

TRANSPORT EAST FORUM

To be held at 14.00 – 16:30 on 22nd July 2020, Virtual Meeting through Microsoft Teams

AGENDA

1.	Welcome, Apologies and Introductions, and Declarations of Interest and Scene Setting Cllr Kevin Bentley, Chairman of Transport East Andrew Summers, Strategic Director Transport East.	14:00
2.	Notes of the Last Meeting held on 26 February 2020 Cllr Kevin Bentley, Chairman of Transport East.	14:05
3.	100-day plan – Overview and progress Andrew Summers, Transport East Strategic Director. Summarise progress since April on the 100-day plan (including update on Transport East organisational matters and next steps for Transport East).	14:10
4.	Transport East Communications Plan Andy Allsopp, Essex County Council To present the Communications Plan for Transport East.	14:30
5.	Transport Strategy To update the Forum on two core elements of our strategy – carbon reduction and COVID-19 recovery, then secure endorsement of project plan for the Transport Strategy and engagement: <ul style="list-style-type: none"> a) Decarbonisation: KPMG report and recommendations for Transport East Ben Foulser / Hifzur Rahman, KPMG b) COVID-19 recovery: Transport East work programme Andrew Summers c) Transport East Strategy: Outline proposal and methodology Adam Thorp, EELGA / Andrew Summers 	14:50 15:10 15:35
6.	Draft Investment and Delivery Plan (I&DP) Andrew Summers, Transport East Strategic Director To present a draft I&DP which collates in one document the existing programme of strategic projects currently progressing across the region, in advance of a more comprehensive I&DP later this year as part of strategy development.	15:55
7.	AOB and future meeting dates	16:20
	Close	16:30

Transport East Forum

DRAFT Notes of the Meeting

Held on the 26 February 2020 at Ipswich Town Football Club, Portman Road, Ipswich, IP1 2DA

1. Welcome, Apologies and Introductions, and Declarations of Interest

- 1.1. The Chairman welcomed members including Andrew Summers, the newly appointed Strategic Director due to start in April 2020. He also noted apologies.

2. Notes of the Last Meeting held on 21 October 2019

- 2.1. The notes of the last meeting were agreed.

3. Reflections on Transport East Summit

- 3.1. Forum members discussed the communications requirements across the Transport East partnership, and recognised the work of Francesca and Andy at Essex County Council. It was noted that a specialist communications role within Transport East itself would be beneficial, and this would be picked up by the new Strategic Director, Andrew Summers once in post.
- 3.2. The Forum undertook a questions and answers session with Andrew Summers. Initially, his core focus will be to look at a partnership development approach across Transport East and ensuring a work programme was in place. Andrew welcome any contact ahead of start date, which is 14th April.
- 3.3. Question) Cllr Phil Smart. Would Andrew like to be invited to the rail consortium? Andrew would be happy to meet anyone here.
- 3.4. Notes from the Summit will be supplied to all council leaders and members of Transport East in due course.
- 3.5. Cllr Kevin Bentley is keen to consider strategy going forward. The MRN paper and Regional Evidence Base have already been submitted to DfT in 2019. No feedback has been received from DfT about these as yet. Queries have been raised with individual authorities, who will be asked to feed back individually.
- 3.6. Alastair Southgate suggested that DfT are prioritising business cases depending upon resource available. Timescales not provided in depth. Cllr Bentley responded to say that this will probably be linked to the outcome of the budget in terms of funding and consistency.

4. Transport East Elevator Pitch

- 4.1 Cllr Bentley talked through the Elevator Pitch and the benefits of it. The plan is to use this approach to consistently make the case for Transport East. The Pitch is contextualised across areas, but at the same time, the points are very solid. STBs and the importance thereof have increased in terms of profile, however, we need to consider infrastructure holistically. Andrew Cook talked about a meeting he attended yesterday afternoon, and the messages coming from government. Baroness Vere is very interested in and enthusiastic about STBs. Government wishes to agree a core group of responsibilities for all STBs. Funding will be tied to whether these STBs deliver these priorities. Optional extras will be included in future funding. Evolution of these conversations will happen over the coming months.

- 4.2 Question from Cllr Bentley: what's the situation with future funding? Answer from Andrew Cook: DfT wish to make the case for funding to Treasury that STBs are value for money, and can unlock savings, Keen to reduce volume of bids and work directly with STBs for funds.

ACTION: EELGA will distribute to all council leaders.

- 4.3 Cllr Graham Plant; need more energy from wind farms off North Coast kept in Norfolk to fuel carbon neutrality in Norfolk. Need to look at infrastructure around electric vehicles etc. to support this growth and development work on carbon neutrality. Concerns from district colleagues in Norfolk around leveraging benefits of energy in coastal communities.
- 4.4 Cllr Bentley explained that investment in green infrastructure improves deprivation situation in pockets that exist across a wealthy region.
- 4.5 Ian Davidson suggested holding an innovation day for Transport East. There was one for garden communities. Electric car charging approaches could benefit from standardisation, or technologies could become obsolete in some scenarios.

ACTION: Andrew will look at links with universities and will support set up of this event as part of the Transport East strategy development.

5. Transport East Terms of Reference and New Director Post

- 5.1. Marc Lucas questioned terminology around whether TE is an STB. Nicola Beach confirmed that we are an established STB.
- 5.2. The Forum discussed the Terms of Reference, with a focus on our role on decarbonisation:
- Cllr Kevin Bentley would like to hold an evidence review for climate change;
 - Cllr Bentley is keen to involve younger people as Transport East strategy and decarbonisation will impact them. Suggestion to involve colleges.
 - Ian Davidson - last week lots of good sessions with young people. One of the key outcomes was that young people don't feel comfortable with engagement approaches. Can we ask the target audience where the best venue or what the best route would be? Need to consider approaches.
 - Andrew Summers; outlined the work that DfT are undertaking on decarbonisation and the opportunity for this region to work with government on that.
 - Nicola Beach; for businesses who did respond - these are being followed up with the relevant constituent authority.
 - Transport East can help to look at how travel and transport joins up to hubs.
 - Initial review of Terms of Reference took place, but it was agreed that we should reserve our judgement on changes until Andrew is established in post and a work programme / DfT funding agreed. This meeting will note current content of ToR, subject to review, and pending agreement with DfT. Then new ToR will be provided to the Board following Andrew's induction period.

ACTION: Andrew Summers to explore as part of review of Terms of Reference later in 2020

6. AOB

No further business raised.

Transport East Forum

Date: 22 July 2020
Item: Item 3: Transport East 100-day Plan update
Report by: Andrew Summers, Strategic Director, Transport East
Contact: Andrew.Summers@suffolk.gov.uk

Purpose

To provide an overview of Transport East activity over the last 100 days.

Recommendations

Transport Forum to note the report and comment on proposed next steps.

1. Introduction

- 1.1 This paper sets out the progress made by Transport East this quarter, providing an update on our activities and setting out our next steps. The core focus has been on progressing the governance, capability and work programme of Transport East.
- 1.2 This period has coincided with one of the most disruptive periods in UK post-war history. Unprecedented changes have taken place as a result of the COVID-19 lockdown, transforming the way that people travel in our region and across the UK. At a national level, the seven Sub-National Transport Bodies (STBs) across England are responding by accelerating sub-national transport strategies, investment programmes and governance to speed up sub-national delivery, as well as strengthening the national network of STBs as a strategic transport group to work in partnership with government and delivery bodies.
- 1.3 To ensure Transport East is equipped to drive forward our priorities, both within our partnership and nationally, we appointed our first staff member in April - the Strategic Director (SD) - with a remit to work alongside the Transport East Strategic Officers Group (TESOG), this Forum, the Wider Partnership Panel and national partners to progress Transport East to the next level of organisational maturity, creating a single voice for transport, based on shared outcomes, strategic approach, quicker delivery and robust organisational governance.
- 1.4 Within this context, the SD and TESOG together scoped and initiated a **100-day plan**, kick-starting four priority work packages:
 - i. Transport East as a Functional Body
 - ii. Transport Strategy
 - iii. Investment and Delivery Planning
 - iv. Communications, advocacy and partnership
- 1.5 The agenda for this meeting is structured via these four headings, setting out our long-term goals, priority actions, key progress and next steps for each. This paper focuses on progress relating to **(i) Transport East as a functional body**.

2. Transport East as a Functional Body

- 2.1 Our long-term goal established in the 100-day plan is *“To ensure Transport East is a successful, effective, accountable and well-run Sub-National Transport Body, fully championing the aspirations of the Transport East partners, working in close partnership with DfT and the rest of the UK.”*
- 2.2 Transport East already has a well-developed governance, with a Terms of Reference and key governance mechanisms in place, including a Board (this Forum), Officer Steering Group, committed budget, secretariat, an accountable body, and first employed officer. To build on this, our 100-day plan set out three initial priorities:
- Review of existing and emerging governance requirements, to ensure we are fit for purpose for the future
 - Resourcing and funding the work programme
 - Establish the remit of Transport East to maximise 'added value' and minimise 'duplication'

Review of existing and emerging governance requirements, to ensure fit for purpose for the future

- 2.3 To progress to the next stage of organisational maturity aligned with government expectations, Transport East needs to bring existing and required governance together into a **single business plan**, endorsed by the Forum, which: (1) Sets a clear plan for the operation and development of Transport East as a functional body (2) Provides public transparency of TE's functions and activities, and (3) Provides assurance and accountability to TE's funding partners and DfT.
- 2.4 Our aim is to produce a **Business Plan** for the next financial year, starting from April 2021. Our initial scoping has identified this should include:
- Outcomes and outputs report from 2020/21
 - A long-term Vision for Transport East
 - Governance, including accountability and transparency
 - Costed work programme for 2021/22, to deliver required outputs, including income Plan and resource allocation
- 2.5 TESOG will be tasked with developing the draft business plan, alongside the Transport Strategy development, and we propose to bring the first Transport East business plan to the Transport Forum later this year for endorsement.

Resourcing and funding the work programme

- 2.6 Transport East requires capability and resources to grow and fulfil our aims. A budget review for 2020/21 has taken place as part of the 100-day plan. Our annual contribution in 2020/21 from members totals £242,000, in addition, £131,000 from 2019/20 has been carried forward into this financial year. Our baseline planning assumption is therefore £373,000 for 2020/21, reducing back to £242,00 in 2021/22.
- 2.7 It should be noted that we are still awaiting confirmation on our proposal for DfT funding for 2020/21. Should this forthcoming, our work programme budget would be increased, significantly enhancing the scope, quality and impact of our work outputs.
- 2.8 Table 1 sets out our proposed 2020/21 high-level budget allocation to maximise our outputs and outcomes, based on funds currently available

Table 1: Transport East Budget 2020/21

Priority work area	Core expenditure items FY 2020/21	Baseline 2020/21 budget allocation (without DfT Funding)*
i. Transport East development and operation as a functional body	<ul style="list-style-type: none"> • EELGA programme management function • EELGA secretariat function • Dedicated staff: <ul style="list-style-type: none"> ▪ Strategic Director (from April 2020) ▪ Executive Assistant (from Summer 2020) • All Forum / TESOG / wider partnership meetings and events • Transport Summit 2020/21 • 2021/22 Business Plan development 	£160,000
ii. Transport Strategy and iii. Investment and Delivery Plan	<ul style="list-style-type: none"> • Transport Strategy: <ul style="list-style-type: none"> ▪ Carbon Evidence Base ▪ Broader evidence base ▪ Scenario and strategy Development ▪ Strategy engagement programme • Interim investment and Delivery Plan (July 2020) • Full investment and delivery Plan (Winter 20/21) 	£148,000 <i>(c. £60,000 of this has already be utilised for the Carbon Study and Interim Investment and Delivery Plan)</i>
iv. Communications and advocacy	<ul style="list-style-type: none"> • Development of Communications Plan (Essex CC) • Dedicated full-time Communications Manager (from Summer 2020) to boost our single voice lobbying 	£65,000
Total proposed expenditure		£373,000

* the proposed allocations would be updated if DfT funding was forthcoming

Enhancing our capabilities and capacity

- 2.9 A staffing and capability review took place as part of the 100-day plan. The TESOG identified the immediate requirement for the next two new members of staff to enhance our operational and advocacy capabilities:
- **Communications Manager** – A dedicated communications professional to drive forward our ‘loud voice’, mobilising advocates to make the case for investment.
 - **Executive Assistant** – To provide centralised, consistent professional support for staff, TESOG and forum members, allowing Transport East to act quickly and professionally, manage our growing workload, and releasing the time of the Strategic Director and Communications Manager to focus on strategic priorities.
- 2.10 These have both been approved by the recruiting host body (Suffolk County Council), and were advertised in W/C 13th July. Interviews will commence in August for both roles.
- 2.11 As Transport East grows, the next permanent resource required will be our strategic transport project and programme management capacity. In the meantime, and for the remainder of 2020/21, it is proposed to retain the services of EELGA contracted services for all project and programme management, with a focus on delivery of the Transport Strategy.

Establish the remit of Transport East to maximise 'added value' and minimise 'duplication'

- 2.12 It is important that Transport East perform a unique role, not duplicating others, but genuinely adding strategic value as a partnership. To ensure this, the Strategic Director has reviewed our remit, including via:
- A Transport East **'ways of working' workshop** on 4th May, including all five transport authorities, two LEPs, and other partners;
 - **Over 30 one-to-one introductory meetings** between Strategic Director and individual Transport East Forum members or partner organisations;
 - Meetings with the **other six STBs** across England and the Department for Transport
 - A Transport East **District briefing session on 29 June**, at which all 24 districts were invited
- 2.13 The outcome of these meeting has established six unique features of our partnership, validated with the other STBs across England:
- Development of a **single transport strategy** on a scale to impact on local and national outcomes
 - Speak with **one voice** for our sub-national area on transport
 - **Champion our whole sub-national region** in parliament and Whitehall
 - Accelerate and improve **delivery**, via joint working at a national scale with HE, NR and DfT
 - **Work beyond boundaries**, across the UK
 - Provide **economies of scale** for our partnership to drive forward specific issues
- 2.14 The three fundamental work packages required to achieve this are scoped in more detail in the next three agenda items sections, namely:
- Communications Plan (see agenda item 4)
 - Transport East Strategy (see agenda item 5)
 - Interim Investment and Delivery Plan (see agenda item 6)

3. Summary and Next Steps

- 3.1 Our 100-day plan period ends today. Moving into quarter 2 of 2020/21, our work programme progresses into capacity building and strategy development. Key milestones include:

Table 2: Major Milestones

Next Major Milestone	Timescale
Phase 2 recruitment:	
• Communications Manager	July - August 2020
• Executive Assistant	July - August 2020
Initiation Transport Strategy	
• Phase 1 – engagement and evidence base	August – October 2020
• Phase 2 – strategy approach	October – November 2020
• Phase 3 – Delivery Plan	October – December 2020
Communications Plan – go-live	August 2020
Draft Transport East Business Plan	Autumn 2020

- 3.2 This Transport Forum will be vital to guiding the work programme. This quarter we have introduced additional workshops between Forum meetings, to engage members on key items, including the Communications Workshop (18 June) and the Carbon Workshop (26 June). We intend to continue this level of engagement with Transport Forum members, to ensure our partnership develops as a single voice.
- 3.3 **The Forum is asked to review the items in this paper, and comment on the proposed next steps.**



Transport East Forum

Date: 22 July 2020
Item: Item 4: Transport East Communications Plan
Report by: Andy Allsopp, Essex County Council
Contact: Andy.Allsopp@essex.gov.uk

Transport East Communications & Public Affairs Strategy

Draft – 10.07.20

1.0 Background

Transport East is the Sub-Regional Transport Board for the East of England, made up of Norfolk, Suffolk and Essex County Councils and Southend-on-Sea and Thurrock Councils as principal members.

To achieve Transport East's vision, we must successfully communicate with and influence partners and decision makers who have the ability to help bring about desired changes. Through communications and advocacy, TE can secure support for its objectives, build a case for change and position the organisation as a leading voice and champion for the economic growth of the region.

TE will be operating in a crowded space competing for Government attention and ultimately, funding. Clear, effective communications and securing advocates who will our behalf will be important in gaining traction.

A key element of this strategy, and TE's approach to communications and public affairs, will be our offer, a more important proposition than our ask in gaining attention.

This is outlined later in this paper within TE's key messages.

2.0 Communication and Public Affairs objectives:

Ensuring that TE's messages and asks are being clearly conveyed to the right people - who have the ability to determine investment decisions - and that we speak their language will be crucial. Successful communications and advocacy can make TE stand out from the crowd and achieve cut-through.

TE's key messages to these audiences are:

- Transport East is the Sub-national Transport Board (STB) for the east of England - representing Essex, Suffolk, Norfolk, Southend and Thurrock - tasked with delivering a cohesive transport infrastructure strategy.

- We are driving forward a truly connected and integrated transport network and securing vital investment in future infrastructure, allowing for transformational growth in the East of England.
- As a partnership, Transport East brings together local transport and planning authorities, Local Enterprise Partnerships (LEPs) and business leaders, alongside Network Rail and Highways England. We enable the region to speak with one voice on the issues of transport and infrastructure investment, influencing decisions currently made by Central Government.
- Our vision is of a thriving economy for the East, with fast, reliable and resilient transport networks, driving forward a future of inclusive and sustainable growth for decades to come.

2.0 Strategic context

Our offer - We are connecting our growing economy with the rest of Britain and the world.

We are:

- Achieving a truly connected and integrated transport network and securing vital investment in future infrastructure, to enable and support transformational growth in the East of England.
- Bringing together the combined forces of local transport and planning authorities, Local Enterprise Partnerships (LEPs) and business leaders, alongside Network Rail and Highways England. We enable the region to speak with one voice on the issues of transport and infrastructure investment, influencing decisions currently made by Central Government.
- Fulfilling our vision of a thriving economy for the east, with fast, reliable and resilient transport networks, driving forward a future of inclusive and sustainable growth for decades to come.

Our ask - We need Government support to seize opportunities, to enable businesses to innovate, thrive and grow. We need Government support and ministerial endorsement to make our objectives a reality.

- We require funding to deliver a mixture of road and rail projects across the region. These have the potential to unlock under-performing areas while radically enhancing regional productivity.
- We want to see increased devolution of powers that enable us to co-create strategic road and rail investment programmes at a regional scale, allowing for greater integration and innovation. The success of regional growth corridor taskforces show what can be achieved when local authorities and MPs work across boundaries for the benefit of the region.
- Our region is emerging and showing its potential. To help us realise the benefits we would like parliamentarians to fully understand and advocate the east's potential as a dynamic economy and one of the major exporting regions of the UK.

4.0 Key audiences:

The public – locally, regionally, nationally, internationally.

The media

Elected members – MPs, Peers, county, city, district, town and parish councillors

Officials across government departments

Local authority officers

Industry/businesses/workplaces.

5.0 Communications approach:

The strategy is made up of five elements which are distinct but related.

These are: Identity, Geography, Delivery, Engagement and Influence.

- The **Identity** pillar is designed to build the brand of Transport East; TE is not just another Sub-Regional Transport Board, it is a key part of wider ambitions for economy growth and national prosperity. The identity of Transport East is different to other SRTBs – and it is seizing the opportunities of the post-Covid world.
- The **Geography** pillar builds on the unique attributes of the region – its coastline, energy production, and ports and airports. The East has more international ports and airports than any other region; it is the gateway to the UK. It is also home to the UK's largest sources of renewable energy, enabling the Government's ambitions to build back better and develop low-carbon and carbon neutral travel and transport options.
- The **Delivery** pillar is where campaign-led activity to secure TE's ambitions will be focussed, with strategic objectives communicated through a range of activities including briefings, media relations and social media. A revamped website and social media presence will be key elements.
- The **Engagement** pillar is we ensure that priorities and strategies are informed and meet the ambitions of our key partners across industries, businesses and public services. The focus of this activity may be in the East, but it's influence and impact on the regional and national economy stretch far further.
- Finally, the **Influence** pillar contains the programme through which we will build relationships through which we will ensure our ambitions for transport in the region are understood and are at the front of the queue for consideration. Virtually or in person, Transport East will be at the table

6.0 Key messages:

- We are an exemplar in rapid regional growth: with an economy worth £71bn, the east plays an important role in the overall success of UK and is one of the fastest growing regions outside of London.

- We are creating links between our high growth, booming clusters: enhanced links between our fastest growing places and business clusters are enabling the area to function as a coherent economy and boosting productivity.
- We are a gateway connecting the country to world markets: Connections to the rest of the world will be more important than ever, and early adoption of emerging technologies will be vital to keep us globally competitive. Better connected ports and airports help UK businesses thrive and boost the nation's economy through greater access to international markets and facilitate Foreign Direct Investment.
- We are energising coastal communities: we are creating a reinvented, sustainable coast for the 21st century which delivers on our ambition to become the UK's foremost all-energy coast, as well as supporting a year-round, competitive visitor offer.

7.0 Barriers and mitigation:

In comparison with other STBs, we lack profile and brand awareness.

This strategy is designed to address this, but we need to be realistic that we are starting from a point behind other STBs.

Alongside our work influencing Government, establishing our brand, credibility and active participation with the private sector, and chiefly, operators, carriers, shipping lines, the supply chain and investors in transport, will be essential.

We will undertake a survey of key stakeholders in a year's time, in order to assess the degree of recognition, understanding and buy-in of our mission, aims and objectives and how successful we have been in deliver of this strategy.

8.0 Public Affairs – Our narrative

We need Government support to seize opportunities for the region.

- We have exciting ambitious for a mixture of vital transport schemes, for which we are seeking funding. These have the potential to radically enhance regional productivity.
- We want to see increased devolution of powers enabling us to co-create strategic road and rail investment programmes at a regional scale, allowing for greater integration and innovation. The success of regional growth corridor taskforces show what can be achieved when local authorities and MPs work across boundaries for the benefit of the region.
- We need government support and ministerial/wider parliamentary endorsement to make our objectives a reality. The East has traditionally been overlooked as a region by successive governments. We would like to see funding for our major infrastructure projects, but beyond that, we want to see Ministers and parliamentarians recognising and advocating the east's potential as a dynamic economy and one of the major exporting regions of the UK.

9.0 Our initial programme

A six-month rolling programme of public affairs activity has been established and is included below as Appendix 1. This will be augmented incrementally and initially, based around virtual meetings and opportunities. It will be reviewed by Members on a quarterly basis.

Appendix 1: Transport East Communications & Public Affairs Programme: The First 6 Months

Objectives

To achieve Transport East's (TE) vision, we must successfully communicate to stakeholders and decision makers who have the ability to help bring about desired changes. Through a campaign of communications and advocacy, TE can secure support for its objectives, build a case for change and position the organisation as the leading voice and champion for the region.

Ensuring that our messages and asks are being clearly conveyed to the right people - who have the ability to determine investment decisions - and that we are speaking their language will be crucial. Successful communications and advocacy can make TE stand out from the crowd and achieve cut-through.

Understanding the national context – how can TE best engage with government at this time?

All of Government's current efforts have been directed towards **tackling the COVID-19 pandemic**. We have seen the Government take unprecedented steps to support the economy during this time. As lockdown restrictions begin to lift, attention is now turning to rebuilding the economy and society. Amidst the pandemic, there has been consideration given to what may want to be retained and using this opportunity to **'build back better'**. The Government has recently talked about their ambition to deliver a 'cleaner, greener, more resilient economy which will create new jobs'.

It is essential to ensure that TE's communications strategy recognises the pressures that this government is operating within – and then directly responds to those. As government now looks to rebuild rather than just manage, aligning TE's messaging to wider national ambitions, with a clear offer from the East of England, will be crucial.

The below sets out a series of engagement opportunities and actions that the forum could undertake to both build its profile and develop the essential relationships it will need to deliver its core objectives.

Proposed 6 Month Engagement Programme

Activity	Timeframe
<p data-bbox="203 277 752 309">Message house and supporting collateral</p> <ul style="list-style-type: none"> <li data-bbox="203 333 904 365">▪ Develop and refine TE’s political-facing messages <li data-bbox="203 373 1688 437">▪ Produce supporting collateral such as short briefings papers and infographics that can be used as engagement tools <li data-bbox="203 453 1344 485">▪ Begin to establish a social media presence that can be used to disseminate content 	<p data-bbox="1729 293 1805 325">ASAP</p>
<p data-bbox="203 512 517 544">Fiscal stimulus package</p> <ul style="list-style-type: none"> <li data-bbox="203 568 1697 671">▪ The Chancellor unveiled his fiscal stimulus package – ‘A plan for Jobs 2020’ - on the 8th July. TE to undertake a full assessment of the Chancellor’s announcements, with consideration of how the TE strategy helps to deliver and enhance the Government’s plans. <li data-bbox="203 687 1682 751">▪ Send a briefing into Treasury detailing the core areas the forthcoming National Infrastructure Strategy – to be announced in the Autumn – should address. <li data-bbox="203 767 1234 799">▪ Consider a short written submission to BEIS’s economic recovery initiative 	<p data-bbox="1729 512 1787 544">July</p>
<p data-bbox="203 860 1120 892">Building relationships with the East of England MPs & relevant Peers</p> <ul style="list-style-type: none"> <li data-bbox="203 916 1688 1059">▪ There are 58 MPs for the Eastern region (and a number of relevant Members of the House of Lords) – TE will map and prioritise these, developing a tailored outreach programme, linked to the new strategy and vision for the forum, seeking to build a coalition to promote the value of the forum into DfT and with parliamentary colleagues. <li data-bbox="203 1075 1697 1259">▪ This could include creating a working group of ‘MP & Peer champions’ tasked with undertaking regular activity in Parliament, including: <ul style="list-style-type: none"> <li data-bbox="300 1155 1173 1187">○ Parliamentary debates, to which DfT ministers have to respond <li data-bbox="300 1195 1655 1227">○ Parliamentary questions to raise pertinent issues and ensure that TE’s messages are gaining traction <li data-bbox="300 1235 949 1267">○ EDMs to demonstrate TE’s breadth of support <li data-bbox="203 1275 1659 1378">▪ Consider holding a Parliamentary surgery for East of England MPs & relevant Peers to raise transport issues with TE and encourage them to feel they have some ownership of its work, as well as roundtable breakfasts with existing party groups such as Labour East. <li data-bbox="203 1386 1677 1450">▪ TE to also send all East of England MPs & relevant Peers a regular newsletter and update briefings to ensure they are fully informed & engaged 	<p data-bbox="1729 876 1973 908">August-December</p>

<p>DfT policy engagement: Consultation – Creating a plan to decarbonise transport</p> <ul style="list-style-type: none"> ▪ The Department for Transport has opened a new consultation calling for ideas about the next steps to reducing emissions in transport and creating a decarbonisation plan ensuring we are net zero in emissions by 2050. ▪ TE to develop a submission and seek direct engagement with the DfT team leading the consultation to discuss its ideas in person. 	<p>Consultation deadline 31 August</p>
<p>Budget / Comprehensive Spending Review / National Infrastructure Strategy– all to be announced in the Autumn</p> <ul style="list-style-type: none"> ▪ A punchy, visual, data-led submission sent into both DfT and HMT ▪ Highlight the submission to both departments through a high profile joint letter from East of England MPs and council leaders, published in local media 	<p>August-September</p>
<p>East of England APPG Parliamentary event - Transport and Digital Infrastructure</p> <ul style="list-style-type: none"> ▪ Transport East to be key-note speaker and launch new branding / strategy for the forum within this parliamentary setting 	<p>15th September</p>
<p>Think tank engagement during party conference season</p> <ul style="list-style-type: none"> ▪ While party conferences have been cancelled, many think tanks will still be running their own online events and conferences. TE to organise initial conversations with key think tanks and consider supporting individual events and streams of work. ▪ TE to speak with the Labour and Conservative business relations teams and consider some commercial sponsorships and targeted party events 	<p>Sept / Oct</p>
<p>Launch of the Transport East Manifesto</p> <ul style="list-style-type: none"> ▪ To be launched within a parliamentary setting – remotely or in person. ▪ Leverage new relationships with East of England MPs and secure a ministerial keynote speaker. ▪ Organise targeted follow-up roundtables with smaller groups focussed on individual areas of interest. ▪ Issue an op-ed from Andrew Summers putting the manifesto in context, with a surprising facts and a punchy media hook that can be sold into the nationals. 	<p>October</p>

<p>Transport Committee engagement</p> <ul style="list-style-type: none"> ▪ Organise a face-to-face briefing with Huw Merriman (the chair) and interested members ▪ Submit written evidence to the committee’s Coronavirus: implications for Transport inquiry (deadline 29th October) 	<p>October</p>
<p>DfT Ministerial visit</p> <ul style="list-style-type: none"> ▪ Internal visits audit to identify the most compelling locations to host a visit. ▪ Create a sample visit plan with details and imagery to share with ministerial offices. ▪ Involve wider regional MPs in the visit. ▪ Reinforce with a strong communications package, including op-eds/blogs. 	<p>November-December</p>



Transport East

THE EASTERN DYNAMO

Powering the national economy

TRANSPORT EAST: ELEVATOR PITCH

We are the transport infrastructure partnership for the east

- Transport East is the Sub-national Transport Board (STB) for the east of England - representing Essex, Suffolk, Norfolk, Thurrock & Southend - tasked with delivering a cohesive transport infrastructure strategy.
- We are driving forward a truly connected and integrated transport network and securing vital investment in future infrastructure, allowing for transformational growth in the East of England.
- As a partnership, Transport East brings together local transport and planning authorities, Local Enterprise Partnerships (LEPs) and business leaders, alongside Network Rail and Highways England. We enable the region to speak with one voice on the issues of transport and infrastructure investment, influencing decisions currently made by Central Government.
- Our vision is of a thriving economy for the east, with modern, fast, reliable, resilient and low carbon transport networks, transforming how people travel and goods are transported to drive forward a future of inclusive and sustainable growth for decades to come.

