest in Essex - and employs 97,000 people, with ambitious plans to redevelop its central area. Southend-on-Sea is the centre of the largest urban area in the east with 65,000 jobs and welcoming over 6.5 million visitors per year.

This part of the South Essex corridor experiences the worst traffic congestion in Essex, with a significant proportion of residents driving to work. To cater for economic and population growth, investment in both the road, passenger rail and the bus network is required.

London Gateway, comprising a deep-sea container port and logistics park is one of the fastest growing ports in the world. When fully constructed the port shall have a capacity of up to 3.5 million containers (TEU), whilst the park will provide up to 830,000sq.m of commercial floorspace. As the largest of its kind in Europe, it has potential to directly and indirectly provide c.36,000 new jobs once fully developed.

Alongside London Gateway, Tilbury and Purfleet are major gateways. The Port of Tilbury has ambitious expansion proposals, whilst Purfleet Thames Terminal handles approximately 250,000 trailers, containers and tanks per year.

The expansion of this economic gateway as a powerhouse for future UK trade and innovation is restrained by the capacity of the rail and road network. The A13 along its entire length already carries 64,000 vehicles (including cars and lorries) daily, and junction 30 of the M25 also plays a significant role in enabling traffic movement through the South Essex corridor. Continued congestion and delays will affect network capacity and act as a barrier to growth.

5.5 | Stansted – Braintree – Colchester – Harwich and Clacton (F)

This corridor provides vital resilience for freight to our East Coast ports, whilst also supporting growth. Currently, the A120 suffers from increasing unreliability due to the single-carriageway section, which also has adverse impacts on communities and homes along its length. With the planned population and jobs growth, this situation is expected to become critical.

Unlocking constraints for people and goods moving between Braintree and the A12 will boost our connectivity between growing towns and cities and link the M11 UK Innovation Corridor with gateways at London Stansted Airport, Freeport East and the Port of Ipswich. Improved connectivity and capacity on this corridor will support adjoining corridors, including links to the A414 corridor and Hertfordshire.

Tackling constraints on the A120 corridor will support the creation of garden communities, to the west of Colchester and at Gilston, north of Harlow. It extends to Harwich and Clacton-on-Sea, supporting the regeneration of these communities. This corridor also supports the provision of essential high-capacity public transport and cycleways linking the existing and new communities.

5.6 | King's Lynn – Cambridge – Harlow – London (G)

The UK Innovation Corridor growth partnership is working closely with Transport East, promoting development, transport and better infrastructure, next-generation science and technology powered by London and Cambridge.

The West Anglia Main Line railway and A10 northwards to King's Lynn is a natural extension of this, encapsulating a growing economy based around medical and agri-tech, life sciences and bio-sciences. The corridors include gateways at London Stansted Airport and King's Lynn Port and multi-centred growth at King's Lynn and Harlow.

Network Rail has, in sections within London and Broxbourne, scoped track and station capacity increases on the West Anglia Main Line to bring forward 20,000 homes and 10,000 jobs sooner than 2030. This clearly has positive implications for growth in the UK Innovation Corridor, benefiting Harlow and King's Lynn. Also proposed (currently GRIP2/3) are capacity and other improvements at Ely to allow to allow additional train movements and improve the connection between Felixstowe and the Midlands (see also Corridor C above).

Significant constraints on the road network include the M11 junctions (particularly junction 8 for Stansted Airport) and the A10 limiting proposed growth at West Winch.

6.0
DELIVERY APPROACH

6.1 | How we will prioritise investment and accelerate delivery

Transport East has been tasked by Government to set a Transport Strategy for the region and advise on investment priorities. However, our partnership is already thinking beyond that, to proactively put in place capability, capacity and systems to accelerate delivery of our strategy and investment programme.

This Strategy document is accompanied by our 'Approach to investment and delivery programme' document which sets out our proposals, summarised in Table 6.1.1, for how our partnership will deliver better transport outcomes in the East of England.

Table 6.1.1: Transport East approach to investment and delivery planning

1. What is our PURPOSE?

- To deliver our strategic priorities in our Transport Strategy.

- To identify the best projects and programmes required for the four pathways and six strategic corridors in the strategy.

- To improve and maximise delivery of transport outcomes in rural, coastal and urban places in the region, and on each of our six strategic corridors.