The east is brimming with energy, enterprise and exports

- We are an exemplar in rapid regional growth: with an economy worth £71bn, the east plays an important role in the overall success of UK and is one of the fastest growing regions outside of London.
- We are creating links between our high growth, booming clusters: enhanced links between our fastest growing places and business clusters are enabling the area to function as a coherent economy and boosting productivity.
- We are a gateway connecting the country to world markets: Connections to the rest of the world will be more important than ever, and early adoption of emerging technologies will be vital to keep us globally competitive. Better connected ports and airports help UK businesses thrive and boost the nation's economy through greater access to international markets and facilitate Foreign Direct Investment.
- We are energising coastal communities: we are creating a reinvented, sustainable coast for the 21st century which delivers on our ambition to become the UK's foremost all-energy coast, as well as supporting a year-round, competitive visitor offer.



“...we are the home of renewal energy and a key part of our mission is helping the UK achieve its ambitions for sustainable, low-carbon transport for all...”

We need government support to seize opportunities

- We have exciting ambitious for a mixture of vital transport schemes, for which we are seeking funding. These have the potential to radically enhance regional productivity.
- We want to see increased devolution of powers enabling us to co-create strategic road and rail investment programmes at a regional scale, allowing for greater integration and innovation. The success of regional growth corridor taskforces show what can be achieved when local authorities and MPs work across boundaries for the benefit of the region.
- We need government support and ministerial endorsement to make our objectives a reality. The east has traditionally been overlooked as a region by successive governments. We would like to see funding for our major infrastructure projects, but beyond that, we want to see Ministers recognising and advocating the east’s potential as a dynamic economy and one of the major exporting regions of the UK.

The Eastern dynamo will positively impact through driving up productivity, attracting inward investment, supporting sustainable economic and housing growth and reducing pressure on public services, including the NHS.

We aim to:

- Rapidly reduce the dependency on our road and rail transport networks and vehicles running on fossil fuels, and replace these with greener, viable alternatives
- Establish cleaner air by tackling harmful levels of CO₂, NO_x and particulates, reducing the unacceptable incidence of respiratory diseases and deaths within our communities.
- Create a better connected and more mobile workforce, able to seize the opportunities for study, training and employment.

We want to create an attractive environment for further investment in transport infrastructure. There has been tremendous investment here by the private sector, such as the new port facilities at DP WORLD and Tilbury II, as well as the £1.2 Billion investment secured by Abellio Greater Anglia in new state-of-the-art trains. We intend to build on this.



Transport East



LONDON



Essex



Thurrock



Southend-on-Sea



Suffolk

Norfolk



“...we have more major seaports and airports than any other region... they are also the seaports and airports for the North and the Midlands... connectivity through the East by road and rail to sea and air is an essential element of our national economic health...”



Transport East Forum

Date: 22 July 2020
Item: Item 5a: Draft Decarbonisation Evidence Base and Strategic Recommendations Report
Report by: Transport East
Contact: Andrew.Summers@suffolk.gov.uk; Adam.Thorp@eelga.gov.uk

Purpose

This document is a Transport East Decarbonisation Evidence Base and Strategic Recommendations Report. It has been developed to demonstrate the region's commitment to help meet the Government's policy target of achieving Net Zero Carbon Emissions by 2050, through efforts in reducing transport related carbon emissions. The production of this document has been commissioned by Transport East, a sub-national transport body comprising a partnership of local council members in Essex, Suffolk, Norfolk, Thurrock, and Southend-on-Sea (ENSTS), for the purposes of identifying and assessing potential transport decarbonisation opportunities in the region.

Intended audience

The intended audience for this document includes (but is not limited to), local and regional: policy makers, government authorities, industry forums, academic institutions, R&D institutions, private sector businesses, transport companies and transport bodies. Reducing carbon emissions in the region is not something that can be achieved wholly and exclusively through the efforts of one stakeholder but rather through the involvement and commitment of many. From changes in policy to extensive research and testing, from funding and investment in infrastructure to development of new fuel technologies, and from implementation across transport companies to adoption by users and the population – the several stages involved in achieving a reduction in carbon emissions will require a unified and collective effort.

Stakeholder engagement

Recognising the importance of a collective and united approach, the process for producing this report has involved several rounds of stakeholder engagement with both public and private sector organisations across the region, representing a broad range of industries. A list of stakeholders consulted is presented in Appendix 3 of the report itself (which is presented as Appendix A).

Recommendation(s)

It is recommended that members review the content and findings of this report and provide thoughts / comments on future development of the report, including how it can feed into the development of Transport East's wider Transport Strategy.

1. Introduction

1.1 The report outlines the following: the current challenges in respect of reducing carbon emissions across transport, existing efforts / initiatives across the region, key themes and areas of opportunity to focus efforts on, and a list of interventions that can be acted upon by various stakeholders (including Transport East).

2. The challenge *(note: respective statistics are referenced accordingly within the main report)*

2.1 Total carbon emissions across the region have incurred a steady increase over the last decade since 2010. More recently, in 2017 the largest contributor to carbon emissions in the region was 'Transport', contributing to 39% of overall emissions. Of this, road transport was the most significant, making up approximately 96% of all carbon emissions across transport. The report identifies a number of different focus areas (listed below) but there is a clear need to address emissions from road transport as an immediate priority. 78% of commutes to work in the region are still made by private use vehicles. The region also has a lower than average journey to work via bus mode share (4% compared to a national average of 7%), emphasising the need to encourage a modal shift to public transport through greater investment in public transport networks. This is further strengthened by the fact that only 13% of households in the region do not have access to a private car, compared to 26% across the rest of the country.

3. Key focus areas

3.1 The report identifies an initial six key areas of focus to realise potential opportunities for reducing carbon emissions relating to transport. Detailed analysis of each area is included within the report itself but at a high-level, these are:

- **Road passenger vehicles** – *increase investment in, and deployment of, further electric vehicle charging infrastructure across the region*
- **Logistics and freight** – *encourage a greater modal shift from road freight to rail freight, complementing this with improvements in rail infrastructure and capacity*
- **Maritime and shipping** – *adopt the use of alternative fuel technologies and energy sources for shipping as well as the development of 'smart / digital' port technologies*
- **Renewable (wind) energy** – *leverage the vast on- and off-shore wind capabilities and attributes, to position the region as a hub for renewable energy supplies*
- **Public transport and active travel** – *invest in greater public transport and active travel infrastructure, to incentivise a modal shift away from personal car use*
- **Agriculture** – *adopt greener fuel technologies for heavy machinery and deploy elements of automation to enhance transport / machinery carbon efficiency*

4. Proposed actions and interventions

4.1 In order to achieve a reduction in carbon emissions across transport in the region, Transport East (with the support of stakeholders across the region) could derive value in undertaking the following proposed actions:

Short Term (1 – 3 years):

- Work with employers across the public and private sectors to develop ‘green travel to work’ strategies and policies
- Consider strategic investment in, and placement and positioning of, public transport and active travel infrastructure (e.g. bus stops / stations, cycle lanes, pedestrianised paths, bike parking stations, e-bike charging stations etc.)
- Begin the development of roadmaps specific to the region’s transport industries, for the transition to cleaner and alternative fuels

Medium Term (3 – 5 years):

- Identify locations for, and invest in, greater electric vehicle and fuel-cell electric vehicle charging / refuelling infrastructure (e.g. at stations, depots, ports etc.)
- Facilitate the mapping of the renewable (wind) energy network with the strategic road network, rail network and key economic centres of the region
- Bring together regional capabilities in ‘Smart Port’ technologies and develop a cluster / working group to position the region as a hub for maritime innovation

Long term (5+ years)

- Develop a clean energy cluster, combining the skills and capabilities of the region’s energy, transport, technology and R&D sectors
- Work with local government to develop multi-modal hubs at key interchanges across the region’s transport network

A more comprehensive evaluation of potential actions and initiatives to undertake is included in the main report itself.

5. Transport East Submission

5.1 The submission of this document is included as Appendix A. The Decarbonisation Evidence Base and Strategic Recommendations Report will be published and available on the Transport East website later this year.

6. Next Steps

6.1 This work will feed into Transport East’s development of the wider Transport Strategy. Further input will be sought from members on how best the outputs of this report can be incorporated into the wider transport strategy.

6.2 Engagement with relevant stakeholders will also be made in the interim, to determine the viability and feasibility of some of the proposed and indicative opportunities, and to determine whether subsequent business cases for funding and investment purposes will need to be developed.

Appendix A:

Transport East Decarbonisation Evidence Base and Strategic Recommendations Report



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TRANSPORT EAST DECARBONISATION SUMMARY

LANDSCAPE

39% of carbon emissions (7,800 kt CO₂e) in Transport East's region were emitted by transport in 2017, **96%** of which were from road vehicles⁴².

East of England is one of the fastest growing regions in the UK. Along with such rapid growth, carbon emissions from transport have grown by **200 kt CO₂e on average every year**⁴².

78% of commutes to work are still made by private vehicles, despite being the most polluting transportation mode⁶⁵.

ATTRIBUTES

East of England has the **largest** number of **wind generator sites in England** (offshore and onshore combined), and the second largest in the UK⁴⁸.

In 2017, East of England contributed to **6.1% (£1bn)** of the total turnover of **maritime industry** in the UK⁶².

East of England has been among the **top three regions** with the busiest **freight and logistics** market in the UK⁴⁹.

The region also contributes to **14.6%** of the total national income generated by **agriculture**⁶⁹.

BENEFITS

Primary Benefits

Secondary benefits



Improvement in air quality and health from fewer harmful particles in the air



Improvement in future employability prospects via reskilling and education for new 'green technologies'



Significant economic growth opportunities for regions with strong zero-carbon transition propositions



Improvement in operational efficiencies through convergence with digitisation of carbon reduction technologies

OPPORTUNITIES

1 **Cross-cutting multimodal planning**
Identify the need for, prioritisation of, and design, funding, as well as development of multi-modal decarbonisation schemes.

2 **Maritime**
Deploy technologies, digital solutions and operational change to save energy. Establish Free Port Zone(s) to attract green businesses to the region.

3 **Logistics and Freight**

- Increase rail capacity
- Encourage modal shift to rail
- Use greener alternative fuels
- Develop open freight data to increase fleet utilisation

4 **Public Transport and Active Travel**

- Develop MaaS platforms
- Promote active travel and develop supporting infrastructure
- Provide bus services connecting residential areas to city centres

5 **Wind Power**

- Provide more renewable energy to the region
- Identify the need for power grid extension vs. hydrogen fuel as means to supply renewable energy to remote areas

6 **Electric/Fuel Cell Electric Vehicles**

- Enhance renewable energy capacity to enable more charging/refuelling points
- Develop and support a commercially viable business model for EVs

7 **Agriculture**

- Leverage waste-to-energy plants
- Choose greener fuel
- Deploy automation/autonomous driving function to enhance efficiency

ACTIONS

Short Term

Medium Term

Long Term

- Promote active travel
- Strategic planning for bike parking & e-bike charging
- Transition roadmap from diesel to cleaner fuels
- Lead public-private green transport collaboration
- Develop 'green travel to work' strategy
- Develop a roadmap for 'smart ports'

- Put together local capability cluster targeting smart port propositions
- Identify strategic locations for charging points / refuelling depots
- Map renewable energy network against regional transport network
- Push for a funding requirement allowing for longer trialling periods
- Develop MaaS platforms to encourage the use of public transport

- Develop a 'Clean Energy' cluster, combining the energy, transport, technology and R&D capabilities in the region
- Working with Local Government, establish multi-modal transport hubs at key interchanges across the region's transport network

Glossary

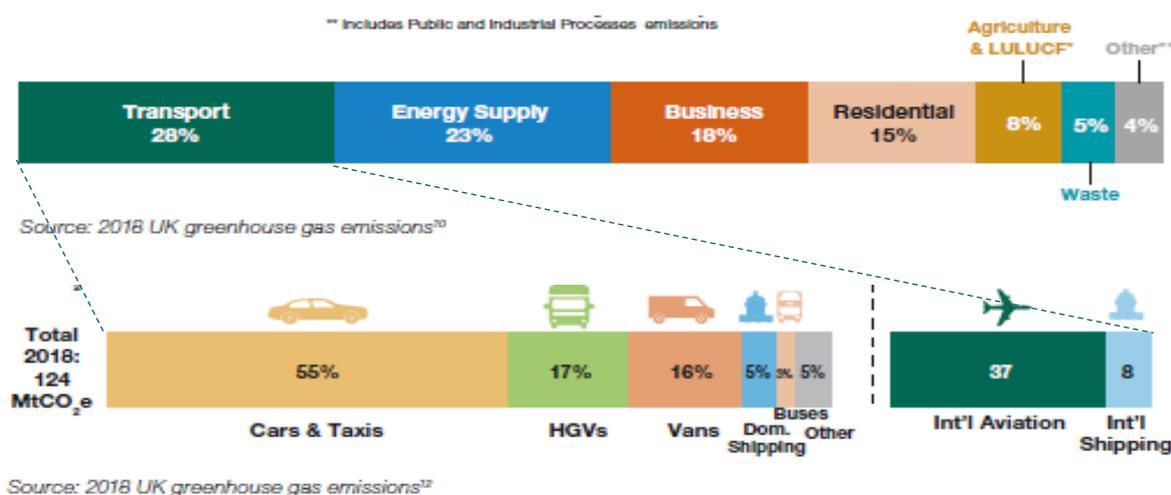
Acronyms	Full Form
BEV	Battery Electric Vehicle
CCC	Committee of Climate Change
CDAS	Connected Driver Advisory System
CNG	Compressed Natural Gas
CO ₂	Carbon Dioxide
DfT	Department for Transport
DRT	Demand Responsive Transport
ECML	East Coast Main Line
ENSTS	Essex, Norfolk, Suffolk, Thurrock, and Southend
ESG	Environmental, Social and Governance
EV	Electric Vehicle
FCEV	Fuel-Cell Electric Vehicle
GHG	Greenhouse gases
GPS	Global Positioning System
GVA	Gross Value Added
H ₂	Hydrogen
HFO	Heavy Fuel Oil
HGV	Heavy Goods Vehicle
HyDIME	Hydrogen Diesel Injection in a Marine Environment
ICE	Internal Combustion Engine
IMO	International Maritime Organisation
LCV	Light Commercial Vehicle
LEP	Local Enterprise Partnership
LNG	Liquified Natural Gas
MaaS	Mobility-as-a-Service
MDO	Marine Diesel Oil
MtCO ₂ e	Metric tonne carbon dioxide equivalent
NGO	Non-government organisations
OEM	Original Equipment Manufacturer
PSV	Public Service Vehicle
R&D	Research and Development
SNTB	Sub-national Transport Body
TDNS	Traction Decarbonisation Network Strategy
ZEM	Zero Emission Mobility

1. Executive Summary

Current Global and UK Decarbonisation Landscape

The Paris Climate Change Summit in 2015 incited the international community to commit to more active and bolder policies to decarbonise the global economy. In transport, the European Commission has been pushing for full decarbonisation by 2050. Current plans by the commission include schemes to increase modal shift from road to rail, switching to cleaner fuels, and road user charges on polluting vehicles to incentivise the use of greener transport modes. In response to the global climate challenge, a commitment was made by the UK in June 2019 to achieving a net zero carbon economy by 2050 (please refer to page 15 for a more detailed description of the targets set). The transport sector will need to play a significant role in helping to achieve this, given in most regions, it is the single largest contributor to emissions – particularly road transport which currently produces more than 90% of the CO₂ emissions from transport. The UK Government recently published its ‘Decarbonising Transport: Setting the Challenge’ report, providing an overarching plan and highlighting key areas to further work on across transport, in order to help achieve net zero targets.

Figure 1.1 – 2018 UK Greenhouse Gas Emissions



Primary and secondary benefits of achieving decarbonisation

- Primary:** A transition to cleaner fuels and more carbon efficient modes of transport will result in improved air quality and health benefits. Cleaner fuels will result in less harmful emissions being released into the air, helping to slow down global warming and reduce the harmful particulates that we breathe in. The increase in green spaces in urban centres, encouraging active travel, will result in improved physical health outcomes across populations. Countries which have made progress in decarbonisation are also arguably better placed to benefit from a transition to a zero-carbon economy in the future.
- Secondary:** Greater training and upskilling opportunities (e.g. areas including green fuel technologies) will mean more of the workforce is suitably equipped and ready for the transition to a low-carbon economy. Many decarbonisation initiatives will also likely coincide with the rise of digitisation, resulting in operational efficiencies and further improvements across the transport network. Achieving decarbonisation can also support multiple objectives and policies across industrial strategies, relating to the achievement of sustainable economic growth.

Means of achieving decarbonisation: modal shift and alternative fuel technologies

- Modal shift:** There is considerable scope for reducing CO₂ emissions by encouraging both passengers / commuters and businesses (e.g. freight) to adopt less polluting forms of transport. Road transport is currently the most common form of travel to work across the UK, and in aggregate the least environmentally friendly. Investing in connected and integrated public transport networks, and better utilising bus and rail infrastructure could help to improve the situation. Similarly, a large proportion of goods in the UK is currently transported via road; significant reductions in emissions can be achieved from simply transporting more freight via rail as opposed to road.
- Alternative fuel options:** Investments in cleaner alternative fuels will become necessary as the hydrocarbons we burn release harmful gases and particulates as well as being environmentally detrimental to extract in the first place. Adoption of the appropriate fuel technology (e.g. battery / hydrogen) across different modes of transport would contribute significantly to reducing carbon emissions. However, it will be important to consider the full life cycle of assets - so as to ensure that the adoption of alternative fuel options does not lead to counterproductive outcomes.

Transport East Decarbonisation Landscape

Carbon emissions from transport in the region have seen a steady increase from 2010. The largest contributor of carbon dioxide in 2017 was transport (7,800 kt CO₂e), followed by industry and commercial (5,237), domestic (5,100), and agriculture (234.7). By transportation mode, road transport is also the largest contributor of total transport carbon emissions in the region, accounting for more than 90% of GHG emissions⁴².

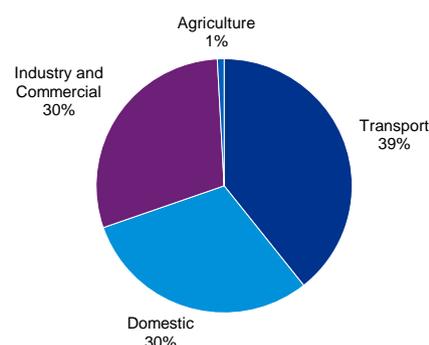


Figure 1.2 - CO₂ emission by sector in TE's regions: Essex, Norfolk, Suffolk, Thurrock and Southend-on-Sea (ENSTS) in 2017

However, the region has a number of attributes which could play a part in decarbonising transport. These include: a rich, natural endowment in wind power, a vibrant logistics and freight market, a strong maritime economy, and a largely rural geography with ample green space. These attributes have contributed to the region being one of the fastest growing in the UK, both in terms of population and economy – and there is no reason to suggest that they also cannot contribute to helping reduce carbon emissions whilst simultaneously maximising economic growth.

Drivers for Decarbonisation in the Region

There are a number of drivers (in the form of both challenges and opportunities) which make decarbonisation a significant and immediate focus area, in terms of investment and activity:

Drivers	Trends
Political	A number of political commitments have been made at a national and regional level. The UK Government has set a net zero target of 2050, whilst some local authorities in the region have declared climate emergencies and committed to achieving carbon neutrality by 2030 (<i>note: this target is applicable to the local authorities themselves as opposed to their wider, respective districts / areas</i>). Allocating funding appropriately across initiatives

	and leveraging public-private partnerships will be needed to help achieve these targets.
Economic	Achieving decarbonisation could see the region establish itself as a national and global hub of best practices with respect to the United Nation's (UN) Sustainable Development Goals in creating sustainable cities and communities. Potentially declining industries (e.g. the manufacturing sector) could view decarbonisation as a means of rejuvenation, and innovative technology start-ups as an opportunity for them to offer the market new products and services. Collaboration between businesses and local authorities will be needed to stimulate inclusive growth through the adoption of new, sustainable practices and the respective upskilling of workforces.
Social	Greater pressure from different environmental and social activist groups is requiring governments and regional bodies to take concrete actions to tackle climate change. Shifts in expectations and demand from populations are now requiring many businesses to adopt more sustainable and environmentally friendly methods and practices. Engaging with supply chain partners and stakeholders who adopt such practices will be crucial going forward in order to gain the support of the wider population / user base.
Technological	R&D and innovation is (and will continue to be) playing a significant role in identifying new and more efficient carbon reduction technologies and practices. Challenges in generating sufficient ranges for electric vehicles and reducing the cost of hydrogen will undoubtedly require input and contribution from the R&D and innovation sectors.
Legal	The UK Government has set a net zero target of 2050, committing to a number of decarbonising initiatives to achieve this. A current challenge is a lack of legislative progress relating to the trialling and use of alternative fuels. Local stakeholders will need to be aware of the latest standards not only for battery technology but also other forms of alternative fuel with promising future potential.
Environmental	The impact of climate change is having adverse effects on populations, land space and assets / infrastructure across many places. The region is endowed with significant on- and off-shore wind infrastructure and capabilities, providing a more developed opportunity to achieve a green economy through decarbonising transport. Environmental issues resulting from methods of decarbonisation will also need to be considered. For instance, activities involving offshore rare earth and natural gas mining, and palm plantations, are very carbon intensive.

Six initial areas for the region to focus on

There are six initial areas which the region can focus on in order to support the reduction of carbon emissions across transport. These areas have been identified through a combination of research and outputs from stakeholder consultations; and are based on the ability to leverage the strengths unique to the region and the main “pain points” of carbon emissions.

<p>Maritime: The main options to be considered to decarbonise the maritime sector include:</p> <ul style="list-style-type: none"> ▪ Technologies that can increase energy efficiency; ▪ Operational or behavioural change to increase energy efficiency; ▪ Capture or treatment technology for exhausts; ▪ Alternative fuels and energy sources 	<p>Logistics and Freight: The logistics and freight market represents a significant opportunity to decarbonise transport. This includes:</p> <ul style="list-style-type: none"> ▪ Increasing the capacity of the railway network to facilitate modal shift; ▪ Increasing the use of rail to transport goods; ▪ Adopting the use of alternative fuels; and ▪ Using open data to increase fleet utilisation
<p>Renewable (wind) energy: The fact that the region is naturally endowed with strong wind power means that there is a significant opportunity to leverage this as a capability unique to the region. Capitalising on this could see the region establishing itself as a hub for renewable supplies.</p>	<p>Road Passenger Vehicles: There is an opportunity to develop more charging infrastructure and, at the same time, boost road users’ appetite for EV/FCEVs. Greater carbon efficiencies can also be enabled via car-sharing. Employers can co-operate by arranging such schemes for their employees.</p>
<p>Public Transport and Active Travel: There is room to encourage further uptake of public transport and active travel in the East of England. This includes investment in the public transport network to achieve better connection and integration (i.e. in line with MaaS principles). Improved end-to-end journeys for passengers in future are likely to require the interconnection of different forms of transport, which can be utilised to help reduce overall carbon emissions.</p>	<p>Agriculture: Heavy machinery and equipment used in agriculture can be decarbonised by:</p> <ul style="list-style-type: none"> ▪ Switching to cleaner type of fuels; ▪ Leveraging waste-to-energy plants; and ▪ Automation to enable more efficient driving behaviour and minimise wastage (e.g. fertiliser, water, etc.)

Cooperation amongst regional stakeholders is required to successfully deliver the opportunities / recommendations identified

Efforts from multiple regional stakeholders will be required to successfully deliver any decarbonisation opportunities and recommendations identified. This includes: setting of policy and regulations from central and local government, provision of access to required funding schemes across various central / local government bodies, development of new technologies and solutions by stakeholders in the private sector, extensive research, testing and trialling by those involved in R&D and innovation sectors, and the championing, leading and co-ordinating of activities by Transport East as a Model 1 Sub-National Transport Body (SNTB). The opportunities outlined in this report provide an indicative alignment of necessary actions and interventions to the stakeholders / bodies best placed to deliver them. These will be tested further and agreed with respective stakeholders.

Proposed strategic actions and interventions

The role of Transport East will be crucial in achieving a reduction in carbon emissions across the region's transport network and ecosystem. In order to achieve a reduction in carbon emissions across transport in the region, Transport East (with the support of stakeholders in the region) could derive value in undertaking the following proposed actions:

Short Term (1 – 3 years):

- Work with employers across the public and private sectors to develop 'green travel to work' strategies and policies
- Consider strategic investment in, and placement and positioning of, public transport and active travel infrastructure (e.g. bus stops / stations, cycle lanes, pedestrianised paths, bike parking stations, e-bike charging stations etc.)
- Begin the development of roadmaps specific to the region's transport industries, for the transition to cleaner and alternative fuels

Medium Term (3 – 5 years):

- Identify locations for, and invest in, greater electric vehicle and fuel-cell electric vehicle charging / refuelling infrastructure (e.g. at stations, depots, ports etc.)
- Facilitate the mapping of the renewable (wind) energy network with the strategic road network, rail network and key economic centres of the region
- Bring together regional capabilities in 'Smart Port' technologies and develop a cluster / working group to position the region as a hub for maritime innovation

Long term (5+ years)

- Develop a clean energy cluster, combining the skills and capabilities of the region's energy, transport, technology and R&D sectors
- Work with local government to develop multi-modal hubs at key interchanges across the region's transport network

A more comprehensive evaluation of potential actions and initiatives to undertake is included in Section 6.

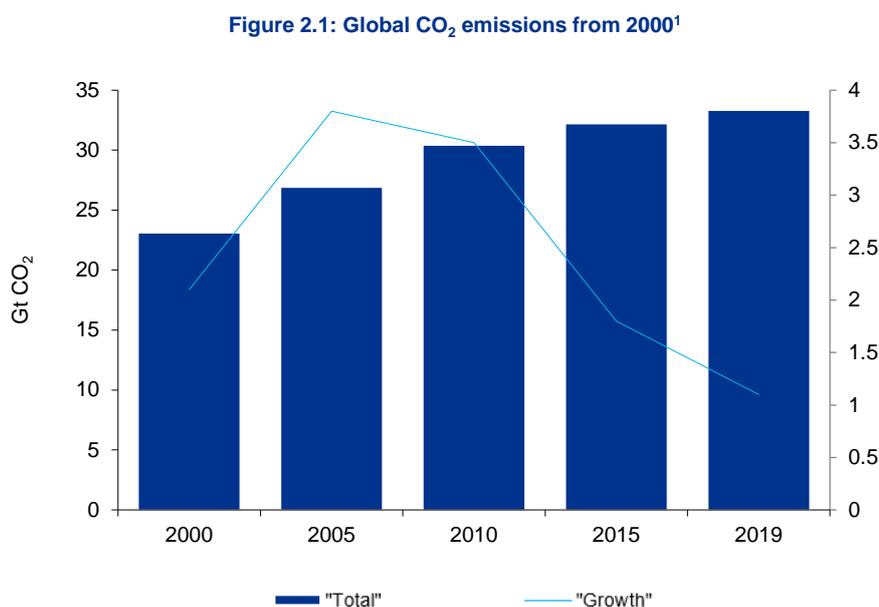
2. Current Global and UK Decarbonisation Landscape

2.1. Global Landscape

The Paris Climate Change Summit in 2015 incited the international community to commit to more active and bolder policies to decarbonise the global economy. In transport, the European Commission has been pushing for full decarbonisation by 2050. The plan includes schemes to increase modal shift from road to rail, switching to cleaner fuels, and road use charges on polluting vehicles to incentivise the use of greener transport modes.

The ‘Decarbonising Transport Initiative’ is another international movement that focuses on policy development and progress tracking through scientific studies. The Decarbonising Transport Initiative does not advocate specific measures or policies; however, building on an evidence-based assessment of mitigation impacts, it identifies options for decision-makers to achieve their targets – for instance the Nationally Determined Contributions (NDCs) submitted by countries under the Paris Agreement, as well as targets set by sectors, companies and cities. The initiative builds on contributions from the following governments: France, Korea, Ireland, the Netherlands and also the European Commission, as well as other prominent international organisations such as the World Bank.

Figure 2.1 below shows how CO₂ emissions globally have been increasing, though at a decreasing rate, since 2000¹:



2.2. UK Landscape

In response to the global climate challenge, a commitment was made by the UK Government in June 2019 to achieving a net zero carbon economy by 2050. In practice, what this means for UK transport is the urgent need to bring down the current emissions (latest data available in 2018) from 124.4 MtCO₂e (112.9 associated with road and 123 take the form of CO₂) to emissions to 33 MtCO₂e (2 associated with road) with the assumption that the remainder is offset by other forms of carbon-reducing measures, e.g. re-forestation and carbon-capture technology, among others². This does not however take into account emissions from the international travel of goods and people and is primarily focused on internal measures.

Figure 2.2: UK Greenhouse Gas Emissions from 2000²

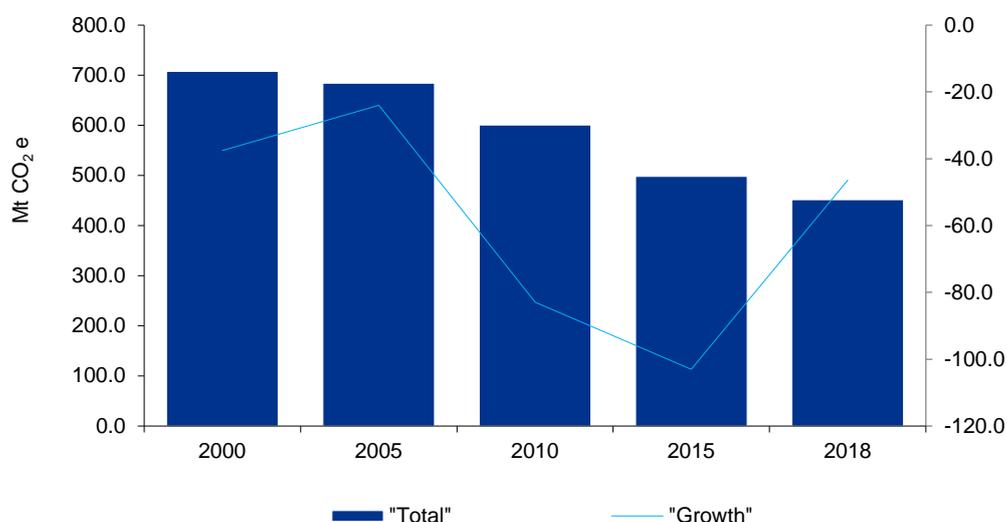
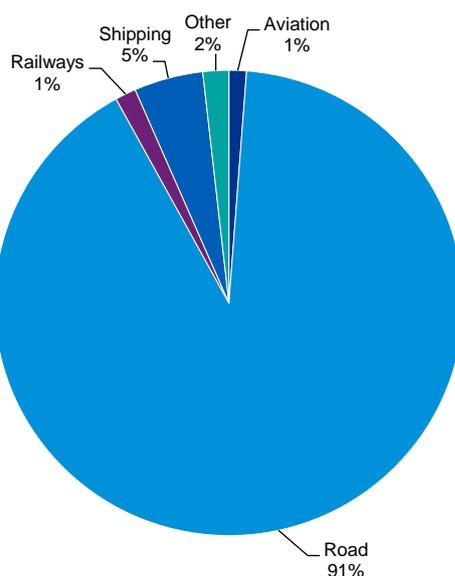


Figure 2.3: UK Greenhouse Gas Emissions from Transport by Sector in 2018



Comparing Figure 2.1 and 2.2, the UK's decarbonisation performance has been comparatively better than other countries. Whilst global emissions have been increasing, albeit at a slower rate since 2005, the UK's greenhouse gas emissions have been in consistent decline since 2000.

Notwithstanding the ongoing reduction in emissions, if the UK is to meet its 2050 net zero carbon ambition, further work is required to decarbonise the UK economy. This includes establishing means to track carbon emissions from cross-border air and sea travel, and logistics, and reducing these too where possible.

A short-term measure being adopted in many cities is the application of financial penalties to drivers / operators of highly polluting vehicles. In the wake of travel restrictions from Covid-19, many cities are also considering (or have begun) re-allocating road space to pedestrians and cyclists. Initiatives are also underway to deploy electric vehicle charge-points, encourage adoption of zero emission

vehicles, decarbonise rail traction, construct freight consolidation centres, and improve the accessibility and attractiveness of mass public transport.

Two principal fuels are considered to be the most feasible and clean alternatives: electrification (battery), and hydrogen fuel cells. Compressed Natural Gas (CNG) is being considered as a stop-gap measure but is not a zero-emission fuel.

The UK Government has published multiple strategies to inform and support its net zero objective, including: the 'Road to Zero', which targets ending the sale of new conventional petrol and diesel cars by 2035, and the Transport Decarbonisation Plan.

UK Transport Decarbonisation Plan

To support the UK Government's commitment to achieve net-zero carbon by 2050, the Department for Transport (DfT) has released the "Decarbonising Transport: Setting the Challenge" report, which provides an overarching strategy to help enable the UK to achieve its 2050 net-zero emissions target. The report outlines DfT's six strategic priorities to deliver the vision of a net zero transport system³:

- 1) **Accelerating a modal shift to public and active transport:** The government will encourage both public and active transport as the first choice for travel. With the adoption of new transport models, such as Mobility as a Service (MaaS), the government will also support and facilitate the development of new technologies and encourage people to use these new platforms.
- 2) **Decarbonisation of road vehicles:** The report notes that there needs to be a significant shift in the types of vehicles used (e.g. fuel technology options), and the way road users drive. To ensure a successful transition to zero emission road transport in the UK there will need to be: a strong regulatory framework, willingness from the user base to adopt new solutions, the right market conditions, adequate (electric) vehicle supply, and investment in and development of charging infrastructure. There are significant economic opportunities for those who can provide solutions to these challenges, but there will need to be investment across the board in low-carbon supply chains to enable such opportunities to be exploited.
- 3) **Decarbonising the transportation of goods:** Changes in consumer behaviours need to be considered when evaluating the future demand for transporting goods. With the increase of 'next (and even same) day delivery', more companies will have to innovate their last mile logistics deliveries to ensure they are able to compete. With this comes huge opportunities for innovative new digital solutions and data sharing platforms which can in turn also reduce the negative impact of congestion and thus reduce carbon emissions.
- 4) **Place based solutions:** As emissions are not produced consistently across the country, a more tailored and localised approach is needed for an effective and efficient overall reduction. A true understanding of how, where and why specific locations produce more emissions must be built to allow for the most effective response. The UK Government is seeking to work with a range of stakeholders, including Local Authorities, mayoral Combined Authorities, Sub National Transport Bodies (SNTBs), and other interested parties, to obtain the insights required for effective place-based solutions.
- 5) **UK as a hub for green transport technology and innovation:** Government intends to make the UK a world leader in green transport technology by exploiting our strong and extant research and development (R&D) capabilities, and exploring how greater collaboration can be stimulated between R&D organisations and industry.
- 6) **Reducing carbon in a global economy:** The UK wants to feed developments and best practices into the wider global economy, citing that reducing emissions from transport is a global, not only

UK, priority. Impacting international travel of goods and people for instance will need collaboration between and across multiple countries if global targets are to be achieved.

The Department for Transport (DfT) has stated its forward intentions to:

- Take a holistic view of transport, looking at challenging new cross-modal approaches to mobility whilst maximising the potential in each mode to deliver the UK's carbon reduction targets; and
- Continue building on decarbonisation policies by working with industry and business groups, academic and research institutions, community and interest groups, environmental NGOs, local authorities, and the public, to focus on the six strategic priorities listed above.

2.3. Existing decarbonisation efforts across the UK

Decarbonisation efforts have always been at the core of government investment in future infrastructure for transport, even prior to its policy commitment. Most efforts have been focused on road transport since it is the biggest domestic contributor to carbon emissions in the country. Existing efforts across road, rail, aviation and maritime, can be categorised as follows:

Cars, LCVs and Motorcycles: The UK government is investing circa. £2.5 billion with grants available for plug in cars, taxis and motorcycles, as well as funding to support charge point infrastructure at homes, workplaces, on residential streets and across the wider roads network. The UK has pledged that every new car and van sold will need to be a Zero Emission Vehicle (ZEV) by 2035 at the latest (brought forward from 2040)³. Furthermore, government is encouraging Electric Vehicle (EV) uptake by facilitating and/or funding the installation of more EV charging infrastructure across the country.

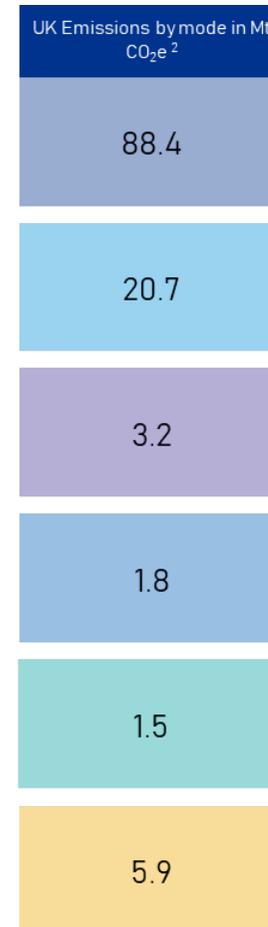
HGVs: Due to the shorter driving range of a battery-powertrain (up to 150 miles according to a report by the Low Carbon Vehicle Partnership)⁴, and inability to support higher torque requirements, battery technologies cannot yet be sufficiently applied to HGVs which typically cover a longer driving range and require higher energy density. Government has been encouraging the use of biofuel* (range: 310 miles)⁴ and R&D into hydrogen fuel cell technologies (310-380 miles)⁵ for HGV transport. Several trials have been observed all around the world: electric HGV with overhead lines in Germany (by Scania and Siemens)⁶ and fully battery-powered trucks in the US (by DAF)⁷.

Buses: Electric buses could help to decarbonise public transport. On 11 February 2020 the Prime Minister announced £5 billion funding for investment in local buses and cycling and walking infrastructure. This includes funding for at least 4,000 zero emission buses to make greener travel the convenient option; and measures to improve modal shift onto the bus⁸. Hydrogen is also being trialled to assess its suitability as an alternative zero emission fuel. 10 hydrogen-powered buses have been in operation in Aberdeen since 2015 and the city has stated its intentions to procure 15 double decker hydrogen buses in 2020^{9,10}.

Rail: Rail is a relatively low-carbon form of transport in operation, and is one of the most efficient ways of moving high volumes of people. The Rail sector produced only 1.4% of the UK's domestic transport emissions¹¹ despite being the mode which delivered 10% of passenger miles travelled and 9% of goods moved in 2018^{12,13}. Government is investing in decarbonising power for the railways (known as "traction") through investments in cleaner rolling stock technology and infrastructure. Network Rail has established a Traction Decarbonisation Network Strategy (TDNS) which will result in a portfolio of decarbonisation schemes across the country.

Aviation: At present domestic aviation travel accounts for a relatively smaller proportion of total emissions. Notwithstanding the medium-long term impact on demand associated with Covid-19, this sector is expected to increase in total proportional terms as other sectors (such as cars and buses) decarbonise more quickly. Government is currently developing a net-zero aviation plan which will be released later in 2020. Furthermore, there is a debate to be had on managing the carbon emissions from international travel amongst national governments around the world.

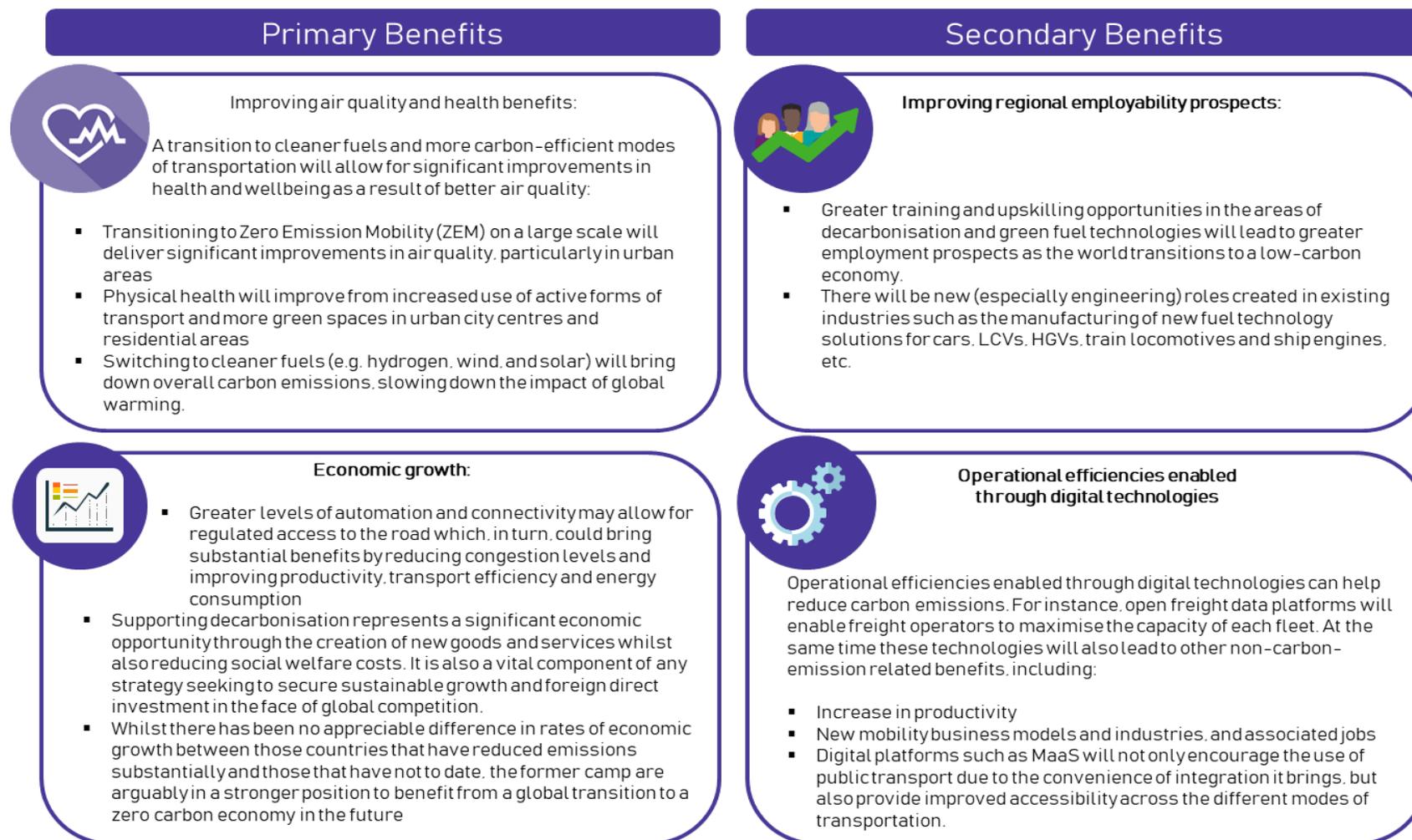
Maritime: In 2019, the UK Government published its Maritime 2050 strategy¹⁴ which sets out its vision for cleaner shipping in the UK. The strategy discusses a number of future commitments, including a call for evidence in 2020 on non-tax incentives to support the transition to zero emission shipping. The DfT will: collaborate with industry, government and different parts of the supply chain to understand and implement lessons from other sectors; ensure regulation supports decarbonisation; and, help maritime companies realise the benefits of research and investment.



*It is noteworthy that even though biofuel is cleaner than conventional fossil fuels, it is still a variant of hydrocarbon and therefore still emits carbon when burnt. Furthermore, if biomethane is leaked prior to combustion, the methane released into the atmosphere will have a larger potency of trapping heat than carbon dioxide. Methane contributes to global warming more significantly in terms of GHG potency than carbon dioxide. However, methane has a much shorter lifespan (8-12 years) than carbon dioxide (>100 years).

2.4 The benefits of decarbonisation

There are a wide range of primary and secondary benefits associated with a reduction in carbon emissions:

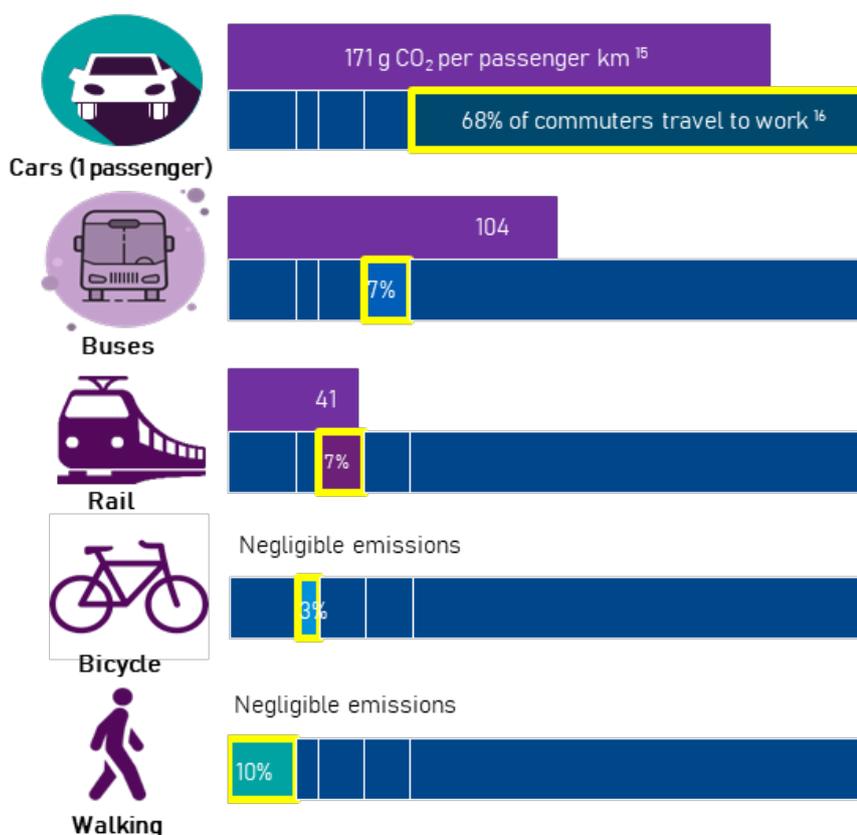


3. Methods of Reducing Carbon Emissions

3.1. Modal Shift Potential

Using road transport (primarily individual car use) is still the most common method to travel to work. Increasing uptake of other modes of transport will help curb carbon emissions per capita from transport. Given the reliance on cars as the main method for travelling to work, a modal shift to other transport modes will contribute significantly to reducing carbon emissions.

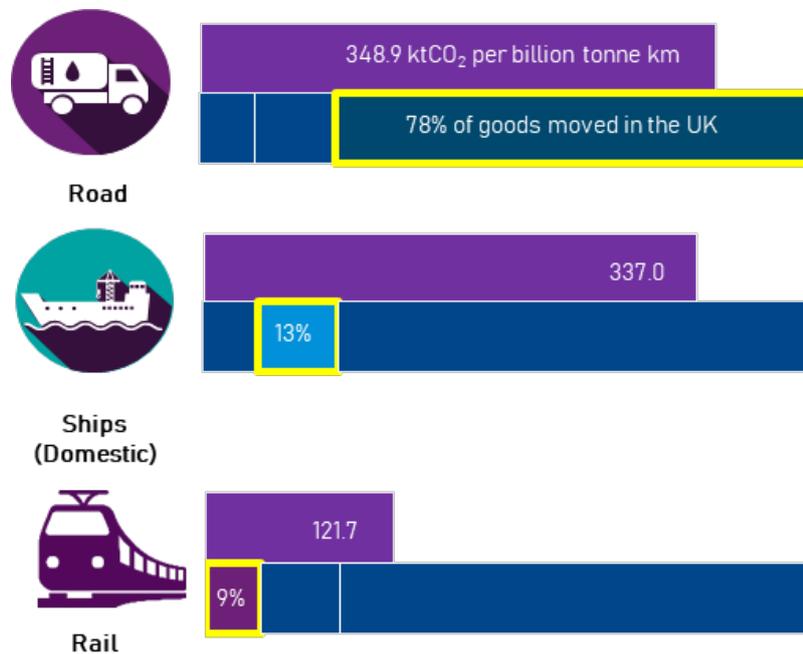
Figure 3.1.1: Carbon emissions and percentage of journeys to work made by various transport modes in the UK^{15 16}



Similar to the movement of passengers, the majority of freight is still being transported via road. A crucial part of decarbonising freight in the region will involve shifting from road (HGVs, trucks, vans etc.) to rail. However, the existing rail network is already running at near capacity and improvements in infrastructure are needed to be able to accommodate greater freight capacity on the network. This includes greater electrification of tracks on certain routes and greater allocation of track space and slots on timetables for freight operators.

“Until public transport infrastructure is improved, and the region is better connected, there are few incentives for people to stop driving.” – Stakeholder interview quote

Figure 3.1.2: Carbon emissions and percentage of goods moved by various transport modes in the UK (See Appendix 1 for Further Sources and Details)



“There is a need to shift more freight to rail but the rail network is already operating at near capacity level.” – Stakeholder interview quote

“Rail is currently not very competitive over shorter distances for distributing freight. As a result, all journeys for freight from the port that are delivering to the region, are by road.” – Stakeholder interview quote

“There is a lack of initiatives around developing the rail track capacity to enable more goods to be delivered by rail.” – Stakeholder interview quote

3.2 Existing Fuel Technology Options

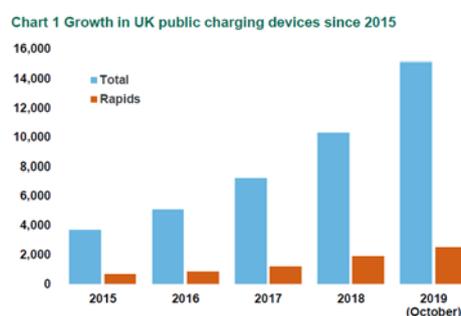
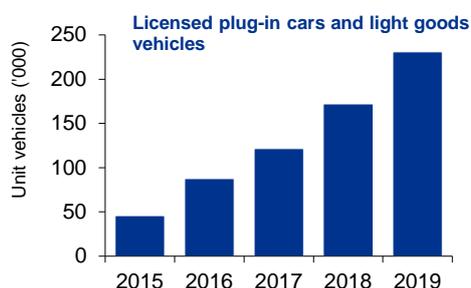
Direct plug-in / electrification

The deployment of Battery Electric Vehicles (BEVs) is currently at the forefront of methods being used to electrify road vehicles. BEVs are among the most mature technology solutions among zero-emission vehicles, with a number of OEMs having invested heavily in this technology. Plans announced by OEMs in 2019 suggest that circa. USD 300 billion will be invested in EVs, almost half of which will be targeted at the Chinese market¹⁷. There are also significant R&D activities being carried out to extend the driving range of battery powertrains and apply recent advances in battery technology to wider transport sectors such as aviation, shipping and rail¹⁸. Electrification of rail is principally achieved by providing overhead catenaries to accommodate rolling stock with electric engines. Electrification can also be achieved by installing third rail, but this is largely limited to the South East of England. Batteries are most likely going to be introduced in the future as a secondary energy source to cover patches of tracks in between routes which have not yet been electrified (i.e. gaps in provision of overhead line electrification).

Current uptake / application in the UK or globally

Cars and LCVs

As at 2019 Q3, of the 37.2 million cars and LCVs registered in the UK, 230,800 were plug-in electric or hybrid vehicles. However, the UK government has been making significant investment in charging infrastructure for EVs^{19 20}. As at 2019 Q3, 15,116 public charging devices were available in the UK (312% increase since 2015). Of these, 2,495 were rapid charging devices²¹.



Buses

As of 2018, approximately 700 of the 35,000 buses in England were electric, most of which are in London²². The UK Government aims to have all UK buses fully electric by 2025 and has allocated £170m in the recent budget to improve bus services and make them greener as well as more reliable. This includes £50 million to help create the first fully electric bus town²³. Local authorities can apply to become the UK's first all-electric bus town, setting best practice in environmentally

friendly public transport. The winning areas will receive up to £50 million to help pay for a brand-new fleet of electric buses.

The government is also trying to increase uptake of buses in areas not covered by bus operators through a new £20 million fund to encourage the development and trialling of on-demand ride sharing services.

A further £30 million of funding is also available from 2020 to 2021 to help local authorities outside London to help improve current bus services or restore those which have been lost.

Rail

At present, around 40% of the UK rail network is electrified - much less than comparable European countries which are typically 60% or more electrified²⁴.

With the UK government pledging to fully decarbonise the rail network by 2040, there is significant scope for the implementation of new technologies. The East Coast Main Line (ECML) proved that the UK could deliver rail electrification efficiently, with 2,250 single-track kilometres electrified for £671 million (adjusted for 2018). The programme took seven years from authorisation to completion.

At present, battery technology is still in its early phases with application to rail. In 2019 Bombardier signed a £89 million deal to make the UK's first lithium battery powered trains²⁵. Dual electric-battery trains can be potentially applied to a rail network which is partially electrified. The energy stored in the batteries can help such trains to cover and run through patches of the network which are yet to be electrified.

“Some areas of the rail network will likely not be electrified until 2050-2060. Where this is the case, electric and hydrogen trains could provide an interim solution.” – Stakeholder interview quote

Hydrogen fuel

Hydrogen provides the ability to travel further on a single “charge” than battery electric vehicles due to higher energy density. It also benefits from quicker speed of (re)fuelling – similar to current petrol- and diesel-powered vehicles - making the technology more suitable for use in longer distances and more energy intensive use cases, usually covered by public service vehicles (PSV), HGVs and trains. It is also possible to produce “green hydrogen” fuel through the use of electrolysis, powered from renewable energy sources. At present, however, hydrogen has a significant cost premium, with powertrains largely still in the R&D phase, and very limited production, distribution and storage facilities. There are varying levels of investment in this technology globally with nineteen governments around the world currently having “hydrogen strategies” to develop hydrogen fuel cell technologies within their borders.

Current uptake / application in the UK or globally

Cars and LCVs

The current market for hydrogen fuel cell electric vehicles (FCEVs) is still relatively small but has significant potential. Globally, in 2019 there were 7,500 hydrogen fuel cell cars sold (90% up on 2018)²⁶. Leading countries in FCEVs by uptake as of 2018 include: Japan (2,800 units in operation)²⁷, South Korea (2,000)²⁸, and China (1,200)²⁹.

As described above, the cost of R&D in hydrogen is relatively much higher than that of batteries, which is why few OEMs have attempted to tap into the market potential. However, OEMs in (and governments of) several countries in East Asia such as China, Japan, and South Korea recognise the advantages of hydrogen over batteries, including its longer driving range and ability to be distributed beyond the reach of the electricity grid network. This is demonstrated through the relatively higher uptake of FCEVs in these countries.

Buses

The UK leads the world in the application of hydrogen in buses, with Aberdeen being the first city in the world to operate 10 buses (manufactured by Van Hool) running entirely on green hydrogen in 2015. The city is procuring a further batch of 15 double-decker hydrogen buses (manufactured by Wrightbus) in 2020^{30,31}. The hydrogen bus project in Aberdeen received significant support from the government, the EU (Fuel Cells and Hydrogen Joint Undertaking) and partnerships with private company suppliers. The project also includes Aberdeen's own hydrogen fuel manufacturing facility. In addition, TfL announced that it has invested £12 million in 2019 in new hydrogen buses and refuelling infrastructure which it anticipates being delivered in 2020³².

HGVs

While current numbers are low (the UK currently does not have any hydrogen powered HGVs), 'Hydrogen Roadmap Europe' has predicted that there will be 45,000 fuel cell trucks and buses on roads by 2030 in Europe³³.

Internationally, the biggest investor in renewable energy trucks is China. In 2019, the Chinese truck manufacturer Beiqi Foton Motor announced its ambitious new plan to manufacture 200,000 new energy trucks by 2025.

Rail

Network Rail is currently preparing a cross-industry Traction Decarbonisation Network Strategy (TDNS). This strategy will set out the case for, and plan to achieve the replacement of all diesel-powered rolling stock by 2050 with trains powered by electricity, batteries, or hydrogen fuel cells. It will provide information and analysis to inform Government's decisions on how to decarbonise traction power on different parts of the national rail network.

It will aim to prioritise the conversion of currently unelectrified routes by evaluating the most appropriate traction type for each line and will be carried out in a way which considers the carbon opportunity costs of traction conversion within a more traditional cost/benefit analysis.