2. What is our PROCESS for better prioritisation and faster delivery?

- Create and manage an Investment Pipeline for the East, supporting progression of new ideas from our partners through scheme development to making the case for delivery, and identifying and tackling resulting gaps in our portfolio.

- Adopt the draft Strategic Assessment Framework – to identify our pan-regional and corridor priorities aligned with our 4 strategic pathways, and enable regional and national partners to ensure their projects align with the region's single voice set out in the Transport Strategy.

- Support our partners to accelerate business case development to get our projects funded and delivered quicker.

- Regularly review of our programme to ensure continued alignment with our priorities and to respond to changing circumstances.

3. How will we maximise PERFORMANCE?

- Work with government to improve the conditions for better delivery including funding certainty for new projects and programmes as well as maintenance for existing infrastructure, greater transparency of decision-making, reduction of risk, and increased 'lock-in' to other delivery bodies.

- Deliver a technical work programme agreed annually by our members through our Business Plan to 'improve capacity, capability, intelligence and expertise in the region to drive forward our strategy, projects and programmes'.

6.2 | Funding the strategy

One of the crucial elements to delivering the strategy is the availability of funding to local authorities and other bodies responsible for infrastructure in the East. In 2018 the East of England saw the lowest per capita government spend on public transport nationally, and the fourth lowest across transport overall. In the Investment and Delivery Programme (IDP) we have mapped prior, current and future funding streams as well as exploring new innovative funding opportunities to deliver this strategy.

Funding and prioritising schemes is part of a wider, inter-linked process. Transport funding and the priority status of schemes are often linked to external decisions on delivering infrastructure beyond the remit of transport itself. The funding approach we put forward is intentionally flexible; identifying potential future funding streams so we can pivot to meet changing needs and alternative funding approaches as opportunities arise. The IDP sets out in more detail how we will secure funding for our future projects.

Transport East advocates for multi-year funding for the East. Multi-year funding provides a more stable income stream that can be used to launch a long-term programme of works, allowing for the longer-term planning and development of

schemes. This supports the more efficient delivery of investment projects, the ability to effectively plan maintenance programmes to maximise our existing extensive assets, thereby delivering greater value for money.

6.3 | How we will measure success

It is important we can measure the success of interventions in achieving the aims of the strategy and against our four strategic priority pathways. The IDP sets out more about how we will monitor our performance and a full Monitoring and Evaluation Plan will be developed to accompany this strategy in the future.

6.4 | Encouraging innovation

A central component to Better Delivery across all four pathways is a focus on encouraging innovation and harnessing new technology to overcome challenges and remove barriers.

Improvements to electric vehicle technology are needed to overcome psychological barriers to take-up, for example 'range anxiety'. Connected and autonomous vehicles offer the potential to

improve accessibility and connectivity, but further testing and refinement is needed before these vehicles can be introduced on our roads. More work is needed to develop viable alternative fuels in the aviation and shipping sectors. Digital mobility apps can be improved through the collection and utilisation of richer data.

Transport East is committed to supporting research and development across the transport sector as part of delivering this Strategy. We will become the regional horizon scanners; working with academia and business to understand the future of transport and technology innovation to determine the best solutions for our unique region.

We will work with private sector-led initiatives and collaborate with local authorities and other Sub-national Transport Bodies to pilot new initiatives and make sure that the region is at the cutting edge of technological innovation. We will also act as an advocate for research and development projects, working in partnership with government to increase funding and allow for longer trial periods to test new technologies.

6.5 | Delivering for everyone

Throughout this Strategy we have conscientiously considered the needs of people with protected characteristics under the Equality Act and those who suffer deprivation. People do not experience the transport network and services equally, and we are committed to implementing changes across the region to make accessing and using our networks more equitable. Transport is not an end, but a means to access employment, education, services and experiences.

The Integrated Sustainability Appraisal of the Strategy has reviewed our approach against equality and socio-economic outcomes. We will work with local experts, groups and organisations to understand the needs and experiences of users more fully and seek to make positive change as we deliver the Strategy.

6.6 | Delivering for our environment

It is important new transport infrastructure is planned with as much sensitivity to the wider environment as possible. As new projects come through the pipeline we will support promoters to optimise designs for climate change resilience, bio-diversity net gain and minimise embedded carbon and operational carbon emissions.