For hydrogen specifically, it will consider how hydrogen trains might be most effectively deployed, especially in areas where there is limited access to a power network. The TDNS programme will be set out in 2021³⁴. The first trial of hydrogen trains, HydroFLEX, began in the West Midlands in 2019³⁵ and East Midlands Railway plans to trial hydrogen trains in the next 2-3 years³⁶. Furthermore, Scotland is converting an old train unit to hydrogen as part of its trial.

Marine

HyDIME (Hydrogen Diesel Injection in a Marine Environment) is a 12 month, Innovate UK funded project that will use an environmentally friendly form of hydrogen as a fuel for a commercial ferry operating between Shapinsay and Kirkwall in Orkney. HyDIME aims to make waves in the marine industry by proving the safe integration and use of hydrogen on vessels.

One of HyDIME's goals is the design and physical integration of a hydrogen injection system on a commercial passenger and vehicle ferry which will be the first of its kind worldwide³⁷.

Biomethane and Natural Gas

Alternative fuels such as Biomethane / Compressed Natural Gas (CNG) provide an opportunity for a short-to-medium term solution for decarbonisation, albeit with some limitations.

Together with reducing carbon emissions by up to 85%, biomethane provides a saving of 30-35% compared with comparative journeys on diesel fuel. However, a key concern is the impact of Biomethane on Ozone, which – if leaked – is 25x more potent in trapping heat than CO₂. In 2018 the total GHG emission savings achieved by displacing fossil fuels with low carbon fuels has been estimated at 3.7MtCO₂e. This is equivalent to taking over 1.7 million cars off roads.

Current uptake / application in the UK or globally

HGVs

The principal biofuel in the UK is Compressed Natural Gas (CNG), with CNG Fuels the principal supplier. Several retailers and logistics delivery companies such as John Lewis, Asda, Argos and Hermes are switching their fleets to CNG-based trucks. John Lewis, for example, will begin using renewable biomethane made from livestock manure to fuel almost 300 of its delivery vans³⁸. However, public coverage of refuelling infrastructure in the UK is relatively limited. There are three currently operational CNG fuelling stations operated by CNG Fuels in Northampton, Crewe and Leyland. A further 11 stations are either being constructed or planned across the country³⁹.

Marine

In January 2020, the International Maritime Organisation (IMO) banned ships with exhaust emissions that contain more than 0.5% of sulphur content, forcing ship-makers to move towards Liquefied Natural Gas (LNG). Furthermore, the European Union requires each member state to have at least one LNG bunkering port, and proposed legislation may see ships mandated to use shore power whilst berthed. In practice, however, the majority of ships and boats are still powered by Marine Diesel Oil/Heavy Fuel Oil (MDO/HFO). To date, less than 1% of the total marine fleet globally is powered using LNG, with most vessels operating in the North Sea/Baltic Sea region and concentrated in Norway⁴⁰.

3.3 Lifecycle pathways for alternative fuels

While there is a wide range of alternative fuels, each tailored for a very specific use and possessing varied decarbonisation potential, the decision to invest in new infrastructure to enable the use of cleaner fuels should be considered with full lifecycle pathways in mind. Outlined below is an example lifecycle mapping of the different fuel types explained in the preceding pages. This highlights potential pathways for different fuel / vehicle types and helps to indicate initial areas which may require investment / policy changes from public and private sector stakeholders.

Most Green	Alternative Fuel Options	Generation Infrastructure	Existing Application	Distribution Infrastructure	End-of-life / Decommissioning Options
	 Direct plug-in/ Electrification	Wind farm	<ul style="list-style-type: none"> Battery Electric Vehicles Battery-powered niche vehicles (e.g. ferries and tractors) Electrical Locomotive Cold-ironing 	<ul style="list-style-type: none"> Connecting existing grid to renewable plants Charging infrastructure Electrified rail tracks Cold-ironing facilities at port 	<ul style="list-style-type: none"> Battery Recycling Facility Secondary and Tertiary Use Cases for Batteries (i.e. post-life household appliances and electronics application)
		Solar farm			
	 Hydrogen	Water electrolysis plant	<ul style="list-style-type: none"> Fuel-cell Electrical Vehicles (FCEV) and trucks Hydrogen Trains Dual diesel-hydrogen ferries 	<ul style="list-style-type: none"> High pressure storage, distribution (e.g. pipes), and refuelling facilities Liquid organic hydrogen carriers Refuelling depots 	<ul style="list-style-type: none"> High decommissioning cost since the applications of fuel-cells are limited to powertrains and stationary energy generation.
		Biomass gasification plant			
Steam reform plant					
 Biofuels	Fermentation plant	<ul style="list-style-type: none"> Marine fuel Passenger, LCVs, and HGVs Trains Fuel additives to improve carbon efficiency 	<ul style="list-style-type: none"> Can be stored and distributed with existing oil storage and distribution infrastructure 	<ul style="list-style-type: none"> Biofuels = diverse range of applications (cooking, fuel additives) Vehicles can be easily retrofitted to ICE - hampers decarbonisation 	
	Waste-to-energy plant				
Least Green	 Natural Gas	Off-shore natural gas extraction plant	<ul style="list-style-type: none"> LNG in marine fuel application Passenger vehicles, LCVs and HGVs Trains 	<ul style="list-style-type: none"> Mature, dedicated infrastructure is in place to store and distribute the fuel 	<ul style="list-style-type: none"> Natural gas is a limited natural resource which will be depleted Natural gas is frequently used as an alternative to diesel.

Environmental

The environmental pillar focuses on the decarbonisation potential for each infrastructure option to meet the UK's policy objective to be net zero carbon by 2050. As it currently stands, cleaner fuels are less mature and more expensive to adopt.

Socially Responsible

The social pillar refers to the need for an aligned position on decarbonisation efforts amongst stakeholders such as local authorities, employers, workers, and local residents so as to ensure that everyone benefits from the investment.

Good Governance

This pillar requires the management of an organisation to take an action that ensures commercial viability but also puts sustainability at the core of decision-making. This includes transparency and established methods to manage risks.

3.4 Decarbonisation scenarios

Depending on the extent of success in implementing decarbonisation interventions, there are a total of four scenarios up to 2050 that the UK Committee for Climate Change (CCC) has developed since 2016. These are:

- **Net Zero:** this scenario represents the interventions that need to be accomplished by 2050 in order to meet the Net Zero policy target
- **Max:** this scenario was developed in 2016 when the target by 2050 was to keep the total UK emissions around 160 MtCO₂e/year or less. It represents higher deployment towards the maximum limits that are likely to be feasible, acceptable and sustainable. This scenario is less ambitious than the “Net Zero” scenario
- **Central:** this scenario represents UK CCC’s best assessment of the technologies and behaviours required to meet targets cost-effectively while meeting other criteria in the Climate Change Act. This scenario is less ambitious than the “Max” scenario
- **Barriers:** this scenario represents less favourable conditions for key measures (technological barriers, failure to achieve cost reductions, or market barriers)

For each scenario, the forecasted annual carbon emissions and extent of interventions required are outlined in the table below:

Table 3.1: Decarbonisation scenarios by 2050

Scenarios	Net Zero*	Max**	Central**	Barriers**
Surface transport	With the assumption of full electricity decarbonisation: <ul style="list-style-type: none"> • 100% of cars and vans are electric vehicles • 100% of buses are low carbon (half H₂, half EV) • HGVs are harder to decarbonise. New research by CCC suggests that it is possible to get to very-low emissions by 2050 by switching most of these 	With the following assumptions: <ul style="list-style-type: none"> • 100% of cars and vans are EVs • 95% of buses are low carbon (half H₂, half EV) • 50% of HGVs use H₂ and 40% EVs <p style="text-align: center;">5 MtCO₂e</p>	With the following assumptions: <ul style="list-style-type: none"> • 93% of cars and vans are EVs • 95% of buses are low carbon (half H₂, half EV) • 40% of HGVs use H₂ and 25% EVs <p style="text-align: center;">19 MtCO₂e</p>	With the following assumptions: <ul style="list-style-type: none"> • 70% of cars and vans are EVs • 90% of buses are low carbon (half H₂, half EV) • 20% of HGVs use H₂ and 25% EVs <p style="text-align: center;">42 MtCO₂e</p>

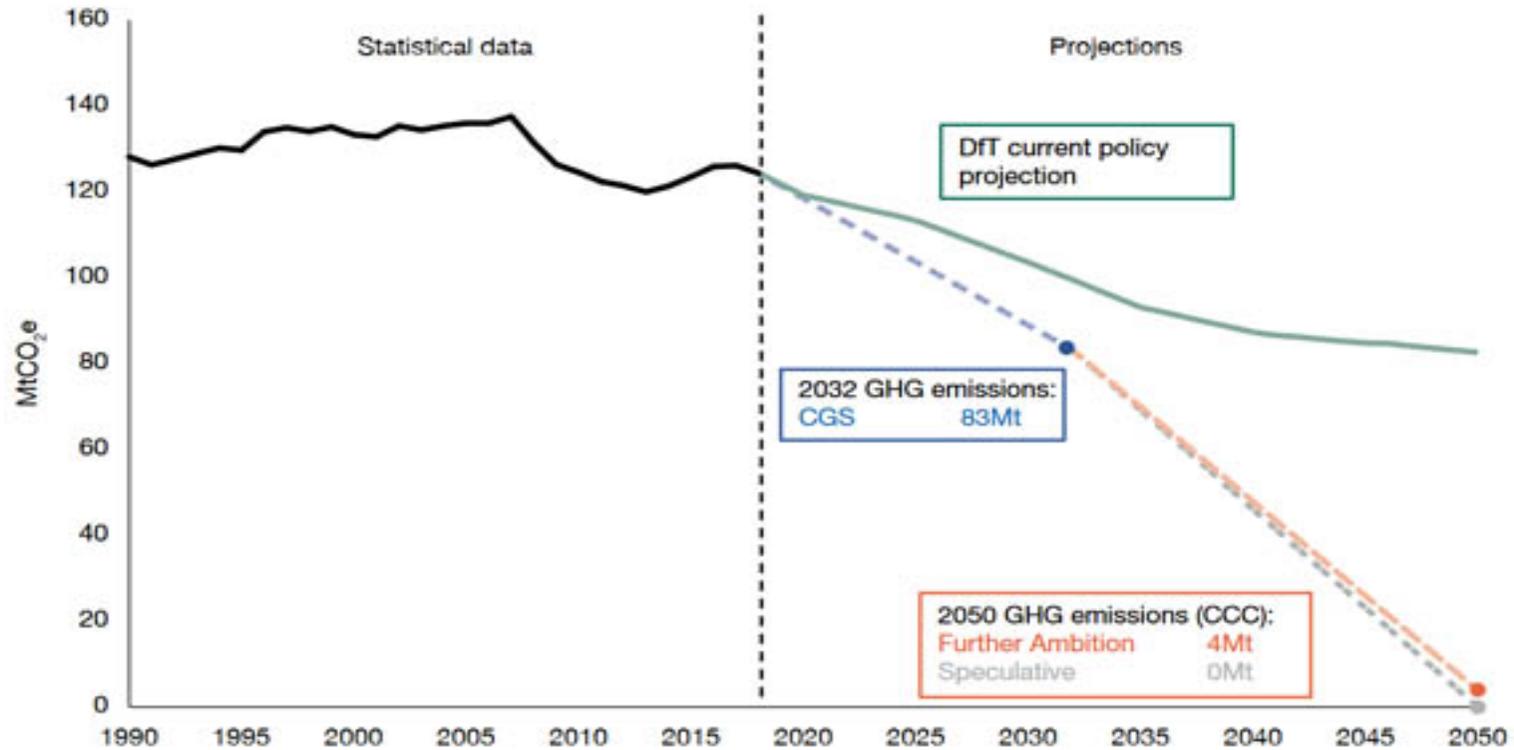
	vehicles to hydrogen power or electrification. 2 MtCO₂e			
Aviation and shipping	Aviation: some use of hybrid-electric aircraft from the 2040s, and from reductions in design speeds of aircraft Shipping: improved energy efficiency and ship operations, and use of alternative fuels 32 MtCO₂e	Aviation: emissions 15% lower than 2005 levels Shipping: full take-up of technological and operational measures; further increases in ship size and use – still limited use of biofuels and LNG 40 MtCO₂e	Aviation: emissions at around 2005 levels Shipping: speed reductions and increases in the average size of unitised container ships; limited use of biofuels and LNG 46 MtCO₂e	Aviation: emissions not capped, increasing to 40% above 2005 levels Shipping: improvements reflecting IMO's Energy Efficiency Design Index but limited further abatement 63 MtCO₂e

* Information taken from CCC Report: Net Zero The UK's contribution to stopping global warming – May 2019 ([Source](#))

** Information taken from CCC Report: UK climate action following the Paris Agreement – October 2016 ([Source](#))

Furthermore, a forecast published by the DfT also suggests that the net zero target cannot be achieved in the transport sector without introducing major interventions (Information taken from DfT via [Transport Network](#)).

Figure 18: DfT's latest domestic GHG emissions projections based on current policies, compared to Clean Growth Strategy (CGS) targets and CCC Net Zero 'Further Ambition' and 'Speculative' scenarios™



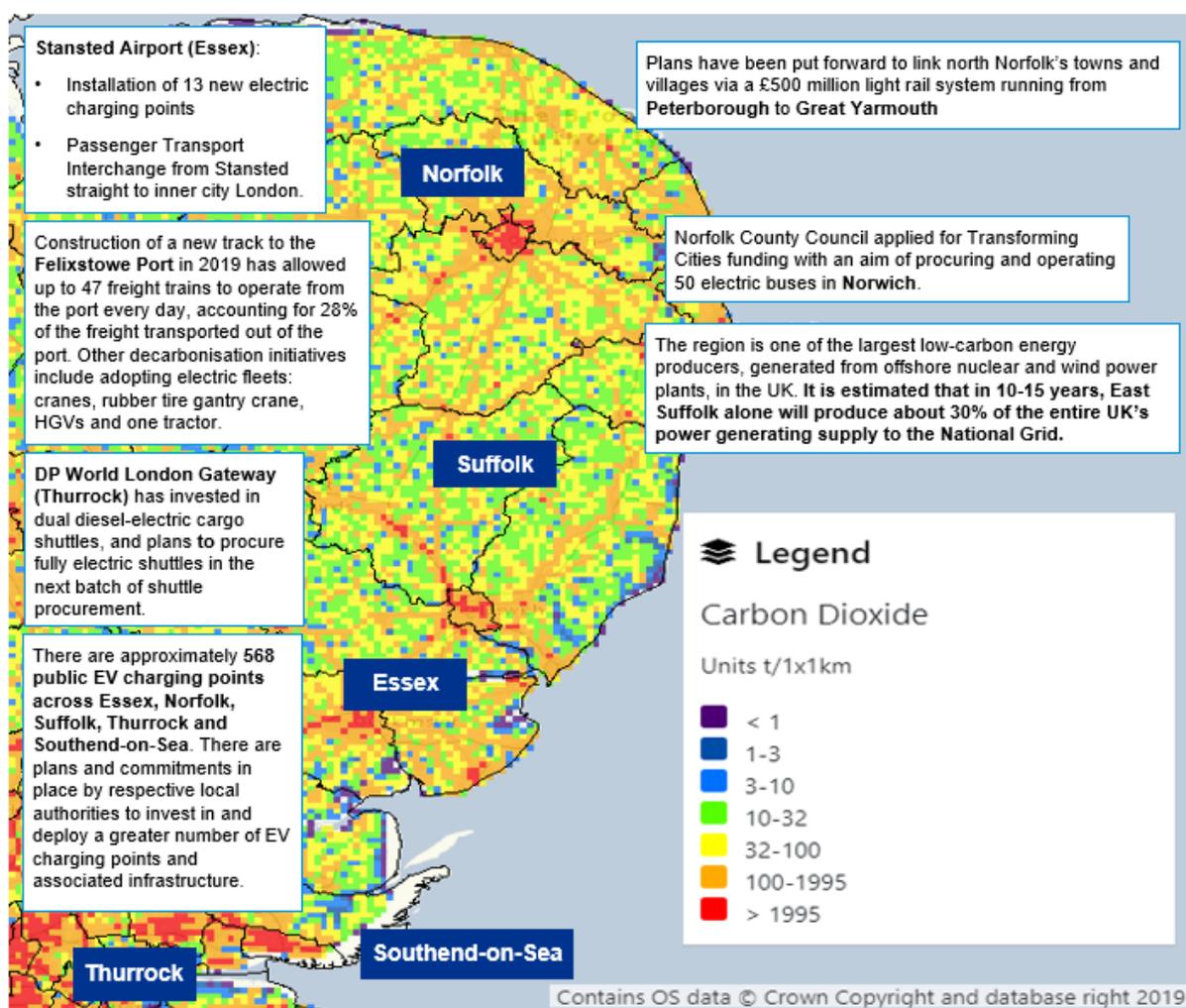
4. Transport East Decarbonisation Landscape

Important Note: The analysis contained within the following section (and across other parts of this report) is based on the best possible (and available) information and data as at the reporting date.

Within this section, the majority of the analysis conducted on carbon emissions is primarily focused on the regions covered under the remit of Transport East, which are: Essex, Norfolk, Suffolk, Thurrock, and Southend-on-Sea (ENSTS). To highlight instances where data and analysis is focused primarily on these regions, we have referenced accordingly using the acronym 'ENSTS'.

There are some instances where datasets on each specific region / local authority are not currently available (mainly relating to the wider decarbonisation landscape and contextual information e.g. regional assets). The available information within these instances is more generic and encompasses the wider East of England region comprising Peterborough, Cambridgeshire, Luton, Essex, Norfolk, Suffolk, Thurrock and Southend-on-Sea. This is also highlighted and referenced where appropriate.

4.1 Carbon Emissions in the ENSTS Region



Sources: BEIS – National Atmospheric Emissions Inventory (Carbon dioxide emissions), DfT Statistics: Electric vehicle charging devices by local authority, Letter from Suffolk County Council to BEIS and DHLGC (Dated 11 May 2018)

Note on nuclear: Although this provides potential for the generation of low-carbon energy, considerations will need to be made in respect of other potential environmental impacts.

The largest contributor of carbon dioxide in the region in 2017 was transport (7,800 kt CO₂e/39%), followed by industry and commercial (5,237/30%), domestic (5,100/30%), and agriculture (234.7/1%). Meanwhile, transport in ENSTS makes up approximately 5% of the total transport carbon emissions across the UK⁴². The emissions from agriculture in the form of methane is likely to be more significant which means that the impact of emissions from agriculture is potentially more significant than anticipated / outlined. With reference to the heat map, emissions are concentrated in city centres such as Norwich, Ipswich, and Bury St. Edmunds. The amber, web-like strokes spreading out of Norwich on the map also highlights the significant contribution of transport / the strategic road network to CO₂ emissions in the region.

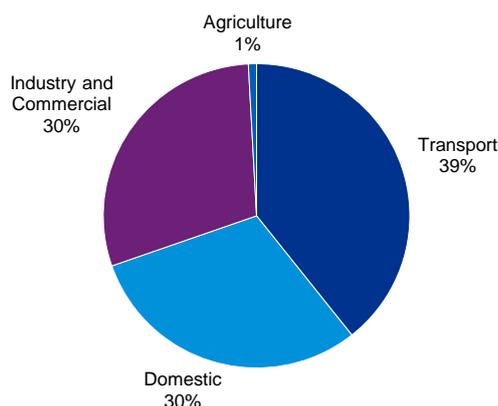


Chart 4.1: CO₂ emission by sector in Essex, Norfolk, Suffolk, Thurrock and Southend-on-Sea (ENSTS) in 2017⁴²

With reference to Figure 4.1 below, carbon emissions from transport in Essex, Norfolk, Suffolk, Southend-on-Sea and Thurrock have seen a steady increase since 2010.

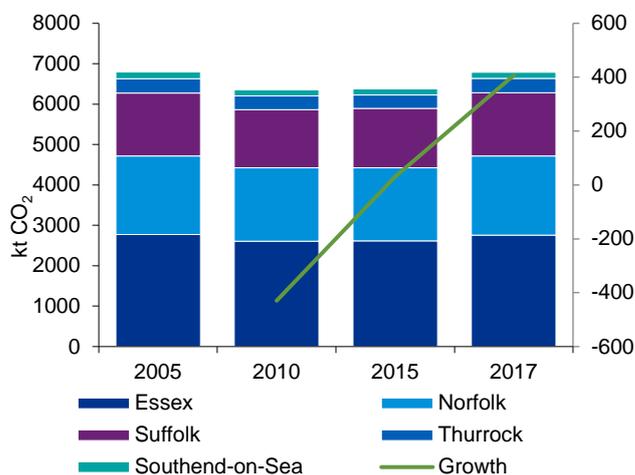


Figure 4.1: CO₂ emission from transport in ENSTS from 2005 to 2017⁴²

Several local authorities in the region, including East Suffolk, Mid Suffolk, North Norfolk, and Suffolk, have declared a climate emergency in response, and have committed to being carbon neutral by 2030 (note: this target is applicable to the local authorities themselves as opposed to their wider, respective districts / areas)⁴³. Local government bodies across the region need to make a conscious effort and

actively engage with industry to identify and implement measures to support transport decarbonisation to meet local and national policy commitments.

By transportation mode, road transport is the largest contributor of total transport carbon emission in Essex, Norfolk, Suffolk, Thurrock & Southend (ENSTS), as shown by figure 4.2 below. This provides a strong indication for the prioritisation of decarbonisation efforts. With rail being a greener transportation mode in operation, opportunities may exist to utilise rail more in meeting the demand for transport of passengers and goods in the region.

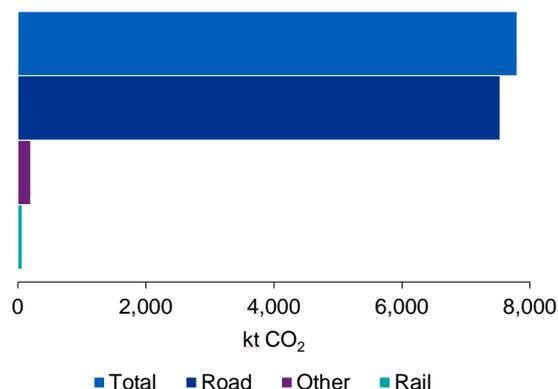


Figure 4.2: CO₂ emission contribution by transport mode in ENSTS in 2017 ⁴²

Further information relating to the decarbonisation landscape in the context of each transportation mode in ENSTS can be found on pages 33 – 34.

The region is one of the fastest growing regions in the UK, both in terms of population and economic growth. Much of the region benefits from its proximity to London and is increasingly linked with London and the South East in terms of labour and housing markets. The region is also the fourth largest exporting region in the UK after London, the South East and the West Midlands. The regional economy is heavily reliant on services, with a strong financial services sector but is also active in manufacturing (e.g. automotive, pharmaceuticals) and ICT⁴⁴.

4.2 Current Regional Activity

Overview of current decarbonisation plans in the region

The UK's average per capita emissions nationally fell from 8.7 tonnes/ person in 2005 to 5.4 tonnes/ person in 2017⁴⁵. Over the same period per capita emissions in ENSTS demonstrated a similar downward trend, with a below-UK average 8.5 tonnes in 2005 to 5.0 tonnes in 2017. The downward trend suggests that energy consumption per capita in the region has improved significantly since 2005⁴². However, if the 2050 net zero target is to be achieved, more needs to be done to decarbonise road transport in the region.

There has been progress made to date over the past few years, with a number of initiatives considering the need, and options, for decarbonisation in the region. Examples include: the Climate Change Adaption and Carbon Reduction Scoping Report (produced by the University of East Anglia and New Anglia LEP in July 2019), the Norfolk and Suffolk Local Industrial Strategy, which states the vision for Norfolk and Suffolk to be 'the UK's clean growth region' (published by New Anglia LEP in January 2020), the South East LEP Local Energy Strategy and Clean Growth Working Group, and the planned

establishment of a Clean Growth Taskforce with the aim to “embed clean growth in the development and delivery of actions and decisions which deliver the Economic Strategy and Local Industrial Strategy”⁴⁶.

Multiple efforts across the region have been made to identify specific actions for the transport sector which include; embedding clean growth ambitions in transport strategies and policies to ensure that clean growth is considered in decision making with respect to transport; reducing the need for transport through an increase in flexible working and digital connectivity; improving access to, and use of sustainable modes of transport through behavioural change; working with the Connected Places Catapult (CPC) and Highways England to drive transport innovation and support for SMEs; development of an EV strategy focusing on infrastructure improvement as well as increasing take up rates of EVs; considering various types of modes and alternative for freight and air travel; initiatives to improve air quality across the region; and increasing the resilience of infrastructure.

East of England key regional attributes

In addition to the initiatives above, the region also has several key attributes that position it well for achieving a reduction in carbon emissions. These include:

Green Energy Generation

A key strength of the region relates to its energy production capabilities, both current and future. Offshore, the area hosts over 100 gas fields, over 150 gas-related platforms and 4,500 km of pipelines⁴⁷. The Bacton gas terminal and network of offshore gas platforms supply over a third of the UK’s low carbon transitional fuels. The bioenergy industry is worth nearly £2bn and is based on the scale of agriculture locally, with 13.7% of England’s crop output and 9% of the livestock output. The region is also amongst the leading producers of clean energy onshore, largely generated by wind and nuclear. The East of England has the second largest number of onshore wind generator sites nationwide (879), with only Scotland having more (3,468)⁴⁸. The region also has the highest concentration of offshore wind energy generation as of 2018 in the UK.

Logistics and Freight Market

The East of England has one of the strongest logistics, freight and distribution markets nationwide. The region has been among the top 3 UK regions which have ‘lifted’ the most amount of goods in million tonnes of overall haulage since 2017⁴⁹.

The region is a base for a number of large freight cargo companies including Freightliner, GB Railfreight and DB Cargo. These companies have been in discussions with Network Rail and the DfT with respect to improvements required in the rail links across the region to allow more trains to run and reduce lorries travelling on the A14⁵⁰.

HGVs still make up the larger proportion of the freight market share in East of England, with 65-75% of goods coming through the Felixstowe and London Gateway ports being moved via road⁵¹.

Maritime Economy

The East of England is home to several of the busiest ports in the UK, including Felixstowe, London Gateway, Lowestoft, King’s Lynn, and Ipswich Dock. With its active and vibrant port activities, the region is well-positioned to spearhead initiatives for decarbonising shipping and the wider maritime economy.

Currently 25% and 35% of the goods going through Felixstowe and London Gateway respectively are moved by rail. In 2019, a new track pathway to Felixstowe has allowed up to 47 freight trains a day to operate from the port to Ipswich⁵⁰. However, the existing rail network has already been operating at near full capacity and further upgrades are needed to allow rail to play a more significant role in meeting decarbonisation goals.

Clean Energy Cluster

There is currently a large energy sector in the region and also extensive R&D capabilities (e.g. within University of East Anglia and University of Cambridge). There could therefore be an opportunity to develop a 'clean energy cluster', combining practical expertise of energy, transport and technology sectors, with R&D expertise of universities and others.

Decarbonisation Initiatives in ENSTS

There are already a number of existing initiatives and efforts underway across multiple transport modes, aimed at reducing carbon emissions. These include:

Cars

In the Transport East region only 13% of households do not have access to a car, compared to 26% across the whole of England. From 2018 - 2019 an additional 1,522 plug-in EV cars and vans were registered in the Transport East region with the overall fleet of 5,241 vehicles representing 29.2% of the total in England at that time⁵².

There have been a number of charging infrastructure initiatives launched in the region including the installation of 40 charging points around North Norfolk in 2019 as part of a £250,000 initiative. There is also a presence of local businesses such as Lotus which manufactured the first British all-electric hyper car (Lotus Evija) in Hethel, Norfolk, marking the start of c.£100m of investment for R&D and manufacturing⁵³. The company has also committed to becoming an all-electric car manufacturer from June 2020.

HGVs

The A14 to Felixstowe is a congested route that connects with the A12 at the Copdock Interchange to the south of Ipswich and provides connectivity to the M25 and London from Felixstowe port. This route accounts for approximately 70% of the road freight out of Felixstowe port. The A12 / A14 Copdock Interchange is a pinch point on the Strategic Road Network (SRN), with significant delays and queueing observed in peak hours on the A12 northbound approach. Trafficmaster GPS data shows that average peak hour journey times are more than 50% slower than the overnight 'free flow' conditions. Highways England has not to date announced or committed to improvement schemes for this junction⁵².

The region also hosts local businesses such as Tevva, a business specialising in the development of electric delivery vehicles with a focus on battery system development, telematics, power electronics, and software development⁵⁴.

Bus

The region has a lower than average journey to work bus mode share (4% as compared to an average of 7% for England as a whole). This is reflective of the region's rural geography and difficulties in providing public transport services in rural areas⁵².

- Norfolk County Council has applied for £18 million from the government's 'Transforming Cities' funding pot with the aim of funding for 50 new electric buses in Norwich ⁵⁵.
- Norfolk-based Equipmake Ltd supplies electric drive train technology for British sports car company Ariel, which produces the Hipercar. Equipmake is also developing a low cost electric bus drivetrain to enable more widespread adoption of electric buses ⁵⁶.

Maritime

In total there are 13 ports within the region, six of which are classified as major (Felixstowe, Great Yarmouth, Harwich, Ipswich, Tilbury and DP World London Gateway)⁵².

Felixstowe Port: Construction of a new track to the port in 2019 has allowed up to 47 freight trains to operate from the port every day³⁹, accounting for 28% of the freight transported out of the port. Other specific decarbonisation initiatives at the Port of Felixstowe include converting the cranes in the main port to run on electric power during certain phases of their operation as opposed to running on diesel the entire time. The port has also invested in the first fully electric Rubber Tire Gantry crane (RTG), which will be the first of its kind in the UK. There are also 3 electric HGVs and one tractor at the port currently on trial ⁵¹.

DP World London Gateway: Existing decarbonisation initiatives at the London Gateway Port include the purchase of diesel-electric shuttle vehicles to move containers around the port. The subsequent batch of shuttle vehicles to be procured will also be fully electric⁵¹.

Aviation

ENSTS is home to three international airports: London Stansted Airport (Essex); Norwich Airport (Norfolk); and; London Southend Airport (Southend-on-Sea). The largest of these airports is London Stansted which carried 28 million passengers in 2018 (Southend carried 1.5 million and Norwich 536,000 passengers ⁵²).

Stansted airport: In January 2020, Uttlesford District Council rejected a £35 million plan to expand Stanstead airport's capacity from 35 million passengers a year to 43 million, citing increased carbon emissions as a factor ⁵⁷. Separately, a number of decarbonisation initiatives have been launched by the airport including: 1) the installation of 13 high speed electric charger points at a new purpose-built station; and 2) investing £2 million in its Passenger Transport Interchange, which provides a connective service between the airport and its direct rail services to central London. The airport is also launching a full passenger trial of fully electric coaches running between the airport and London Stratford Coach Station ⁵⁸.

Rail

Freight: Within ENSTS, the main rail corridors are: Felixstowe to the West Midlands and the North (via Ely or GEML and North London Line); and Cross London including Essex Thameside ⁵². To increase the number of rail freight movements to / from the Port of Felixstowe, Network Rail is currently investing £60.4 million to install 1.4 km of track loop between Trimley and Levington. This will allow the line greater flexibility to run more freight trains as well as improve the reliability of existing passenger services. Network Rail expects the work to enable 10 additional trains per day in each direction, with each train estimated to take up to 76 HGVs off the road ⁵⁹.

Passenger: Only 2.5% of the workplace population in the Transport East region commute by rail ⁵². Plans have been put forward to link north Norfolk's towns and villages via a £500 million light rail system running from Peterborough to Great Yarmouth ⁶⁰.

4.3 Drivers for Decarbonisation

There are a number of drivers (in the form of both challenges and opportunities) which make decarbonisation a significant and immediate focus area, in terms of investment and activity:

Political

Supporting factors:

In response to the global climate challenge, a commitment was made by the UK Government in June 2019 to achieving a net zero carbon economy by 2050. Following the national policy, several local authorities in the region such as East Suffolk, Mid Suffolk, North Norfolk, and Suffolk have declared a climate emergency and their intention to achieve carbon neutrality by 2030.

Challenging factors:

- Brexit will negatively impact UK's trade in the European market, imposing heightened barriers for both accessing a range of decarbonisation capabilities that need to be sourced and selling products & services to Europe
- Public funding is currently skewed in favour of electrification compared to other alternative fuels

Implications for suppliers/local stakeholders:

- Target available government funding around the transition to a low-carbon economy
- Establish relationships, sales channels and R&D partnerships with non-EU partners
- Leverage more funding through public-private partnerships

Economic

Decarbonisation is a global priority which influences demand, and thus directs mainstream automotive manufacturers to shift towards EVs and alternative fuels. An early indication of this is the declining sales of ICE vehicles and parts to some of the UK's biggest export markets: Norway and China. Successful decarbonisation could see the region establish itself as a hub of best practices with respect to the UN's Sustainable Development Goals in creating sustainable cities and communities. This can be further leveraged to attract inward investment and exportation of intellectual property.

Challenging factors:

- Mainstream manufacturers are moving to sites with lower manufacturing costs
- Global competition exists in technological advancement, inward investment and market share
- Rejuvenation of declining automotive industries in parts of the UK (e.g. the purchase of Northern Ireland's Wrightbus by JCB, Geely in Coventry)

Implications for suppliers/local stakeholders:

- Innovation and scientific centres, together with industrial parks, should be used as selling-points to demonstrate supply chain capability and attract investment from the private sector
- New innovation to enhance quality and efficiency in production should be utilised to promote regional competitiveness in the zero-emissions mobility market
- Local suppliers and stakeholders can reap the benefits of cost efficiencies from being in close proximity to export facilities and ports. The region may therefore want to consider applying for Free Port status and the establishment of ZEM (Zero Emissions Mobility) businesses in the areas nearby

Social

Supporting factors:

Greater pressure from activist groups and environmental organisations is challenging governments to take concrete actions to tackle climate change. A growing proportion of the demographic is becoming more environmentally conscious and aware of the consequences of global warming and poor air quality on the quality of their lives.

Challenging factors:

- There are still concerns about the sustainability of battery manufacturing and whether an effective recycling method can be developed to minimise the environmental impact of lithium/rare earth mining
- Hydrogen is a highly reactive chemical and collisions involving FCEVs can be much more explosive than other types of fleets. Safety concerns need to be overcome to make hydrogen an acceptable fuel source
- Government, having only recently encouraged road users to switch to diesel and now imposing disincentives on those who have done so, is potentially creating scepticism and may delay transition

Implications for suppliers/local stakeholders:

- There is a national need to develop a clean recycling facility for batteries and/or fuel-cells, which is also a potential area of opportunity for ENSTS to lead on
- Develop technologies that meet international standards and demonstrate safety to gain public trust

Technological

Supporting factors:

Innovation plays a significant role in decarbonisation. There is still room for R&D in areas such as: improvements in the efficiency of battery technology, recycling of lithium-batteries, application of battery technology in aviation and ship engines, waste-to-energy technology (biomethane), and natural gas. Altogether, they create opportunities for businesses and universities to leverage both ENSTS' manufacturing capability and know-how in domestic and international playing fields. Export of services (financial and insurance, business services, IP, travel and transportation) accounted for 46% of UK's exports in 2018, up from 32% in 2000 61.

Challenging factors:

- There is still a technological gap in EVs to enable longer distance ranges, and broader applications
- More rapid charging points are required to support the use of EVs on road
- Recycling technologies for lithium batteries are not keeping pace with the rapid rise in EVs
- Hydrogen fuel cells are still much more expensive to manufacture than their EV counterparts
- There are a limited number of initiatives advancing ways to mass-produce biomethane from waste

Implication for suppliers/local stakeholders:

- Manufacturers need to collaborate with academic and research institutions through innovation and R&D to accelerate technological maturity (e.g. by leveraging existing capabilities at the University of East Anglia, University of Cambridge and other institutions), and enhance competitiveness of the regional offering

Legal

Supporting factors:

In June 2019, Parliament passed policy committing the UK to a 2050 net zero carbon target. The Bus Services Act in England enables local authorities to intervene with the bus market and select operators based on a set of criteria, including environmental requirements based on carbon emissions. The Autonomous and Electric Vehicles Bill in the UK has set the foundations for quickening the pace of adoption of Electric Vehicles by setting standards for EV charging facility infrastructure. The Alternative Fuels Infrastructure Regulations 2017 defined a common set of standards and functionality for the provision of alternative fuel infrastructure.

Challenging factors:

- There is a lack of clarity in terms of accountabilities for interventions, including ensuring policy compliance, between central and devolved government policy
- There has been limited progress in respect of legislation for standards in respect of BEV-alternatives

Implication for suppliers/local stakeholders:

- Effort is required to co-ordinate local efforts and ensure consistency in pace and standards

Environmental

Supporting factors:

ENSTS is endowed with natural resources such as on- and off-shore wind power, providing an opportunity to achieve a genuinely green economy.

Challenging factors:

The adoption of electrification and alternative fuels does not, in itself, deliver fully zero-emission mobility:

- Lithium is a rare metal which is limited in amount and requires extensive mining activity to acquire – recycling the same resource in the long run is imperative to be genuinely green
- Charging infrastructure must supply energy generated through sustainable resource and not fossil-fuelled power plants (for ENSTS this can potentially be more easily transitioned to wind in entirety)
- Alternative fuels such as biofuels can be obtained in the cheapest manner from palm plantations which are associated with negative environmental impacts. Palm plantations have been associated with forest fires and destruction of biodiversity which impose economic costs to the development of medicines for currently incurable diseases. The development of medicines relies significantly on the discovery of specific DNAs or chemicals hidden within the earth's biodiversity

Implication to suppliers/local stakeholders:

- Decarbonisation is not just a case of switching fuels but also considering the whole life-cycle of processes, assets and services

4.4 Six initial areas for decarbonisation opportunities

The following themes / areas have been identified as having potential for realising opportunities associated with decarbonisation across the region. Of these six areas, **logistics and freight, public transport and active travel**, as well as the use of **electric vehicles**, have the greatest decarbonisation potential as they target the greener use of, and / or modal shift away from, road vehicles (as road vehicles are the greatest contributor to transport emissions).

Before introducing each area in depth, there is a clear opportunity sitting above all of these, involving **strategic planning and regional representation**, to identify and inform the need for, prioritisation of, and design, funding, as well as development of multi-modal transport schemes aimed at decarbonisation. This would involve determining the specific role of Transport East in aligning and cohering schemes and interventions, lobbying for and securing interest in the region, linking local government and business (through LEPs) with national initiatives, and achieving cross-regional alignment with neighbouring SNTBs and PTEs (e.g. Transport for London, Transport for South East, England's Economic Heartland etc.)

Maritime	Logistics and Freight
<p>East of England has a sizeable and significant maritime industry. The region is the sixth largest contributor (of twelve regions) to the total GVA in the maritime sector nationwide. The total turnover and GVA of the sector in 2017 amounted to £1bn which made up 6.1% of the total turnover of the maritime industry in the UK⁶². Potential opportunities to consider include:</p> <ul style="list-style-type: none"> ▪ Technologies that can increase energy efficiency; ▪ Operational or behavioural change to increase energy efficiency; ▪ Capture or treatment technology for exhaust emissions; ▪ Alternative fuels and energy sources and related machinery; and ▪ Establishing a Free Port Zone to encourage ZEM businesses to locate in the region, and other businesses that currently transport goods, to and from the ports in the region. 	<p>East of England has one of the most active logistics and freight markets by region in the UK. The region lifted the most amount of goods in million tonnes in 2018 and has been placed in the top 3 regions since 2016⁴⁹. The logistics and freight market therefore represents a significant opportunity to decarbonise transport.</p> <p>The options available within this sector include:</p> <ul style="list-style-type: none"> ▪ Increasing the capacity of the existing railway network; ▪ Increasing the use of rail to shift vehicle miles travelled away from roads; ▪ Encouraging the use of alternative fuels and energy sources and related machinery ▪ Using open data platform to increase fleet utilisation of HGVs and LCV; and ▪ Demand management measures such as establishing Clean Air Zones (e.g. TfL's Ultra Low Emission Zone (ULEZ) charges)
Public Transport and Active Travel	Renewable (wind) energy
<p>There is room to encourage further uptake of public transport and active travel in East of England. The proportion of commutes made by cars in the region is higher whereas public transport is lower, than the national figures. Investment is needed in the public transport</p>	<p>In 2018, East of England had the second largest number of onshore wind generator sites nationwide (879). The region was ranked after Scotland which had 3,468 sites in the same year⁴⁸. The fact that the region is naturally endowed with strong wind power means that</p>

network to achieve better connection and integration of journeys utilising different transport modes (e.g. greater use of rail, bus and cycling).

Mode ⁶⁵	East of England	UK
Car	78%	68%
Cycle	4%	3%
All rail	3%	10%
Bus	3%	7%

there is a significant opportunity to leverage this as a renewable energy capability which is specific to East of England. For instance, Scotland is currently pursuing to take advantage of its rich renewables to produce hydrogen via water electrolysis. This will help distribute the excess of capacity of wind generators it has on Orkney Islands to other parts of Scotland. A similar concept can be adopted in East of England where the region can become a key supplier of renewable energy.

Road Passenger Vehicles

Although the uptake of electric plug-in cars and vans in East of England has been increasing since 2016, there is room to encourage further uptake in the region. As of 2018, of the 2.1 million cars and vans registered in ENSTS, only 5,671 are electric^{67 68}. Furthermore, according to another report by DfT, the number of public charging devices for EV per 100,000 population stands at 15, with the lowest region standing at 12. This means that there is an opportunity to develop more charging infrastructure and, at the same time, boost road users' appetite for EV/FCEVs. This can be done through effective policymaking which incentivises road users to shift towards cleaner technologies coupled with investment in the necessary infrastructure.

Agriculture

The total income from agriculture in 2018 for the East of England stood at £727 million. This constitutes 14.6% of the total national income from agriculture in the same year. The most common type of crop in the region is cereal (35% of farms)⁶⁹ which utilise heavy machinery and equipment from seeding to harvesting. Means to decarbonise the machinery include:

- Switching to cleaner type of fuels (e.g. plug-in, biofuel from waste-to-energy, hydrogen, etc.)
- Converting agricultural waste to fuel via waste-to-energy plants
- Automation to enable more efficient driving behaviour and minimise wastage (e.g. fertiliser, water, etc.)

Although agriculture contributes to only 1% of total carbon emissions, there are elements of this attributed to transport such as the use of heavy vehicles, machinery and equipment.

“There are plenty of renewable energy sources in the East of England, the surplus of which can be used to provide power for transport.” – Stakeholder interview quote

4.5 SWOT Analysis of decarbonisation areas

Upon identifying the six areas above, an analysis of strengths, weaknesses, opportunities, and threats has also been conducted with respect to each area:

	Strengths	Weaknesses	Opportunities	Threats
Maritime	<p>The region is the sixth (of twelve regions) largest contributor to the total GVA in the maritime sector nationwide. It is also home to major ports such as Felixstowe Port and London Gateway which do not only have a strong operational capability in the sector but are also working on developing respective plans to decarbonise port activities with their partners globally.</p>	<p>There needs to be a coordinated effort among Transport East, local authorities, the ports, operators of other modes of transport (e.g. rail and freight) and private sector to decarbonise the maritime sector.</p>	<p>Major ports in the region could spearhead the trials of decarbonisation solutions in ports. This includes:</p> <ul style="list-style-type: none"> • Considering a mixture of alternative fuels • Operational efficiency enabled through digital solutions (e.g. customs clearance, payments, cargo checks, etc.) • Establishment of Free Port area(s) 	<p>Port activities may increase post-Brexit which could result in longer waiting times and worsening carbon inefficiencies.</p>
Logistics and Freight	<p>Hauliers in the East of England lifted the most goods in million tonnes overall haulage and has been in the top 3 positions in the past 3 years (UK), which demonstrates a very strong logistics market. A small number of freight companies in the region have begun their own initiatives in developing plans for switching to dual-fuel units and participating in the trialling of live Connected Driver Advisory System.</p>	<ul style="list-style-type: none"> • Decarbonisation is not necessarily on the top of operators' agenda. • Lack of coordination can lead to suboptimal outcomes for companies that choose to invest in greener fleets. (e.g. infrastructure needs to correspond to choice of fleet) • Despite being greener, rail freight struggles to compete with road on competitiveness of price / convenience 	<p>Decarbonisation of the logistics and distribution market, ranging from:</p> <ul style="list-style-type: none"> • Alternative fuels to innovative solutions • Modal switch from road to rail • Operational efficiencies enabled through digital solutions: online freight brokerage, smart parking, robotic last-mile delivery service. 	<p>Customers are expecting increasingly quicker deliveries which can result in a greater emissions burden on the logistics and freight market.</p>
Wind generators	<p>By the end of 2018, the East of England had the second highest number of onshore wind generator sites nationwide (879), just behind Scotland (3,468). A natural competitive advantage will position the region well as a potential leader in the production of green renewable energy.</p>	<p>There is lack of infrastructure and R&D to leverage the natural competitive advantages in green energy as a means to decarbonise transport and other sectors.</p>	<p>Utilisation of onshore and offshore wind as a genuinely green alternative fuel to powering transport: including electricity for EV charging points and electrified rail tracks.</p> <p>Surpluses in renewable energy can be distributed to areas with less natural endowment either via grid or in the form of green hydrogen.</p>	<p>Other countries may overtake in terms of being ahead and the UK risks losing the foreign direct investment needed for R&D and infrastructure development.</p>

	Strengths	Weaknesses	Opportunities	Threats
Road Passenger Vehicles	<p>There is a strong government policy pushing for the provision of more public charging devices across the region. In 2019, there were a further batch of 40 charging points installed in North Norfolk.</p> <p>Car-sharing is readily available in the region. Employers are actively incentivising their employees to car-share to work.</p>	<p>Current uptake of electric plug-in cars and vans and provision of public charging infrastructure in East of England remains limited. As of 2019, there were 15 public charging points to 100,000 population in East of England as opposed to the UK average of 23.</p>	<p>There is an opportunity to incentivise the use of greener fuel technologies in vehicles, such as EVs and FCEVs, through effective policy-making and provision of EV charging infrastructure. Car-sharing can also help the region optimise the use of empty seats in private cars.</p>	<p>With China and the US being the largest EV makers, uptake of EVs may result in a heavy reliance on imports instead of an opportunity for the region to grow its own capability in the space. Heavy reliance on imports will end up becoming a burden on trade deficit in the low-carbon regime instead of an investment which will give an economic return in the future.</p>
Public Transport & Active Travel	<p>There is a strong consensus among government bodies and local authorities to support more cycling and other active travel schemes in the region. This is evident from recent funding schemes announced to invest in and improve active travel spaces across the country. The region contains ample green space and rural coverage, and can leverage this to its benefit.</p>	<p>There is a lack of coordination among housing developers and transport planners to ensure that new neighbourhoods will have ready access to public and active transport networks.</p> <p>The rural nature of the region is also likely to contribute to the very low uptake of public transport, as the main travelling method to work.</p>	<p>There is an opportunity to incentivise the uptake of public transport (e.g. bus and trains) by improving access, quality of service and introducing competitive fares, for regular users. Price-competitive MaaS packages can also encourage the multi-modal uptake of public transport and active travel.</p> <p>There is also an opportunity to switch public buses and trains to greener fleets such as electric or hydrogen buses.</p>	<p>The rise in Demand Responsive Transport (e.g. ride-hailing app) may discourage the use of public transport.</p> <p>The impact of COVID-19 is likely to discourage users from using public transport for fear of being exposed to infection in crowded places.</p>
Agriculture	<p>Agriculture is one of the strongest economic sectors in ENSTS. There is currently no existing decarbonisation initiatives in the agricultural space.</p>	<p>The agricultural sector does not normally see itself as a player in the transport market environment. This is despite the fact that the machinery and heavy equipment used (e.g. tractors) use the same fuel technology concept as that of a road vehicle.</p>	<p>The long-standing capability in the sector will enable region to spearhead the initiatives around decarbonising the heavy machinery and equipment used in agriculture. Furthermore, a collaborative strategy for an alternative energy (e.g. waste-to-energy) needs to be rolled out for the wider agricultural sector so as to identify all the areas where transport decarbonisation can play a part.</p>	<p>While waste-to-energy is often the most immediate solution observable for agriculture, it is associated with a more potent GHG, methane. There is a need to ensure that the decarbonisation potential of the chosen alternative energy will be sufficient to bring the sector to meet the target by 2050.</p>

5. Indicative long list of regional decarbonisation opportunities

Based on extensive research and outputs from several rounds of stakeholder engagement with both public and private sector organisations across the region, representing a broad range of industries, an indicative long list of specific decarbonisation opportunities has been produced. This is continuing to be developed, refined and agreed with respective stakeholders.

The potential opportunities listed span across the six initial areas identified in the preceding sections of this report and aim to specifically indicate the types of stakeholders that may be best placed to lead on / deliver them. It is important to note that not all of the opportunities contained in this long-list will be relevant for, or directly attributable to the responsibilities of, Transport East / Local Government. However, they have been captured for the purposes of completeness and to provide stakeholders with a view of opportunities across the transport ecosystem. The next step will be to further refine and agree responsibilities for each opportunity and decide which ones to take forward and begin developing respective business cases or programmes of work for.

The following legend provides the explanations for the colours and markings attached to each of the opportunities in this long list in the following pages.

Opportunities Key:

Short-Term



Medium-Term



Long-Term



Indicative Owners:



Transport
East



Local
Government



Central
Government



InfraCo (e.g.
HE, NR)



Private
Sector

Cross-cutting
multimodal
opportunity:



Strategic Planning and Regional Representation, to identify and inform the need for, prioritisation of, and design, funding, as well as development of multi-modal transport schemes aimed at decarbonisation. This would involve determining the specific role of Transport East in aligning and cohering schemes and interventions, lobbying for and securing interest in the region, linking local government and business (through LEPs) with national initiatives, and achieving cross-regional alignment with neighbouring SNTBs and PTEs (e.g. Transport for London, Transport for South East, England's Economic Heartland etc.)

	Fuel Technology	Operational Efficiency	Infrastructure					
Maritime	Increase the uptake of LNG / CNG ships 2	Development of a roadmap for the adoption of "smart port" technologies. 6	LNG refuelling bunkers (short/medium term) and, potentially electrolysis and hydrogen storage & fuelling and cold ironing infrastructure 9					
	Trial the use of hydrogen fuel in marine applications 3							
	Trial the use of electric engines in ships at ports 4	Development of a cluster / working group bringing together regional capabilities in smart ports technologies and position East of England as a hub for Maritime Innovation. 7	Upgrading and incorporating automation where possible into the systems for port control rooms, signallers, customs processes, and other measures to reduce queue and waiting time. This platform can be integrated with that of Highways England or Network Rail where freight operators can settle all relevant charges at once. 10					
	Establish Free Port areas to attract ZEM businesses 5							
	<table border="1"> <thead> <tr> <th>Fuel</th> <th>Well-to-wake emission²³</th> </tr> </thead> <tbody> <tr> <td>LNG</td> <td>589-662 kg CO₂e/kwh</td> </tr> <tr> <td>MDO / HFO</td> <td>750 kg CO₂e/kwh / 742 kg CO₂e/kwh</td> </tr> <tr> <td>Hydrogen fuel</td> <td>Depending on manufacturing method but considerably cleaner than all the above.</td> </tr> </tbody> </table>			Fuel	Well-to-wake emission ²³	LNG	589-662 kg CO ₂ e/kwh	MDO / HFO
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LNG	589-662 kg CO ₂ e/kwh							
MDO / HFO	750 kg CO ₂ e/kwh / 742 kg CO ₂ e/kwh							
Hydrogen fuel	Depending on manufacturing method but considerably cleaner than all the above.							
	Conduct trialling of digital solutions to increase productivity at ports. For instance, digital solutions can be leveraged to automate business and customs processes and facilitate payments for port related services. 8	There is an opportunity for Network Rail and Highways England to integrate their traffic management systems so as to manage traffic volumes along the routes leading to the ports. 11						
Logistics and Freight	Encourage the adoption of cleaner fuels (e.g. BEV/FCEVs) among HGV operators 12	Develop live rail scheduling system or Connected Driver Advisory System (CDAS) to enable signallers and drivers to determine whether they are ahead or behind schedule. This will allow drivers to make more use of automated driving functions and minimise harsh braking or acceleration. 17	Expand the coverage of electrified rail tracks e.g. route from Felixstowe to Nuneaton and Felixstowe towards Midlands – to enable greater use of electric locomotives and greener technology 21					
	Investment in trialling of new fuel technologies (e.g. bi-modal diesel-battery, hydrogen etc.) 13							
	Investment in an Innovation Hub for the trialling of new fuel and digital technologies 14	Open freight data platform (for both rail and road) which will allow freight operators to monitor location and capacity of each fleet. This will allow operators to optimise the capacity of each fleet 18	More charging or refuelling infrastructure for EVs and FCEVs in and around stations, ports etc. 22					
	Larger incentives from government for freight operators to purchase and use greener HGVs (an unaffordable option for many at the moment) 15							
	Changes to funding project criteria and stipulations allowing for longer trialling periods (> 12 months) for testing of new fuel technologies 16	Increased lobbying for regulatory / legislative changes, and effective policy-making, to encourage modal shift of freight from road to rail 19	Improvements to rail track infrastructure to increase capacity and reduce bottlenecks (mainly for London routes e.g. Barking but also others inc. Ely) 23					
		Investment in Regional Rail Freight Hubs – better connecting ports, depots, stations etc. 20	More two-track pathways to increase capacity for more freight trains to run (plus junction / signalling schemes) 24					
		Changes to timetabling to allow freight operators greater access to track routes (e.g. during non-peak times / overnight routes) 25						

Multi-sector and modal opportunity: Establish multi-modal transport hubs at key interchanges within the transport network so as to encourage travellers to make greater use of greener transport modes, which could likely include the use of multiple transport modes across a single journey (in a connected and integrated manner). 26

	Fuel Technology	Operational Efficiency	Infrastructure
Wind powered generators	<p>27 Harness the natural endowment in wind energy (unique to the East Coast Region) to decarbonise transport and the wider economy. The first step will be to map the renewable energy grid network against the strategic route network, rail network and economic centres in East of England to identify strategic locations for investment in refuelling depots/stations.</p>	<p>29 There is an opportunity to decarbonise the operational aspects of the transport network with renewable energy, such as:</p> <ul style="list-style-type: none"> • The running of train stations and bus interchanges • Train signals and electronic traffic signs • Renewable energy sources in buildings, sites, estates, stations etc (from windfarm energy) 	<p>30 More infrastructure is required to leverage wind as a source of renewables in the region by developing more on/off-shore wind generator sites.</p>
	<p>28 Invest in hydrogen manufacturing facilities to enable the generation of renewable energy in the form of green hydrogen (e.g. via water electrolysis)</p>		<p>31 Upon mapping the grid network against the transport network, extend the availability of renewable energy through expansion of the grid network supplied with renewables to cover a wider part of the region such as: key route network, train stations, refuelling depots, etc.</p>
	<p>32 Develop hydrogen storage, refuelling and distribution facility to 'export' surplus in renewable energy to other parts of the UK</p>		
<p>33 There is currently a large energy sector in the region and also extensive R&D capabilities (e.g. universities). There could therefore be an opportunity to develop a 'clean energy cluster', combining practical expertise of energy, transport and technology sectors, with R&D expertise of university / research sectors. This could create a great opportunity to form UK-leading partnerships and consortiums for bidding for funding of new testing / trialling of technologies (e.g. Innovate UK projects). Most recent indicators of private sector capabilities in zero emission mobility include Stagecoach East and Greater Cambridge Partnership's efforts in introducing electric buses to Greater Cambridge.</p>			
Road Passenger Vehicles	<p>34 Greater investment by OEMs in electric passenger vehicles and buses or a combination of dual-hybrid fuel technology (and provision of appropriate incentives for businesses and wider population to adopt these).</p>	<p>37 Encourage and incentivise the use of car-sharing and car-pooling platforms to make sure that each vehicle on the road is used to its optimal capacity.</p>	<p>41 Work with companies to explore new business models to make EV charging points more commercially viable and expand coverage in the region</p>
	<p>35 Development of a transition roadmap at a regional level for public and private road vehicles from diesel to cleaner forms of fuel: biofuel, electric plug-in, hydrogen, etc. This will help the market anticipate and adapt accordingly to the pace of change. The strategy should include measures that incentivise green vehicles and discourage the use of GHG emitting fuel.</p>	<p>38 An opportunity if not achieved at a national level, would be to work with DfT to develop a region-focused open data platform which allows road users to identify the closest, most suitable charging points.</p>	<p>42 Work with parking site operators to develop a travel and car parking demand forecasting model, mapped to parking assets to identify and prioritise sites for EV chargepoint deployment.</p>
	<p>36 Greater collaboration between local government and regional stakeholders, including OEMs/manufacturers to better understand and concentrate efforts on the region's core decarbonisation capabilities.</p>	<p>39 Changing the use of road/ land space to reduce the number of vehicles e.g. only allow people to drive cars up to a certain point in a city / town, after which they must switch to a greener form of transport (e.g. park and ride facilities).</p>	<p>43 Greater collaboration between local governments and land developers to refine land use policies and focus on providing green and active mobility infrastructure. This includes practices such as: ensuring new developments restrict number of individual car parking spaces and instead provide active mobility infrastructure (e.g. cycling track and parking spaces), and EV chargepoints.</p>
	<p>40 Work with local major employers/partnerships to develop a green travel to work strategy which considers workplace parking, remote working, etc.</p>		

	Fuel Technology	Operational Efficiency	Infrastructure
Public Transport and Active Travel	44 Explore fuel additives and engine modifications to increase fuel efficiency as a short term measure for buses, trains etc.	49 There is a significant opportunity to develop one or more Mobility-as-a-Service (MaaS) platforms for the region to incentivise alternative modes of transport and better integrate end-to-end journeys. The effectiveness of MaaS can be enhanced with :	54 Development of refuelling depots for electric / hydrogen buses
	45 Work with bus operators to pursue the trialling or use of electric and/or hydrogen buses (or dual-hybrid fuel technology, with or without diesel)		55 Creation of more dedicated bus lanes in cities / towns, key route network, major route network and potentially strategic route network.
	46 Work with train makers and operators to pursue the trialling or use of electric and/or hydrogen trains (or dual-hybrid fuel technology)	50 Greater investment in Digital Connectivity (4G / 5G) to encourage people to use modes of public transport as journey experience will be enhanced	56 More dedicated cycling tracks and lanes, and pedestrian paths to improve the safety of vulnerable road users
	47 Develop a regulatory sandbox for the trialling of new innovative mobility solutions (e.g. e-bikes)	51 Use Demand Responsive Transport (DRT) to reinstate previously cut bus services and increase services from / to rural areas to city centres	57 Strategic investment in, and positioning of, bike parking and e-bike charging sites to encourage uptake / ease of use and access
	48 Greater flexibility from Central Government for local authorities to use a small proportion of funding for revenue spending (e.g. Modal Shift Revenue Support). This will allow local governments to make more comprehensive planning and business cases for investments in alternative fuel.	52 Investment in additional, new modes of transport (e.g. light bus / rail service connecting North & South regions or A120 Rapid Transit Scheme)	58 Promote (health/cost-saving) benefits of active travel and provide (free/subsidised) training sessions.
Agriculture	59 Leverage existing and develop new waste-to-energy plants to convert agricultural waste back to energy	61 Adoption of automated tractors to deliver efficiencies in driving behaviour and resource allocation (e.g. seedling, sapling planting, fertilising, watering, and mass-harvesting).	62 In collaboration with other stakeholders in the agricultural sector, develop a full lifecycle design and strategy for a wider deployment of waste-to-energy plant as a means to supply energy to agricultural activities.
	60 Conversion from ICE tractors to electric, hydrogen or hybrid technology		63 In the long-run, develop a strategy to deliver even cleaner fuel alternatives to farms via hydrogen – this argument assumes that it is more expensive to extend the grid network to every remote corner within the region to enable EV charging.