The Integrated Sustainability Appraisal has reviewed our approach against environmental and heritage outcomes. We will work with local experts to understand the strategic opportunities for improving our environment as we deliver the Strategy.
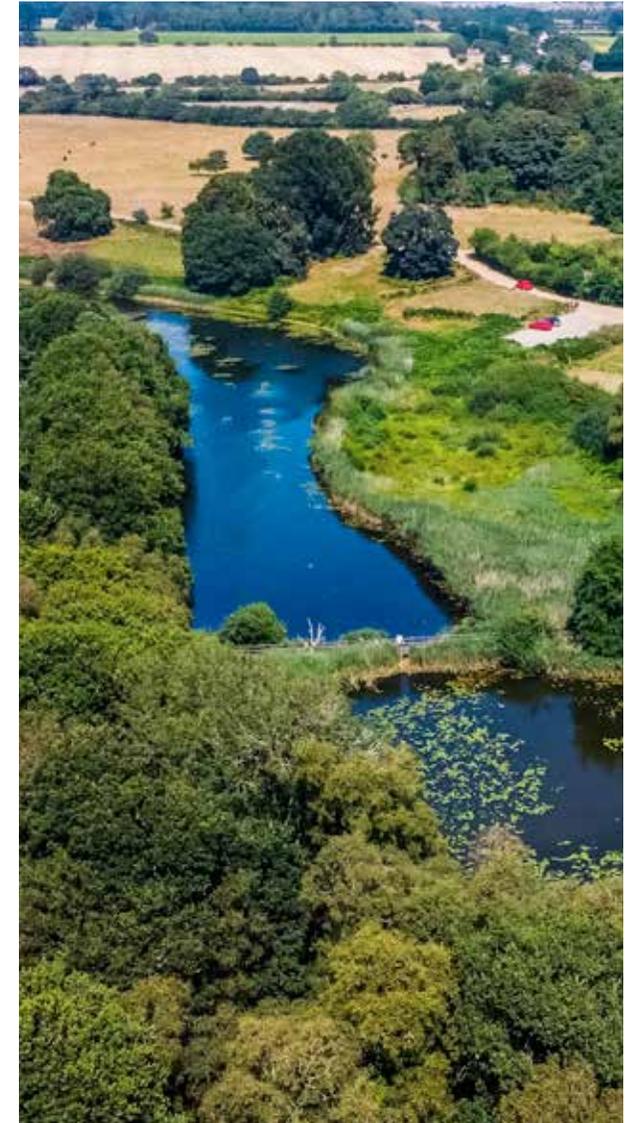
Image: Ryan Grice from Unsplash

7.0
NEXT STEPS

7.1 | How the Strategy will be used

This strategy sets out an approach for improving transport and delivering wider societal and economic benefits in the Transport East region over the next three decades to 2050.

Further work is underway to develop the individual projects and programmes that will be key to implementing the Strategy. Our framework for assessing new initiatives is summarised in our Investment & Delivery Programme (IDP), which sets out the investment necessary for the delivery of the Strategy. The IDP will be reviewed regularly to ensure there is a pipeline of identified investment to continue delivering the pathways, goals and actions within the Strategy.

The Transport Strategy will also drive our own programme of work which is set out annually in our Business Plan.

We will continue to work with government, other regions, our local authority partners and the private sector to deliver existing commitments in the region, and to explore innovative solutions to transport challenges harnessing emerging technologies. We remain open to trialling new initiatives and technologies in collaboration with government agencies and private enterprise to deliver a step-change in transport outcomes both within the region and nationally.

We are also committed to improve collaboration and partnership working with delivery agencies such as Network Rail, Great British Railways, Active Travel England, the Department for Transport, other Sub-National Transport Bodies, and National Highways.

7.2 | How the Strategy will be updated

Progress in delivering the Strategy will be monitored and reported regularly. The strategy will be updated periodically to remain relevant to the evolving transport challenges the region faces. This flexible approach will position the region effectively to continue to support the government in achieving wider national aspirations for new homes and jobs, levelling up, boosting international trade, and achieving net zero as we recover from the COVID-19 pandemic.

We are committed to maintaining transparency and accountability as the Strategy is updated. All versions of the Strategy and associated Investment and Delivery Programmes will always be publicly available on the Transport East website with a clear direction to the up-to-date version of each.

TRANSPORTEAST

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Email: transporteast@suffolk.gov.uk

Web: www.transporteast.org.uk

Twitter: @transporteast

LinkedIn: Transport East

Hosted by:
Suffolk County Council
Endeavour House, 8 Russell Road, Ipswich, IP1 2BX