6. Transport East Proposed Strategic Actions and Interventions

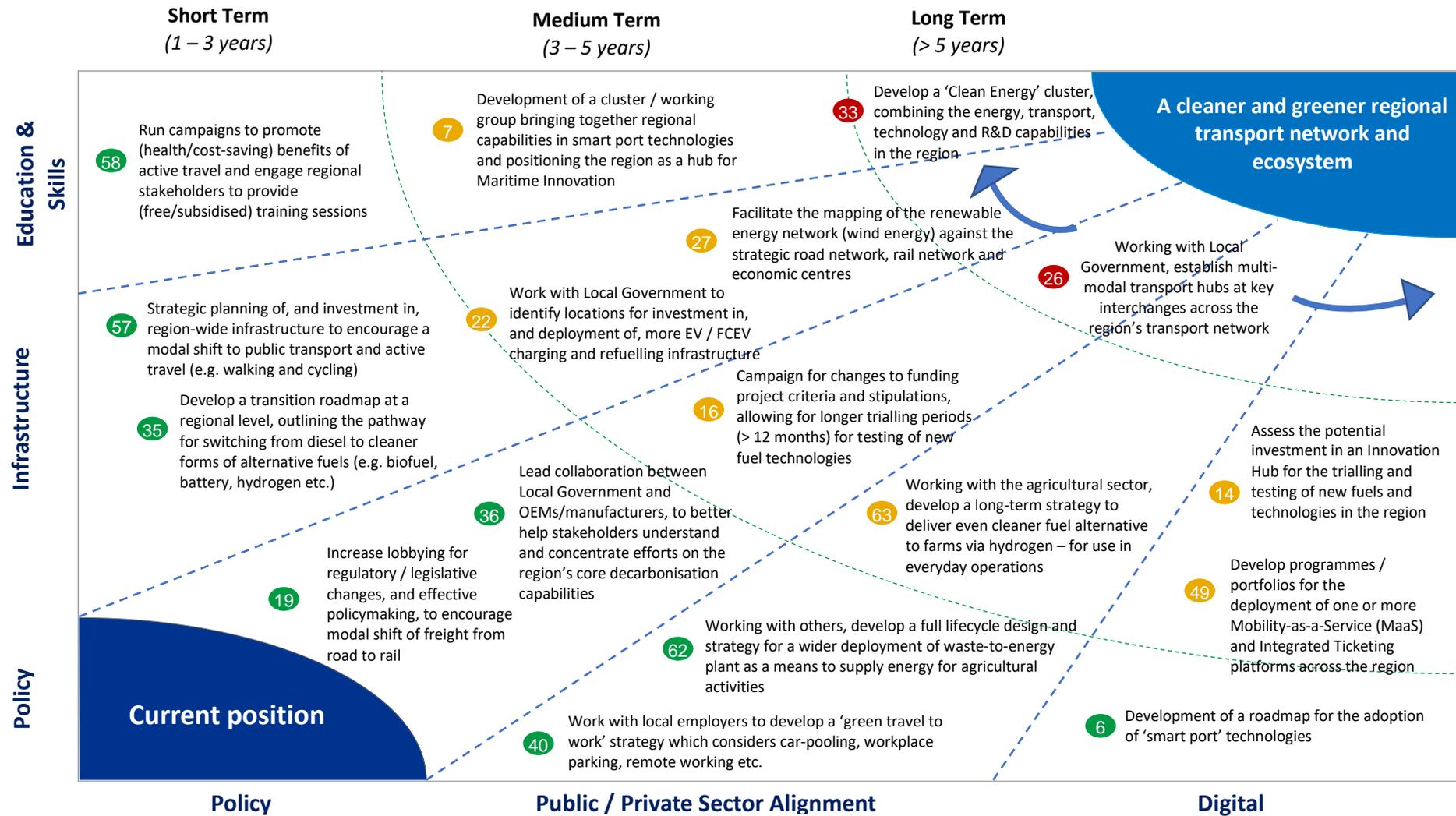
The role of Transport East will be crucial in achieving a reduction in carbon emissions across the region's transport network and ecosystem.

With this in mind, outlined below is a high-level mapping on the specific opportunities / actions / interventions which Transport East could lead and be directly responsible for, in the effort to achieve decarbonisation. The opportunities below have been selected from the long list of opportunities within Section 5 above.

These have been categorised against the following five 'types' of interventions, and mapped against a high-level timeline:



Figure 6.1: Transport East Strategic Actions & Interventions



6.1 Key Immediate Actions by Transport East

The table below specifies the immediate actions that Transport East can take with respect to the opportunities listed in Figure 6.1 above:

Ref	Category	Name of Opportunity	Key Immediate Actions
58	Education and Skills	Promote the benefits of active travel and provide relevant training sessions	Run campaigns to promote the benefits and incentives of active travel and engage regional stakeholders to provide training programmes at subsidised rates
57	Infrastructure	Region-wide infrastructure development to encourage a modal shift from private vehicle use to public transport and active travel	Conduct a 'demand assessment study' into popular journey routes to identify places for investment in (e-) cycling infrastructure
35		Develop a transition roadmap at a regional level, outlining the pathway for switching from diesel to cleaner forms of alternative fuels	Identify potential workable business models for green vehicles and infrastructure requirements to enable a complete switch from diesel by 2050
19	Policy	Increase lobbying for regulatory / legislative changes, and effective policy-making, to encourage modal shift of freight from road to rail	Strengthen the level and frequency of engagement and communications with central government, to strengthen the East of England's position as a leader in decarbonising transport
36		Lead collaboration between Local Government and OEMs/manufacturers, to better help stakeholders understand and concentrate efforts on the region's core decarbonisation capabilities	Identify potential Government funding sources and establish local consortia based in the East of England which can help the region demonstrate its capabilities in the decarbonisation of (road) transport
40	Public/ Private Sector Alignment	Work with local employers to develop a 'green travel to work' strategy which considers car-pooling, workplace parking, remote working etc.	Identify the largest employers in the region and car-sharing providers, who can work with local authorities to come up with practical ride-sharing initiatives, taking into account the impacts of Covid-19, the government's current / future guidance and the needs and preferences of employees
62		Working with others, develop a full lifecycle design and strategy for a wider deployment of waste-to-energy plant as a means to supply energy for agricultural activities	Identify and make initial contact with regional stakeholders (e.g. waste management companies, energy companies, OEMs and R&D/academic institutions) in the waste-to-energy space
6	Digital	Development of a roadmap for the adoption of 'smart port' technologies	Work together with ports to identify the challenges (e.g. business and customs processes) which can be addressed via digital solutions
7	Education and Skills	Development of a cluster / working group bringing together regional capabilities in smart port technologies	Establish local consortia based in East of England which can help the region

		and positioning the region as a hub for Maritime Innovation	demonstrate its capabilities in “Maritime Innovation”
22	Infrastructure	Work with Local Government to identify locations for investment in, and deployment of, more EV / FCEV charging and refuelling infrastructure	Conduct a forecast demand assessment for EV/FCEV and make a funding case to propose the trialling of the use of, and potential business models for, green vehicles/fuels
27		Facilitate the mapping of the renewable energy network (wind energy) against the strategic road network, rail network and economic centres	Establish a working group among transport service operators, road authorities, Highways England, Network Rail and National Grid to address the future supply of renewable energy for transport in the region
16	Policy	Campaign for changes to funding project criteria and stipulations, allowing for longer trialling periods (> 12 months) for testing of new fuel technologies	Collate the views of stakeholders in respect of current funding programme challenges and communicate these to central government with recommendations on potential solutions
63	Public / Private Sector Alignment	Working with the agricultural sector, develop a long-term strategy to deliver even cleaner fuel alternative to farms via hydrogen – for use in everyday operations	Identify and begin initial communications with relevant stakeholders in the agricultural sector to address the decarbonisation challenge in the use of heavy agricultural machinery and equipment
14	Digital	Assess the potential investment in an Innovation Hub for the trialling and testing of new fuels and technologies in the region	Engaged with stakeholders across the Innovation and R&D sectors in the region (including universities) to assess the case for investment in an Innovation Hub
49		Develop programmes / portfolios for the deployment of one or more Mobility-as-a-Service (MaaS) platforms and Integrated Ticketing across the region	Identify existing initiatives relevant to MaaS and Integrated Ticketing and begin planning on how these can be developed further into actual, deliverable programmes
33	Education and Skills	Develop a ‘Clean Energy’ cluster, combining the energy, transport, technology and R&D capabilities in the region	Build on opportunities #36, #6, #7 and #14 as pre-requisites to this – a well-developed regional capability is required to develop a ‘Clean Energy’ cluster that is capable of conducting an end-to-end carbon footprint assessment for new development projects
26	Infrastructure, Policy, Public/ Private Sector Alignment, Digital	Working with Local Government, establish multi-modal transport hubs at key interchanges across the region’s transport network	Identify “pain points” in the regional transport network which will benefit from a multi-modal transport hub, using existing research and data e.g. Transport Evidence Base

7. Conclusion and Next Steps

This Decarbonisation Evidence Base and Strategic Recommendations Report has:

- Set out the regional context (including the current 'as-is' position and example ongoing initiatives);
- Outlined the key strategic areas / opportunities for achieving decarbonisation; and
- Identified a list of potential opportunities / initiatives to undertake across the transport ecosystem in the region.

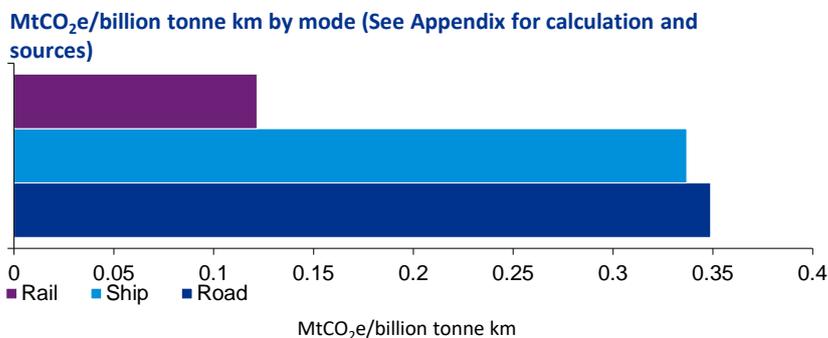
With the support of regional stakeholders, Transport East will:

- Build on the work conducted to date and included within this report, to further refine and develop some of the strategic interventions identified
- Begin mobilising some of the interventions identified over the coming months and develop specific portfolios of programmes (and associated business cases if required)
- Use the outputs of this report to inform the development of Transport East's wider Transport Strategy and activities to be undertaken across the transport network as a whole; and
- Ensure that any future transport activities and initiatives undertaken are performed with a parallel objective of reducing carbon emissions, to the extent possible.

The opportunities set out in this report are aligned with the UK Government's target of Net Zero by 2050. The recommendations and opportunities identified will therefore be updated as necessary, should targets change, in order to remain aligned with the latest decarbonisation developments.

8. Appendices

Appendix 1 – Freight Carbon Emissions of Rail vs Ship vs Road



The total tonne kilometres of goods moved in the UK (2017): 147 billion tonne kms⁷⁰

The share of tonne kilometres by mode in 2017: Road (78%), Water (13%), Rail (9%)⁷¹

Total emission by HGV+LDV: 40.005 MtCO₂e; Water: 6.44 MtCO₂e; Rail: 1.61 MtCO₂e⁷²

$$\begin{aligned} \text{MtCO}_2\text{e / billion tonne km by road freight} &= \frac{\text{Total road emission by HGV+LDV}}{\text{Total tonne kilometres moved on road}} = \frac{40.00}{78\% \cdot 147} \\ &= \mathbf{0.3489 \text{ MtCO}_2\text{e / billion tonne km}} \end{aligned}$$

$$\begin{aligned} \text{MtCO}_2\text{e / billion tonne km by water} &= \frac{\text{Total emission by shipping}}{\text{Total tonne kilometres moved on ship}} = \frac{6.44}{13\% \cdot 147} \\ &= \mathbf{0.3370 \text{ MtCO}_2\text{e / billion tonne km}} \end{aligned}$$

$$\begin{aligned} \text{MtCO}_2\text{e / billion tonne km by rail} &= \frac{\text{Total emission by rail}}{\text{Total tonne kilometres moved on rail}} = \frac{1.61}{9\% \cdot 147} \\ &= \mathbf{0.1217 \text{ MtCO}_2\text{e / billion tonne km}} \end{aligned}$$

Appendix 2 – Sources and References

No	Source
1	International Energy Agency
2	BEIS: Final UK greenhouse as emissions national statistics 1990-2018
3	Decarbonising Transport – Setting the Challenge
4	Low Carbon Vehicle Partnership: The Low Emission Van Guide
5	CNBC: News Article
6	Scania is part of Europe’s First Long Haul Electric Truck Trials
7	DAF Trucks’ First Electric Lorry Delivered to Supermarket Chain
8	GOV.UK: Major boost for bus services as PM outlines new vision for local transport
9	H2 Aberdeen
10	H2 Aberdeen
11	BEIS: Final UK greenhouse as emissions national statistics 1990-2018
12	TSGB0101: Passenger transport by mode from 1952
13	National Infrastructure Committee, Better Deliver: The Challenge for Freight
14	Maritime 2050: navigating the future
15	BBC: Climate Change: Should you fly, drive, or take the train?
16	TSGB0109: Usual method to travel to work by region of workplace
17	UK Reuters: China spearhead USD 300bn global drive to electrify cars
18	Decarbonisation Road-map: A Path To Net Zero - A plan to decarbonise UK aviation
19	VEH0131: Licensed plug-in cars, LGVs and quadricycles by local authority: United Kingdom
20	VEH0105: Licensed vehicles by body type and local authority: United Kingdom
21	Electric vehicle charging device statistics
22	The Guardian: Labour vows to electrify England’s entire bus fleet by 2030
23	GOV.UK: Britain’s first all-electric bus town to pave the way for green communities of the future.
24	RIA Electrification Cost Challenge Report
25	Bombardier signs €100m deal to make UK’s first battery-powered trains
26	InsideEVs: South Korea and Hyundai raised the bar for hydrogen fuel cell cars in 2019
27	Full Cell & Hydrogen Energy Association: Japan Fuel Cell Development

No	Source
28	Fuel Cell & Hydrogen Energy Association: South Korea Fuel Cell Development
29	China Daily: 2020 marks end of support for fuel cell cars
30	H2 Aberdeen
31	H2 Aberdeen
32	TfL: Twenty British-built zero-emission hydrogen buses will arrive next year
33	Hydrogen Roadmap Europe: A sustainable pathway for the European Energy Transition
34	Decarbonising Transport – Setting the Challenge
35	BBC: All abroad Britain's first hydrogen train
36	GOV.UK: Abellio announced to run East Midlands Railway franchise from August 2019
37	Hydrogen Diesel Injection in a Marine Environment
38	The Guardian: Never knowingly undersoiled – John Lewis trucks to run on cow manure
39	CNG Fuels: Refuelling Stations
40	Oxford Institute for Energy Studies: LNG Supply Chains and the Development of LNG as a Shipping Fuel in Northern Europe 2019
41	Low Carbon Vehicle Partnership: The Low Emission Van Guide
42	BEIS: UK local authority and regional carbon dioxide emissions national statistics: 2005-2017
43	Climate Emergency UK
44	Socio-economic profile for East of England
45	BEIS: Final UK greenhouse gas emissions national statistics 1990-2018
46	New Anglia LEP Board Meeting 26th February 2020
47	New-Anglia Local Industrial Strategy
48	BEIS: Renewable electricity by local authority
49	Road Freight Statistics (RFS0121): Goods lifted and goods moved by region and country of origin
50	East Anglian Daily Times: Freight companies want improvements to rail lines from Felixstowe
51	Interview with Felixstowe Port and DP World London Gateway
52	Transport East Regional Evidence base
53	New-Anglia Local Industrial Strategy
54	Plug-in battery-powered trucks coming to a road near you soon
55	Norwich could get 50 new buses if bid for transport cash millions succeeds

No	Source
56	The road to Zero
57	BBC - Stansted Airport expansion rejected by Uttlesford council
58	New emission-saving measures take off at Stansted Airport
59	Network Rail - New Trimley bridge provides safer access across railway
60	Vision for £500m light railway connecting 24 towns and villages is revealed
61	Financial Times: UK trade deficit hits widest in eight years
62	State of the Maritime Report 2019
63	VEH0105: Licensed vehicles by body type and local authority: United Kingdom
64	GOV.UK: Britain's first all-electric bus town to pave the way for green communities of the future.
65	TSGB0109: Usual method to travel to work by region of workplace
66	RIA Electrification Cost Challenge Report
67	VEH0131: Licensed plug-in cars, LGVs and quadricycles by local authority: United Kingdom
68	VEH0105: Licensed vehicles by body type and local authority: United Kingdom
69	DEFRA: Agricultural facts – commercial holdings at June 2018
70	Domestic Road Freight Statistics, United Kingdom 2017
71	NIC Report, Better Delivery: The Challenge for Freight
72	2017 UK greenhouse as emissions: final figures – statistical release
73	Oxford Institute for Energy Studies: LNG Supply Chains and the Development of LNG as a Shipping Fuel in Northern Europe 2019

Appendix 3 – Stakeholders consulted

	One-to-One Stakeholders		Roundtable Stakeholders
1	SEMLEP / UK Innovation Corridor	16	Energy Hub
2	Suffolk Chambers of Commerce	17	British Sugar
3	Success Essex Board	18	New Anglia LEP
4	Simarco International	19	Peel Ports
5	Network Rail	20	Deutsche Bahn
6	Network Rail (East Anglia)	21	First Group
7	C2C	22	Port of London Authority
8	East Midlands Trains	23	Highways England
9	Stagecoach	24	Road Haulage Association
10	Freightliner Group	25	Port of Tilbury London Limited
11	Hutchinson Group / Port of Felixstowe		Workshop Stakeholders
12	DP World	26	Transport East Officers & Members
13	London Strategic Land	27	Local Councillors and representatives from Local Authorities
14	Intu		
15	Liftshare		

Transport East Forum

Date: 22 July 2020
Item: Item 5b: COVID19 Recovery – The Role of Transport East
Report by: Andrew Summers, Strategic Director, Transport East
Contact: Andrew.summers@suffolk.gov.uk

Purpose

This report and appendix sets out Transport East's work programme to support COVID-19 recovery.

Recommendations

Note the attached Transport East work programme and provide comment.

1. Introduction

1.1 The COVID-19 crisis has significantly impacted on strategic transport in the East of England:

- The need for social distancing has reduced the capacity of the public transport network, and will severely impact school transport in September 2020
- Having reduced during lockdown, traffic levels are increasing significantly as the country returns to work, impacting on congestion and air quality in our urban areas
- The Government has promoted a large-scale reallocation of road space to temporary walking and cycling facilities, and local authorities are accelerating delivery
- New ways of working and living were established during lockdown, some of which will have lasting changes to the way people travel
- The Government's public health messaging has recently focused on 'get fit to fight COVID' – our transport policies can support that, particularly via Active Travel.

1.2 Local authorities have asked for Transport East's support to respond to the strategic transport impacts of these challenges. The Transport East partnership has subsequently established two sub-groups for (i) **passenger transport** and (ii) **active travel** to deliver outputs to support the region. Both sub-groups have formed and established clear work programmes and actions.

2. Transport-East Sub-groups and work programme

2.1 The sub-groups, chaired by Transport East, are focusing their work on the following themes on which taking action is most efficient at a sub-national scale:

- a) Communications and Advocacy*
- b) Technical Leadership and Support*
- c) Fostering a Partnership with LEPs, Government and other National Bodies*

2.2 The work programme has a strategic and national-facing focus, supporting the LEPs recovery plans, and the work of local authorities, to develop solutions in partnership with government and the rest of the country. The outputs will also directly influence our transport strategy.

2.3 The work programme is set out in the appendix.

3. Summary

3.1 The Forum is requested to note the appendix and comment on the work programme

Appendix: Transport East COVID-19 Work Programme

Supporting the region's recovery
through a strategic partnership

22 July 2020

Andrew Summers
Strategic Director
Transport East



Purpose of this appendix:

To provide details of Transport East partnership work programme on active travel and passenger transport to aid the transport response to the region's COVID-19 recovery

Contents:

1. Context *(slide 3)*

2. Proposal – A three-point plan: *(slide 4)*

Transport East Sub-groups *(slide 5)*

(a) Communications and advocacy *(slide 6)*

(b) Technical leadership and support *(slide 7)*

(c) Partnerships with LEPs, government and other national bodies *(slide 8)*

3. Next Steps *(slide 9)*

Context:

- Local authorities, transport operators and businesses face significant transport challenges as the lockdown restrictions are lifted over the coming months.
- The need for social distancing has reduced the capacity of the public transport network. Alongside this, traffic levels are increasing significantly as the country returns to work, impacting on congestion and air quality in our urban areas.
- To aid safe social distancing, and lock-in the air quality, congestion-reduction and physical activity benefits experienced during lockdown, the Government has **promoted a large-scale reallocation of road space to temporary walking and cycling facilities.**
- The DfT has allocated **£250m** in the short term to local authorities to support temporary measures, alongside a longer-term fund of **£2bn** for walking and cycling improvements. The DfT has also issued **statutory guidance to local authorities**, applicable immediately, to reallocate road space. Some authorities in the Transport East STB region have started to introduce temporary measures.
- The government has also issued guidance for **passenger transport operators** to maintain social distancing measures. This has created **significant challenges** for operators and severely limit services and capacity – impacting on **communities and individuals** who rely on buses and trains. **School transport** will be particularly challenging when schools return in September 2020.
- The emerging findings of the Transport East Carbon Study (KPMG) are demonstrating significant desire amongst local partners for low-carbon transport solutions to support the region out of lockdown and beyond.
- The Transport East partnership has identified three areas of pan-authority collaboration for both active travel and passenger transport: **(i) Communications, (ii) Technical support, (iii) building partnerships beyond the region with DfT, other STBs and national bodies**
- We have established **two COVID-19 sub-groups for Passenger Transport and Active Travel**, to deliver on the three areas.



Transport East COVID-19 recovery work programme

Aim: Develop a partnership approach to tackling COVID-19 recovery challenges across the Transport East region, specifically related to **passenger transport** and **active travel**

Proposed objectives:

- To support our residents to continue to experience the positive transport-related impacts of lockdown (improved air quality, more physical activity, reduced congestion), and embed positive changes for the long term (aligned to our forthcoming Transport East strategy).
- To help local authorities and partners to tackle shared problems, and share active travel / bus best practice across the region
- To support our businesses and local communities to get back to work and other everyday activities, whilst observing social distancing
- To develop a better long-term relationship between the region, national government and other bodies on active travel / passenger transport, COVID-19 economic recovery and carbon reduction

Theme	Outcomes
a) Communications <i>(slide 6)</i>	<ul style="list-style-type: none">• Listen and support: Understand the challenges of residents, operators and businesses in the region, and monitor regional levels of active travel and passenger transport usage• Promote, lobby and advocate: Promote active travel and support the PT industry to aid COVID-19 recovery, demonstrating joint local authority leadership and collaboration.
b) Technical support <i>(slide 7)</i>	<ul style="list-style-type: none">• Encourage knowledge sharing amongst local authorities and delivery partners to make the case, plan, deliver and monitor the impacts of projects. Commission joint work where needed to tackle joint challenges
c) Fostering effective partnerships <i>(slide 8)</i>	<ul style="list-style-type: none">• Strengthen relationship between the Transport East members, government and other national partners through collaboration on active travel

Transport East COVID-19 groups

- Transport East has established two strategic COVID-19 transport working groups for **passenger transport** and **active travel**
- The groups have each developed a work programme, to understand strategic challenges, share knowledge and experience, and develop new proposals for strategic delivery of sustainable transport post COVID-19

Passenger Transport Group



Key challenges

- Passenger transport capacity is significantly reduced under national social distancing guidance
- Transport operators are facing extreme financial difficulties
- School travel will be extremely difficult to deliver in September 2020

Aims of the group

- In the **short term**, influence government guidance and policies, and share expertise, to tackle immediate issues
- In the long term, develop **new models** for delivery of passenger transport in 'regions like ours', influencing national partners
- Establish the East as a 'leader' in national thinking on this agenda

Membership

Andrew Summers (Transport East)
Adam Thorp (EELGA)
Helen Morris (Essex CC)
Nicki Park (Norfolk CC)
Howard Davies (South East LEP)

Suzanne Buck /Tracey Vobe (Suffolk CC)
Davinia Farthing (Southend BC)
John Pope (Thurrock BC)
Laura Waters (New Anglia LEP)
GROUP HAS MET THREE TIMES

Active Travel Group



Key challenges

- There is an opportunity to lock-in the benefits of the lockdown arising from increased active travel, capitalising on emergency funding
- We need to maximise synergies with passenger transport and business, minimising conflicts between different modes

Aims of the group

- In the **short term**, we need to facilitate delivery of tranche 1 funding, sharing knowledge and capturing impacts and lessons learned
- Other regions secured greater funding than the East. In the **medium term** we need an 'East version' of Active Travel, make the case for it, and ensure we get a greater share of the £2bn tranche 2 funding

Membership

Andrew Summers (Transport East)
Adam Thorp (EELGA)
Julian Sanchez (Essex CC)
Mike Auger (Norfolk CC)
Howard Davies (South East LEP)

Carl Ashton / Sharon Payne (Suffolk CC)
Ashley Dalton / Neil Hoskins (Southend BC)
Navtej Tung (Thurrock BC)
Laura Waters (New Anglia LEP)
GROUP HAS MET TWO TIMES

(Theme A) Communications:

Listen and support: Understand the needs of residents and businesses in the region, and monitor the transport impacts of COVID-19 recovery

Promote and advocate: Promote the delivery of active travel within the region to aid COVID-19 recovery, demonstrating joint local authority leadership and collaboration.

Passenger Transport Group

Agreed Actions

Communicate to government on national policies that we want to influence, change or make permanent (e.g. on national school travel guidance). Progress includes:

- ✓ Essex County Council sent letter to Secretary of State to set out issues relating to social distancing guidance
- ✓ Transport East written to Department for Transport and Department for Education on key requirements needed in the next iteration of the school travel guidance
- ✓ Department for Transport invited to Transport East sub-group meetings to ensure lines of communication established

Active Travel Group

Agreed Actions

Understand the ongoing public demand and attitudes to active travel and passenger transport, and support local authorities to make the 'make the case' for active travel and passenger transport. Actions agreed include:

- ✓ Initiate pan-regional work to understand the expectations of the public and businesses for active travel, and develop an evidence hub for 'making the case' for Active Travel with a 'Eastern lens' (e.g. economic impacts on high streets, interchange with PT, tourism, rural areas and other local outcomes).
- ✓ Produce an online hub, and evidence to inform both Transport East strategy and local authority work

(Theme B) Technical Support:

Technical support: Provide support and knowledge sharing facilities to help local authorities and delivery partners to make the case, plan, deliver and monitor the impacts of projects.

Passenger Transport Group

Agreed Actions

Pool the expertise and resources to deliver joint outputs:

- ✓ Hold a practice sharing session on planning bus and active travel initiatives in tandem to reduce conflict and identify synergies (potentially inviting expertise from elsewhere, for example TfL).
- ✓ Develop a study/proposal for the future of Passenger Transport in 'regions like ours'. To focus on the range of issues we face, both in the short term and more strategically into the long term. The product would be an evidence-based set of options and proposals would directly inform local authorities responses and the Transport East Transport Strategy, as well as developing a partnership with DfT to set out options for the future.
- ✓ Take a leading role in co-ordinating with other similar rural / semi-urban regions across England.

Active Travel Group

Agreed Actions

Pool the expertise and resources to deliver joint outputs:

- ✓ Support local authorities with pan-regional activity on shared challenges, including messaging, community co-creation, and active travel planning best practice. Product would be a series of meetings and workshops to support delivery of active travel in our region (in collaboration with Modeshift organisation and experts from within the region and elsewhere).
- ✓ Develop a pan-regional approach to supporting future bids to DfT (including Tranche 2). The product would be a new proposal, working with DfT, to scope out 'our version' of active travel, to achieve the national goals in the context of rural, semi-urban, multi-centred regions such as the East (compared to large urban areas, on which national funding is currently focused)

(Theme C) Fostering effective partnerships:

Partnership with government and other national bodies: Strengthen relationship between the Transport East members, government and other national partners through collaboration on active travel and passenger transport

a) Partnership collaboration with LEPs and Business Groups

Work with LEPs, Chambers of Commerce and local growth partnerships to ensure Transport East is supporting LEP recovery plans, helping local businesses and employers to get back to work:

- ✓ Understand the collective impact of COVID-19 on the transport industry and operators across the region (e.g. ports, airports, passenger transport, freight and logistics), and the potential role of the Transport East Strategy in supporting these in future
- ✓ Support the development of specific activities, including events for businesses on travel

b) Partnership collaboration with government

Develop partnership with government to ensure better delivery of active travel and passenger transport in the region.

- ✓ Transport East sub-groups to help act as a single point of contact to communicate regional 'lessons learned' and progress back to DfT and government
- ✓ Transport East to invite DfT to participate in regional events on active travel and PT

c) Partnership with other English STBs

Share knowledge and lessons across the wider England Sub-National Transport Body network:

- ✓ Transport East to collate activity across the national STB network and feed back to the partnership
- ✓ Transport East to take the lead on rural transport within the national STB network, starting with hosting a national STB workshop on 24th July

Next Steps

Since June 2020, two sub-groups have been formed and identified their work programmes as set out in this document.

The next steps are to:

- Secure input from Transport Forum today on the proposed work programme, and continue to deliver the key actions
- Transport East to present at national STB forum on 24th July, leading a work programme on rural transport
- Ensure the core outputs and proposals directly support local authorities, and input into our work programme, including :
 - Transport Strategy
 - Interim Investment and Delivery Plan
 - Communications Plan

If you are interested in becoming a member of one of the sub-groups, please contact: Adam.Thorp@eelga.gov.uk and Andrew.Summers@Suffolk.gov.uk

Transport East Forum

Date: 22 July 2020
Item: Item 5c: Transport Strategy Project Plan
Report by: Andrew Summers, Strategic Director, Transport East
 Adam Thorp, Policy and Programme Manager, EELGA
Contact: Adam.thorp@eelga.gov.uk

Purpose

This report explains why our partnership needs a Transport Strategy, and proposes a work programme to complete it.

Recommendations

Transport East Forum Members are asked to endorse the proposed approach to completing the Transport Strategy

1. Introduction

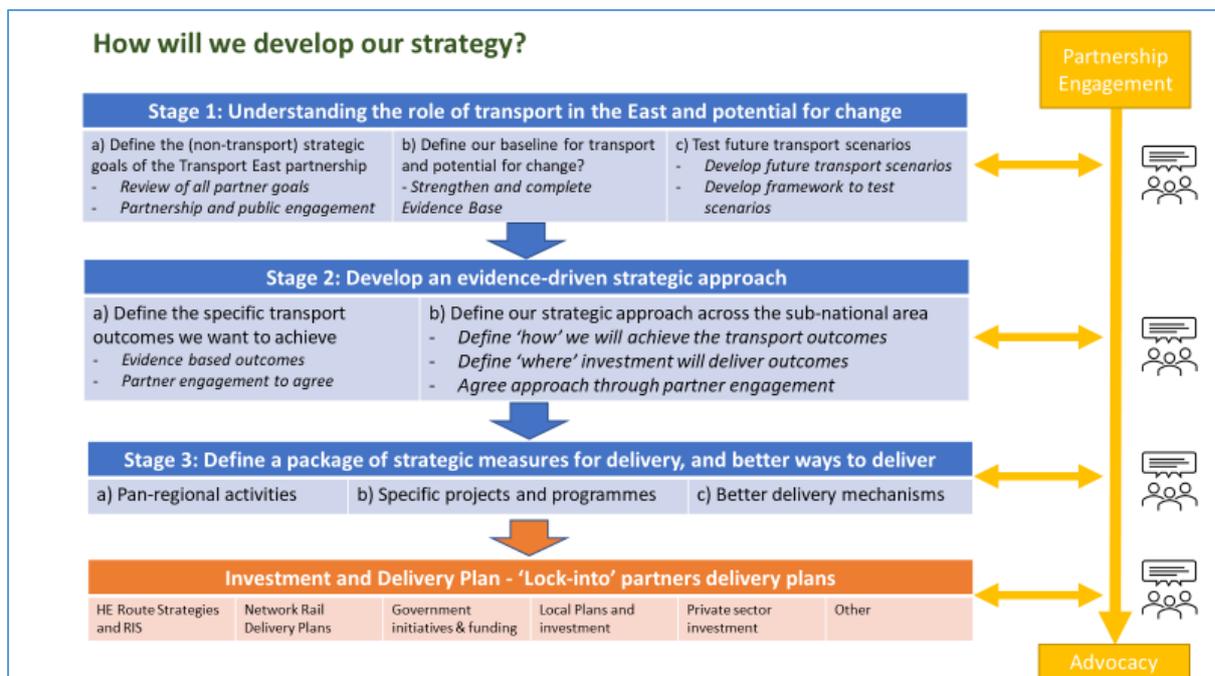
- 1.1 The 100-day plan sets out a requirement for Transport East to produce ***“an ambitious, focused and coherent Transport Strategy, based on robust evidence, fully reflecting the unique ambitions of local partners and aligned to national goals”***
- 1.2 Our inaugural Transport East strategy, unique to our region and setting our ambition to 2050, will articulate a compelling case for investment and strategic approach that underpins our future transport investment. The strategy will define our partnership’s single voice, leading to one set of priorities, locked into delivery plans, to achieve better outcomes for our region.

Figure 1: The role of our Transport Strategy



- 1.3 All other six Sub-National Transport Bodies (STBs) are developing, or have completed their sub-national strategies. An evidence-based strategy, with a framework for investment and delivery, is fundamental for regions to attract government and private sector support.
- 1.4 There are significant advantages and opportunities of initiating our strategy now. Transport East will adopt the best practice and lessons learned from the other STBs, and devise the first sub-national transport strategy in England developed in the post-COVID19 world. This strategy will be grounded in the new global reality, supporting both (a) our **short-term economic recovery from COVID19** and (b) our **unique long term goals to 2050**.
- 1.5 The audience for the strategy will be wide-ranging. It will provide:
- Confidence to national decision-makers and delivery bodies to invest here: including Government, transport delivery agencies and private sector investors
 - Clarity and co-ordination for local and regional partners: including local authorities, community groups, businesses, transport operators and the general public
- 1.6 We are not starting from scratch. Our partners already have the building blocks of a strategy:
- ✓ The Transport East partnership has already established three core strategic priorities: (i) Global Gateways; (ii) Multi-centred growth; and (iii) Energised coastal areas;
 - ✓ Within the region, local partners have already established a range of local strategies, priorities and proposals to support economic, social and environmental goals;
 - ✓ De-carbonisation is emerging as a national and local priority, with DfT's Decarbonisation Consultation now live, and Transport East producing its own carbon evidence base;
 - ✓ Transport East has already produced an initial regional transport evidence base in 2019, with a focus on road and rail.
 - ✓ The government has additional national goals, including housing and economic growth (including 'levelling up' and COVID-19 recovery)
- 1.7 Our proposed programme of work will strengthen this evidence base and clarify our ambitions and goals, setting out a transport approach from now to 2050 that is fully owned and endorsed by Transport East's partners. To scope out our methodology, a TESOG workshop was held on 10th June, resulting in a three-stage process proposed in Figure 2:

Figure 2: Methodology – The three-stage process



1.8 This reports explains the **three technical stages** and our **Engagement Plan** in more detail, and sets out our governance and timescales. The method is based on best practice from across the UK, and tailored to our unique location and circumstances:

2. **Strategy Development Stage 1: *Understanding the role of Transport East and the Potential for Change***

2.1 Stage 1 will comprise three modules, answering three strategic questions:

A) **What do we want to achieve? (both short term recovery and to 2050)**

- We will research and collate the existing economic, social and environmental goals and outcomes that local and national partners have already set out in Local plans, Local Industrial Strategies and other documents throughout the region.
- Our early engagement with partners and the public will then shape these into **unique strategic goals** for our transport strategy.

B) **What is current situation and potential for change?**

- We need to **strengthen and complete our evidence base**, to ensure credibility and robustness. Investors in our region will need to understand why our proposals will deliver our outcomes, and we need to put forward a compelling case.
- The main evidence gaps include our understanding of the role of transport (both generally and specific modes – e.g. roads and rail) in ‘levelling up’, supporting coastal communities, unlocking the potential of our international gateways, and supporting our energy coast. These outcomes will be our unique selling points, and we need to be able to fully evidence transport’s contribution to them.

C) **What are our options?**

- We need to create a unique set of **potential future scenarios**, to understand the best approach for our region. This will allow us to test and define our preferred strategic approach in stage 2.

2.2 Partner and public engagement will be vital throughout stage 1 of strategy development to ensure that Transport East’s thinking is informed at an early stage by a wide range of partners, businesses and communities (see section 5 below for **Engagement Plan**).

2.3 We proposed that consultancy support is commissioned to support all three modules, with the Transport East programme team retaining oversight of the whole stage. The outcomes of stage 1 of strategy development will be drafted into a **stage 1 report** that is shared with the Transport East Forum for approval in Autumn 2020.

3. **Strategy Development Stage 2: *Developing an Evidence-driven Strategic Approach***

3.1 Stage 2 of strategy development will define transport-specific outcomes for the region with clear measures for success, and set a strategic approach to achieve them. This stage will answer two questions:

A) **What transport outcomes does our strategy need to achieve?**

- We will use the outputs of stage 1 to set and prioritise specific transport-related outcomes, goals and targets for our strategy. These could include transport’s specific contribution to carbon reductions, safety, connecting economies, supporting trade, as well as supporting goals such as mode shift.

B) **How will we deliver our outcomes? What is our strategic approach?**

- We will then define a unique strategic approach, taking the most effective elements of the scenarios to maximise delivery of the transport outcomes. This

will include both a thematic approach (i.e. **how** will we achieve our goals) and spatial (i.e. **where** will we need different types of measures).

- 3.2 As for stage 1, engagement is vital to ensure all partners are involved in development of the transport goals, and preferred strategic approach.

4. **Strategy Development Stage 3: A Package of Delivery Measures**

- 4.1 Stage 3 of strategy development translates our outcomes and approach into a set of delivery measures and interventions for Transport East. These will be presented in the form of an Investment and Delivery Plan, covering both post-COVID recovery and to 2050. This will include:

A) Pan-regional measures: This will establish a programme to tackle strategic challenges on a pan-regional scale. For example, this could include rural transport, roll-out of low-carbon vehicles, and other.

B) Specific projects, packages or programmes: on our strategic network and urban / rural areas, or national scale proposals that impact on our region.

C) Better delivery: Alongside what we want to deliver, we need to set out what else needs to change to improve delivery – be that devolution of funding, ways of working with partners or other mechanisms.

- 4.2 Whilst developing this package of delivery measures, it will be crucial to work closely with delivery agencies, including Highways England, Network Rail, DfT, transport and infrastructure operators and businesses to ensure close alignment with their delivery plans, and ensure our strategic transport priorities are 'locked in' them. We also propose to engage with a wide range of other partners across the region, to ensure the delivery measures capitalises on all strengths and opportunities and minimises weakness and threats.
- 4.3 Following completion of stages 2 and 3 of strategy development, a **first draft of the complete Transport Strategy** will be produced and shared with the Transport East Forum to seek approval to go into public consultation

5. **Partner and Public Engagement**

- 5.1 Our strategy will only be successful if it truly represents a single voice, and therefore, alongside the technical work, we will launch an **Strategy Engagement Programme**. It is essential that all our partners, businesses and communities, including those from harder to reach audiences, are given the opportunity to influence all three stages of strategy development. With a time horizon to 2050, this will be a strategy that unlocks economic and social opportunities for all people across the Transport East geography, inclusive of age, gender and ethnicity.

- 5.2 It is through this engagement programme that we also cultivate our single voice and future advocates. In order to achieve high-quality and wide-ranging partner engagement, it is proposed that specialist support is commissioned, to deploy best practice and innovative methods to reach diverse target audiences. Core activities and audiences would include:

- **Dedicated website** to host the engagement documentation and invite comments via online survey.
- Using opportunities to engage **MPs**, such as the All Party Parliamentary Group for the East of England, and further events
- **Focused meetings** with national, regional and local partners representing interests including transport, business, environmental and planning

- **Business** roundtables throughout the region to establish what business leaders need from the transport system
- Establishing a ‘transport influencers group’ to ensure we understand the specific needs and requirements **of different transport** users, for example those with **disabilities** or on **low incomes**.
- **Social media and web-based** activity, to gather views of the general public
- Securing the views of **future generations** with **young people engaged** via youth parliaments, competitions and other channels
- Holding ‘**walking conferences**’ where members of Transport East will visit locations within the region and meet local community and business representatives about their expectations for the transport system

5.3 Transport East is recruiting a Communications Manager who would lead on this engagement programme. In addition, it is proposed that up to 30 per cent of the Transport East budget is allocated for the engagement programme in order to achieve the best possible input across all three stages, and ensure we are developing our future team of regional advocates through this process.

6. Governance and resourcing

6.1 This will be a resource intensive programme, managed by a sub-group of TESOG as follows:

- Programme Director: Andrew Summers (TE Strategic Director)
- Programme Manager: Adam Thorp (EELGA contracted support)
- TESOG Steering sub-group: David Cumming (Norfolk), Graeme Mateer (Suffolk), Alastair Southgate (Essex)
- Advisors: LEPs, Highways England, Network Rail, DfT

6.2 As set out in figure 2, the programme would be split into 3 stages, each comprised of modules. Transport East would retain oversight of the stages. Within the stages, some of those modules would be led by members of TESOG, and some of those modules would be completed by specialist consultancy support. All consultancy support would be procured via the programme manager.

6.3 There is a baseline budget allocation in this financial year of c.£100,000 to cover all costs. At time of writing, we are awaiting news of further funding contributions from other bodies. We have designed the brief to enable us to quickly increase the scope of the work to enhance the outputs, if further funding was forthcoming.

7. Statutory processes

7.1 To ensure legal and statutory robustness, stage 1 would also include a scoping of an **Integrated Sustainability Appraisal**.

7.2 The Cities and Devolution Act which created Sub-national Transport Bodies stipulates that in preparing a Transport Strategy, an STB must carry out a formal public consultation. Following the completion of stage 3, and in addition to the significant early engagement programme, it is expected that a **formal public consultation** would be held, potentially over a period of 8-12 weeks. The exact timings of this would depend on successful completion of stages 1 to 3, and would need to avoid any purdah period for 2021 local elections.

8. Timescales

8.1 Experience from other STBs suggest that the pre-public consultation process would take approximately six months. The timescale depends entirely on the scale of the funding available from external sources (see agenda item 3). If external STB funding is forthcoming

from DfT, we expect the strategy development to take the full financial year due to enhanced scope. If not, then we would expect to complete it sooner, with reduced scope.

- 8.2 We would expect to launch the public consultation on the draft strategy in early 2021, with the final strategy subsequently launched following that consultation.
- 8.3 Whilst we develop the strategy, we do not want lose out on short-term opportunities to progress and deliver existing priorities throughout the strategy development period. Transport East is producing an interim Investment and Delivery Plan (see agenda item 6), which sets out our existing programme for delivery within the partnership.

9. Next Steps

9.1 **Members are requested to comment on these proposals today, and endorse the overall approach.**

9.2 Following today's meeting, we will:

- Update the proposal based on comments received today
- Confirm additional funding from potential contributors
- Initiate project plan, including procurement of consultancy support required
- Report back to Forum members on progress, prior to initiation of the Engagement Plan.

Transport East Forum

Date: 22 July 2020
Item: Item 6: Draft Investment and Delivery Plan
Report by: Andrew Summers, Strategic Director, Transport East
Contact: Andrew.summers@suffolk.gov.uk

Purpose

- This report introduces a draft version of the *Investment and Delivery Plan* (IDP).
- The draft IDP provides a snapshot of the investment programme across our sub-national area
- It only contains strategic projects that are currently being promoted publicly across all five transport authorities, and presents them as an aggregated sub-national programme. It is not a prioritised list.
- It is intended to aid understanding across the partnership of our members' strategic transport projects, and directly support our 'single voice' communications
- It will be updated to include further proposals arising from our strategy development later this year.

Recommendations

Forum members are requested to review the attached draft *Investment and Delivery Plan* and provide comments for inclusion in the final version.

1. Introduction

- 1.1 As identified in item 5, Transport East will be initiating its Transport Strategy this summer to determine our long term goals, strategic approach and priorities to 2050.
- 1.2 In advance of that process completing later this year, Transport East does not have a single document which sets out the existing sub-national programme of strategic transport projects and pan-regional packages currently being promoted by our members. Most other STBs across England have this in place.
- 1.3 The purpose of this document is to compile and present the partnership's existing strategic investment programme as it currently stands. Our ability to speak as a 'Single Voice' is reliant on all partners having a shared understanding of the 'bigger picture' across the whole region, and the trigger points for each project at which collective Transport East communications and advocacy could support the progression of each project to the next phase.
- 1.4 The attached draft Investment and Delivery Plan is designed to address that short-term need by:
 - Providing a snapshot of our existing (circa 30) strategic transport investment projects already being promoted across the region
 - Identifying for each of those, their current stage of development and the next steps for the Transport East partnership to help progress them
 - Providing a broader narrative for projects in the context of strategic corridors and related to Transport East's three strategic outcomes (Multi-centred growth, International Gateways, and Energised Coastal Areas), as well as other outcomes including housing growth, supporting the economy and decarbonisation.
 - Providing a 'proactive' starting point for any forthcoming request for Sub-National Transport Bodies to set out transport investment opportunities in their area.

2. Development of the Interim Investment Delivery Plan (IIDP)

- 2.1 The need for this draft document was identified via the 100-day plan. This draft IDP has been developed for Transport East by *Active Planning*, appointed on behalf of Transport East via EEGLA's Talent Bank. The structure of the document was initially scoped by a TESOG workshop in June, and the development of this first draft has subsequently been overseen by TESOG officers from all our transport authorities and both LEPs.
- 2.2 All five transport authorities have submitted their existing major strategic transport projects and delivery details for inclusion in the document. The plan also includes local authority priorities for delivery by Network Rail and Highways England. The projects have been re-presented along seven strategic corridors across our sub-national area, to start to move our thinking away from county boundary constraints, and genuinely move towards a single pan-regional transport network, connected to and supporting the rest of the UK economy.
- 2.3 In addition to the corridors, we have identified smaller scale investment currently being promoted by our transport authorities that across the region aggregate to significant strategic packages that Transport East would need to support over the next year, for example on buses, electric vehicle charging points, urban realm improvements, walking and cycling.
- 2.4 We have intentionally limited the number of projects to c.30, to ensure that only projects of a strategic scale are included. There are some projects along a corridor that have been aggregated together as part of a broader strategic package (e.g. on the A12 and A127).
- 2.5 Once agreed by this Forum, we will use the final document as our guide for the partnership to support communications activities over the next six months, in advance of completing our transport strategy which will contain a longer term Investment and Delivery Plan.
- 2.6 At this stage, the attached plan solely represents a 'bottom-up' compilation of existing projects being promoted and progressed by our constituent transport authorities within their established project pathways. It should be noted that this document does not prioritise those projects, nor is it a formal bid document or a strategy. Individual projects, and all statutory process such as impact assessments will continue to be progressed by the individual authorities.
- 2.7 When we complete our Transport Strategy later this year, it is intended that this document would evolve into a more comprehensive Investment and Delivery Plan, also incorporating 'top-down' proposals developed through the strategy development process.

3. Next Steps

- 3.1 The Forum is requested to note and comment on the draft IDP in the appendix, and its suitability for 'interim use' until we have completed the Transport Strategy.
- 3.2 Following this meeting, officers will update the draft IDP based on Forum member comments, and a final version will be circulated to Forum members for endorsement via email, and utilisation alongside our Communication Plan.

JULY 2020



Transport East

INVESTMENT AND DELIVERY PLAN



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A NEW DAWN FOR TRANSPORT IN THE EAST OF ENGLAND

Welcome to Transport East

Transport East is the Sub-national Transport Body (STB) for the east of England, a partnership of local authorities, Local Enterprise Partnerships, business groups, Network Rail and Highways England. We are tasked with delivering an ambitious and cohesive transport infrastructure strategy for the region supported by a strong Infrastructure Investment and Delivery Plan.

This document

This document collates our partners' existing strategic transport projects and sets out their role in delivering a world-class transport system, focused on seven strategic multi-modal corridors.

It sets out the contribution of our investment programme in boosting the East of England's already impressive economic role, taking full advantage of our growing economic hubs, our proximity to mainland Europe and the outstanding opportunity to deliver a world-leading green power revolution.

What this document does

In advance of our forthcoming strategy development, this Investment and Delivery Plan provides Transport East with a snapshot of the strategic investment programme across our region, guiding our partnership on where it should focus its 'single voice' communications and advocacy over the next six months. It sets out the next steps for each project and their role in supporting economic growth, the levelling up of our deprived communities and sustained growth for the future. We will keep it up to date with emerging proposals.

REASONS TO INVEST IN THE EAST

Our region includes fast-growing urban centres, thriving international ports and airports and the UK's Energised coastal communities. We have a thriving and diverse economy with particular strengths in international transport, renewable and low carbon energy production, agri-tech, food science and technology.

We anticipate substantial population and jobs growth, including major expansions of our coastal energy, major port activities and our towns in the coming years. All of this requires investment in updating and expanding our transport infrastructure to cater for increased demand, attract a strong workforce with the right skills and maintain efficient access to national and international markets.

The East of England is:

- **A place of rapid regional economic growth.** With an economy worth £71bn, the east plays an important role in the overall success of UK and is one of the fastest growing regions outside of London..
- **Creating multi-centred connectivity serving our high growth economic clusters.** Enhanced links between our fastest growing places and business clusters are enabling the area to function as a coherent economy and boosting productivity.
- **A gateway connecting the country to world markets:** With 13 ports, three international airports and proximity to the largest ports in mainland Europe, we are in the perfect place to deliver the UK economy's international ambitions. Connections to the rest of the world will be more important than ever, and early adoption of emerging technologies will be vital to keep us globally competitive. Better connected ports and airports help UK businesses thrive and boost the nation's economy through greater access to international markets and facilitate Foreign Direct Investment.
- **The home of energised coastal communities.** We are creating a reinvented, sustainable coast for the 21st century which delivers on our ambition to become the UK's foremost all-energy coast, as well as supporting a year-round, competitive visitor offer.

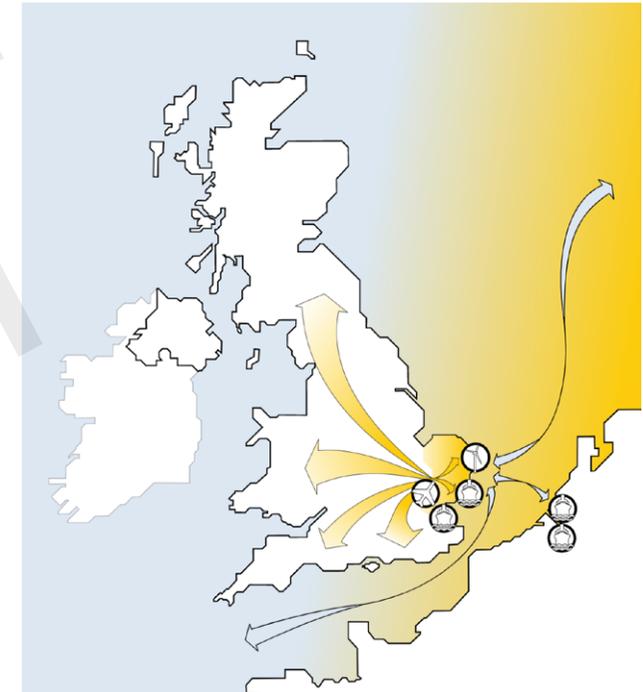


Figure 1: A region with national and international significance and outcomes

REASONS TO INVEST IN THE EAST

Core themes

Our Investment and Delivery Plan provides a strong framework for achieving better strategic transport packages in our towns and cities and along seven strategic corridors. Delivery across all modes, from active travel to buses, rail and road, will strengthen our £73bn contribution to the economy from our **Energised Coastal Communities, Multi-centred Growth** and **Global Gateways**.

Supporting Energised Coastal Communities

We need to unleash the potential of our energised coast, attracting investment of £50bn over 20 years in delivering energy projects of international standing, including major North Sea offshore wind power clusters off Great Yarmouth, Lowestoft and Tilbury Ports and doubling of capacity at Sizewell Nuclear Power Station.

Multi-Centred Growth

Our fastest-expanding areas include Harlow, Ipswich, Norwich, Chelmsford, Colchester, Southend-on-Sea and Basildon, with particular

strengths in motive technology, higher education, medicine, agri-technology, life sciences and engineering. As our area grows, so will our population, and to this end the projects in this plan will support several new settlements, together accommodating over 53,000 new homes over 50 years.



Global Gateways

Our region has a total of 13 ports and three international airports. Felixstowe handles 48% of Britain's containerised trade, welcoming over 3,000 ships each year from 700 ports worldwide. Tilbury has a throughput of 16m tonnes per annum with an estimated value of £8.7bn, making it the largest port on the Thames. DP World London Gateway Port incorporates the largest logistics park in Europe and the capacity to process 2.4m containers annually.

We have three airports, at London Stansted, London Southend and Norwich. London Stansted is the largest of those airports, handling over 24 million passengers annually and serving over 200 short and long-haul destinations worldwide. London Southend Airport has received permission to expand passenger throughput from 7,000 to 300,000 per annum. Norwich Airport has a regular connection to the international hub airport of Schipol, as well as providing an important base for offshore energy operations.

INVESTMENT AND DELIVERY PLAN

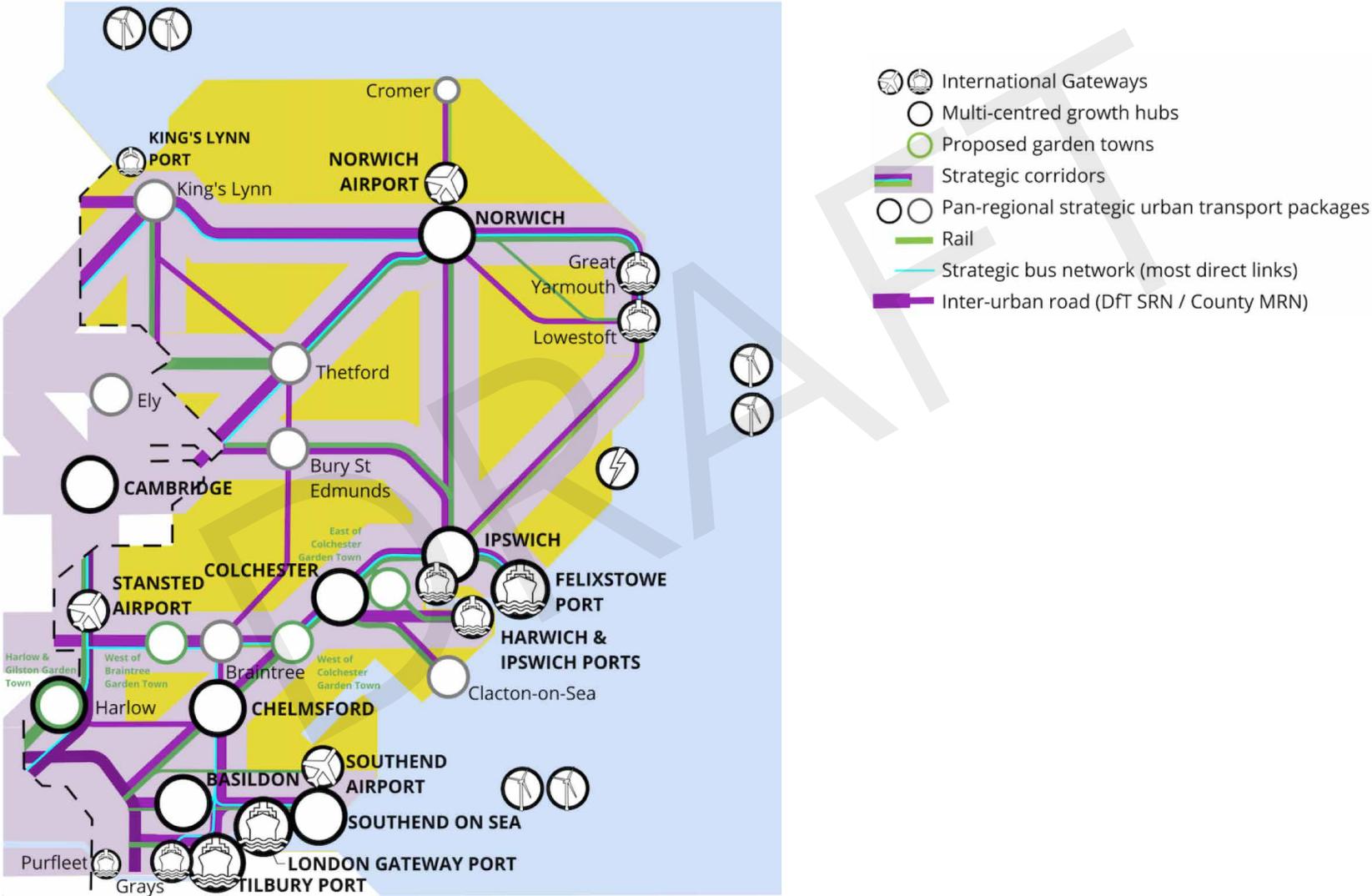


Figure 2a: Strategic rail and road corridors in the Transport East sub-national area

INVESTMENT AND DELIVERY PLAN

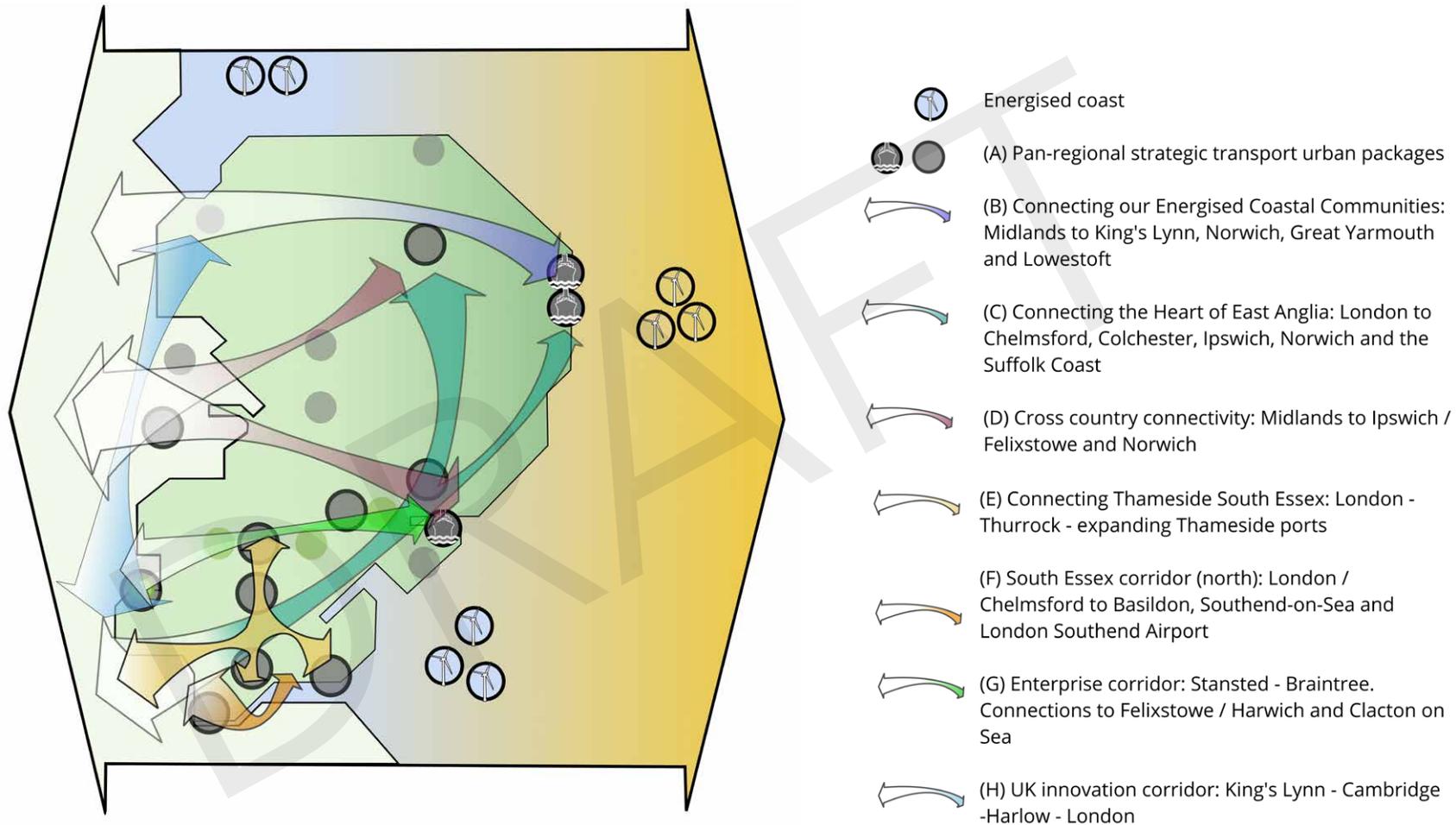


Figure 2b: Strategic transport packages and seven strategic corridors in context with our towns and cities, energy coast and gateways.



Pan-regional strategic urban packages and nationally-significant projects

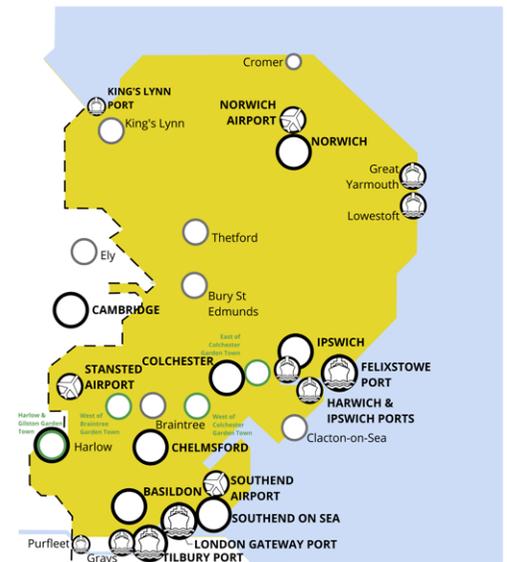
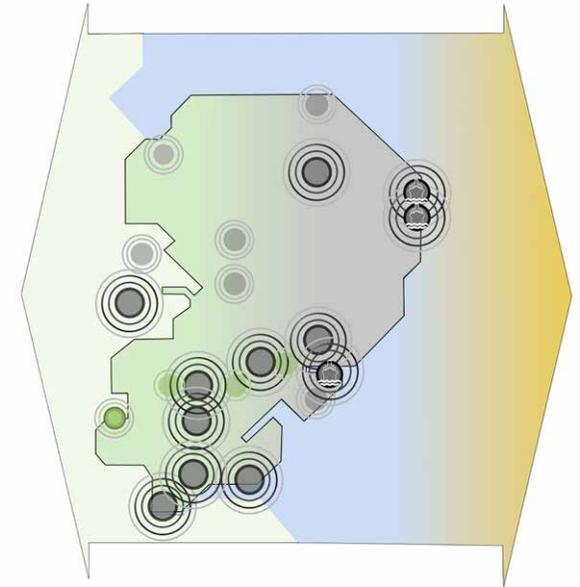
Local Transport Plan proposals for each of our towns and cities express a range of schemes that are designed to reduce congestion and improve air quality, producing positive environmental, health and economic impacts not only within those urban areas but also on the wider transport network. The COVID-19 pandemic has underlined the importance of making our urban areas welcoming to those who want to travel on foot, cycle and safe public transport, and we are already seeing intensified Government investment in active travel measures.

Transport East will be supporting local authorities at a strategic level to progress and accelerate these proposals, ensuring the collective strategic case for their delivery is clearly communicated and supported including:

- The roll out and expansion of local authorities' walking and cycling programmes, including infrastructure and behaviour change. Over the coming months, Transport East will support proposals seeking funding from the government's Transforming Cities Fund, Walking and Cycling Grant, and other sources.

- Support for local authority bus and passenger transport operations throughout the region, from bus priority infrastructure to supporting immediate operational challenges aligned to COVID-19. The Transport East partnership will help authorities tackle the immediate and long-term strategic issues on a regional scale
- The expansion of infrastructure to support the growth of Electric Vehicles including support local authority programmes to deliver charging points in key locations across the region.

As we emerge from the COVID-19 pandemic, and as part of developing the Transport East strategy and associated Infrastructure Development Plan, Transport East will support local authorities to rapidly develop comprehensive and fully integrated packages of measures to deliver the economic benefits of sustainable travel, including improved public spaces and access to town centres, healthy streets and reductions in ultra-short car journeys. This, in turn, will help to reduce car travel demand on the strategic road network so that it operates more efficiently and contributes to a strong recovery and subsequent growth.



Connecting our Energised Coastal Communities: Midlands – King’s Lynn – Norwich – Great Yarmouth

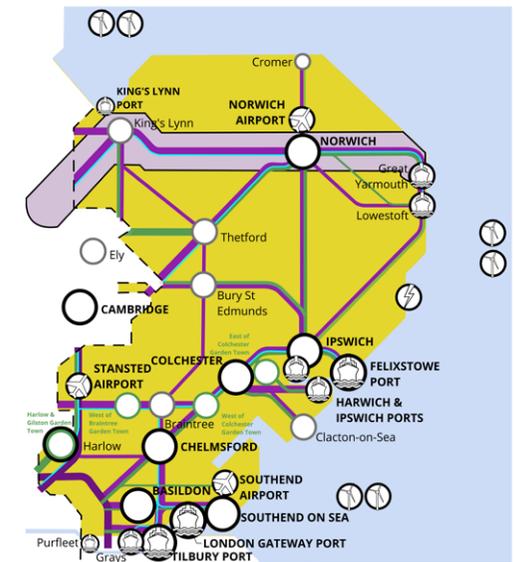
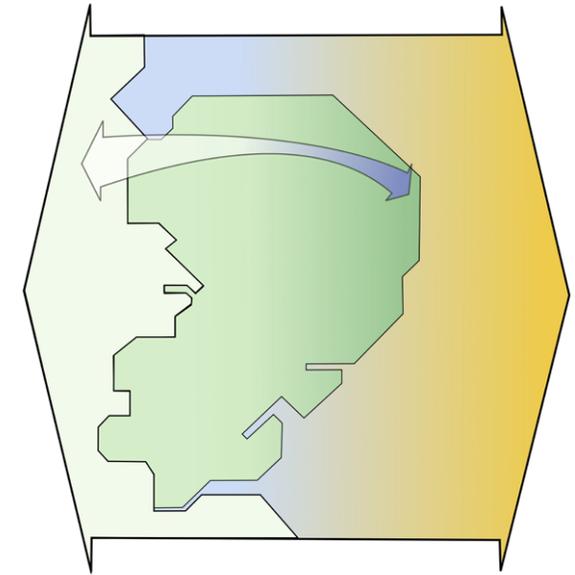
Dualling the remaining single-carriageway sections of the A47 will connect the Midlands with our **Energised coastal communities**, helping unlock over £50bn of inward investment over the next 20 years. This corridor connects to internationally significant offshore wind energy clusters at Great Yarmouth 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 are frequently blocked by congestion, 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 A47 corridor will support economic expansion, including the creation 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 route will support 125,000 new homes and 75,000 new jobs.

This proposal is a package of measures including:

- A47 Tilney to East Winch dualling.
- Norwich Western Link.
- Acle Straight Dualling.
- Great Yarmouth Third River Crossing.





Connecting the Heart of East Anglia: London – Chelmsford – Colchester – Ipswich – Norwich & Suffolk Coast

Our central spine 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 to the **energy coast** of East Suffolk and connects with our most important strategic corridors.

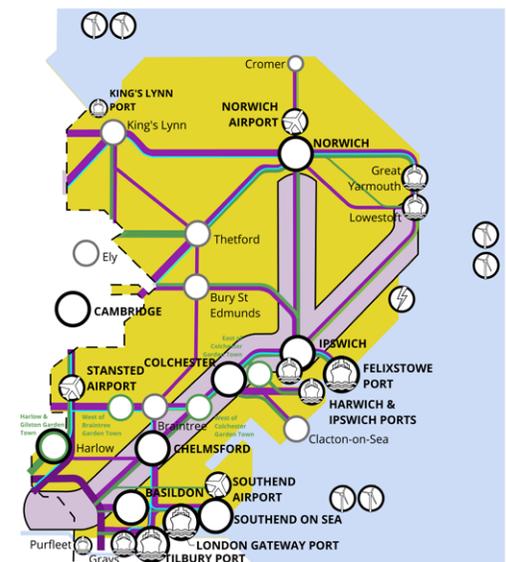
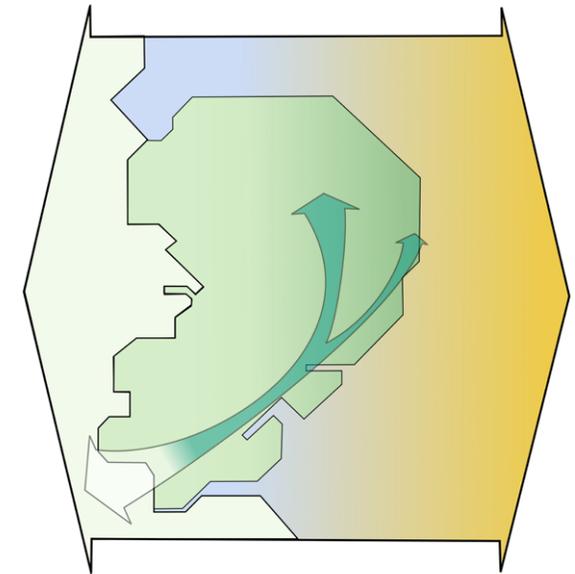
The GEML corridor is essential to the projected £4bn growth and delivery of 10,000 jobs in the region. Currently, even with new rolling stock, passenger and station capacity are inadequate, limiting prospects for modal shift. Haughley Junction is a major pinchpoint on the Felixstowe to Nuneaton freight corridor. Capacity enhancements including passing loops will be needed to enable higher line speeds and 90-minute Norwich to London journey times.

Similarly, the A12 carries over 100,000 vehicles per day and suffers congestion at key pinch points between and around its intersection with the M25 on the sections between the M25 and Colchester and at 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, including Chelmsford, Colchester, Ipswich and Norwich. The corridor will improve connections to the Energy Coast. It will also support the recovery the visitor economies of Norfolk and Suffolk which has suffered during the COVID-19 pandemic.

Strategic schemes include:

- GEML strategic package (improvements in London, Essex, Suffolk, Norfolk).
- A12 strategic package South (Colchester to M25).
- Chelmsford strategic package (NE bypass, Army and Navy, Beaulieu Park).
- A12 Strategic Package North (Ipswich to Suffolk Coast) including Woodbridge Bypass.
- Lowestoft Lake Lothing third crossing.
- Long Stratton Bypass.





Cross-country connectivity: Norwich and Ipswich/ Felixstowe - the Midlands and South-West

The two corridors include **Gateways** at Felixstowe and Ipswich Ports, Norwich Airport and **growing towns and cities** at Norwich, Thetford, Bury St Edmunds and Ipswich.

The Ipswich chord, completed in 2014, enabled the expansion of services between Felixstowe and the Midlands from just 28 trains per day in 2011 to 36 today. To complement this, we need further investment in what is already Britain's premier rail freight corridor, to rise to 60 by 2031 as part of a projected removal of 750,000 lorries from the road network by 2030.

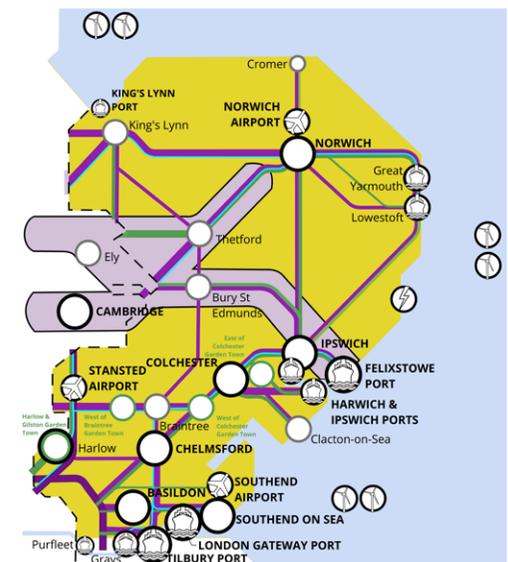
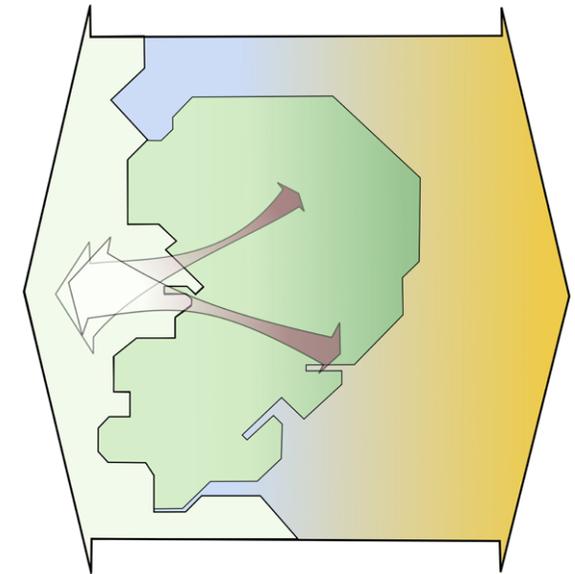
The Ely area and Haughley railway junctions are the main focus of investment, serving both of these strategic corridors. These essential junction capacity improvements, paired with double-tracking, electrification, crossings and traction power increases are vital components of this package.

Improvements to the A11 were completed in 2014 when the last single-carriageway stretch between Thetford and Barton Mills was dualled by Highways England. However, there is a need to address the remaining pinch point

at the Fiveways Junction to further unlock the benefits of this corridor. The A14 forms the road component of the UK's premier freight corridor and requires upgrading to expressway standard along its length. This includes addressing seven pinch-points, the most notable at Bury St Edmunds and Ipswich.

Strategic schemes include:

- East-west rail package (Cambridge to Norwich).
- East-west rail package (Cambridge to Ipswich).
- Felixstowe to Nuneaton rail freight package (Haughley and Ely Junctions, twin-tracking remaining single-track sections, and power increases).
- A11 Fiveways.
- A14/A12 Copdock.
- A14 package: A14/A142 junction (Newmarket), A14/A137 junction (Wherstead), A14/A1189 eastbound on-slip (Nacton Road).





Connecting Thameside South Essex corridor (south): London – Thurrock – expanding Thameside ports

Our South Essex (southern) corridor is a major location for distribution and economic growth, and existing proposals will unlock the further expansion of our **global gateways**.

London Gateway is one of the fastest growing ports in the world, shipping 2.4 million containers annually. The expanding port and ancillary logistics park, which is the size of 400 football pitches and the largest of its kind in Europe, has potential to directly and indirectly provide around 36,000 new jobs once fully developed. The Local Development Order applied to the logistics park allows accelerated planning permissions and rapid expansion of warehousing facilities, enabling new warehousing and distribution centres to be erected in just nine months.

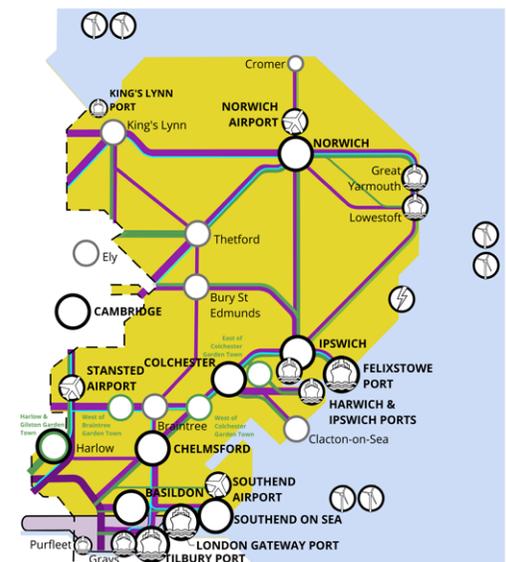
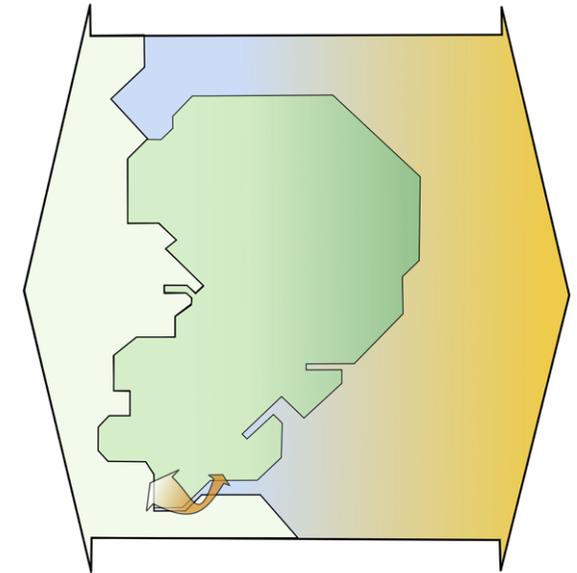
Tilbury Dock also has ambitious expansion proposals to redevelop the former Tilbury power station site, adding several hundred jobs to the existing 8,600FTE equivalent directly and indirectly employed.

However, expansion of this economic powerhouse is restrained by the capacity of the

rail and road network. The A13 carries 32,000 vehicles each way daily. Continued congestion and delays will affect network capacity and act as a brake on growth.

Strategic schemes include:

- Stanford-Le-Hope station (final approvals, funding and construction).
- Essex Thameside rail network study (passenger, freight).
- A13 widening (including A13/A1014 junction).
- A13/A126 east-facing slips.
- Tilbury Link Road.
- A13/A1014 junction improvements.
- A1306 improvements and bus priority.



South Essex corridor (north): London / Chelmsford – Basildon - Southend – Shoeburyness

Our South Essex (northern) corridor provides access to the most densely spaced settlements in the region, with the primary economic growth pole at Basildon. Investment in this area will unlock expansion of **growing towns and cities**, principally Southend-on-Sea and Basildon, and an increasingly important **International Gateway** at London Southend Airport.

Major high value expanding industries in the area include digital, creative and ICT sectors, vehicle automation and aerospace. London Southend Airport, which has approval to increase throughput from 7,000 passengers per annum to 300,000.

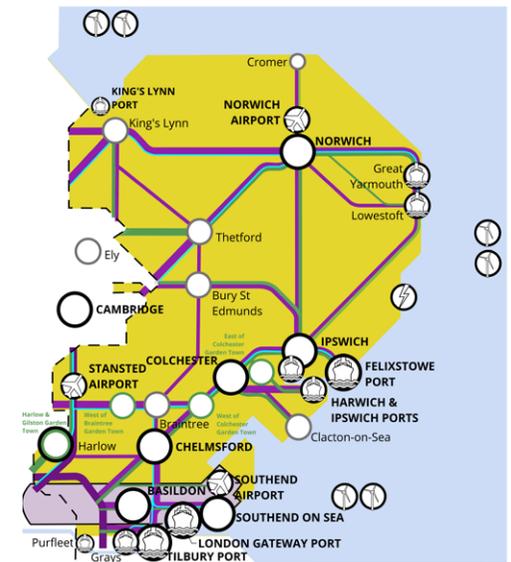
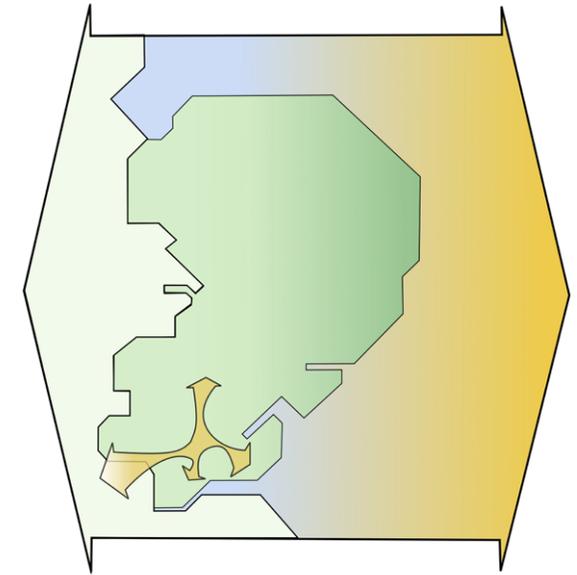
Basildon is a new town developed in the middle of the 20th Century. It is the largest economy in Essex with an economy worth £3.7bn and employing 97,000 people, with ambitious plans to redevelop its central area for the 21st Century. Southend-on-Sea is the second most popular day-visit destination in the country, with over three million day visitors, the majority of whom travel by car. Its economy provides some 62,000 jobs.

To cater for economic and population growth, investment in the passenger rail network is required, including train lengthening to 12 coaches, re-signalling to enable higher frequencies and consideration of additional freight paths to cater for port expansion and modal shift. A new station is approaching detailed design consent at Stanford-Le-Hope.

The South Essex corridors experience the worst traffic congestion in Essex, with a rising proportion of residents driving to work. The A127 carries 75,000 vehicles per day on average and up to 90,000 in peak periods, and the A1159 to Shoeburyness accommodates 30,000 vehicles daily

Strategic schemes include:

- Essex Thameside rail network study (passenger, freight)
- A127 strategic package of capacity and safety improvements.
- A127 Outer Relief Road – Southend and Rochford.
- A127 Northern Relief Road – Southend and Essex.
- Harp House roundabout improvements (access to London Southend Airport).





East-West growth corridor: Manningtree – Basildon – Harlow. Connections to Felixstowe / Harwich and Stansted

Completing the remaining section of A120 dualling between Braintree and Colchester will boost our **connectivity between growing towns and cities** and link the M11 Innovation Corridor with **gateways** at London Stansted Airport and Felixstowe, Ipswich and Harwich international Ports.

The dualled A120 will support the creation of two garden communities, to the west of Colchester and west of Braintree and at Harlow and Gilston. 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.

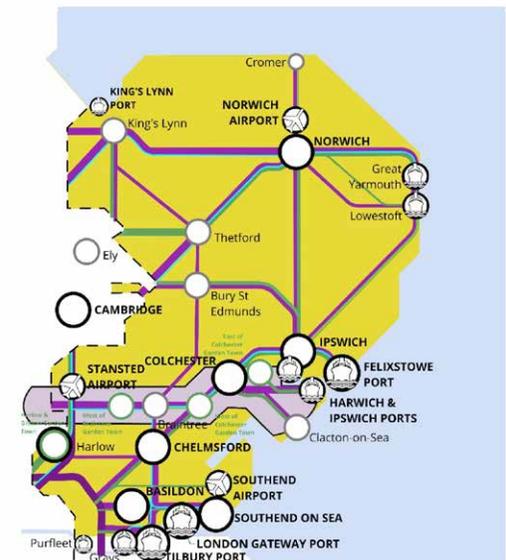
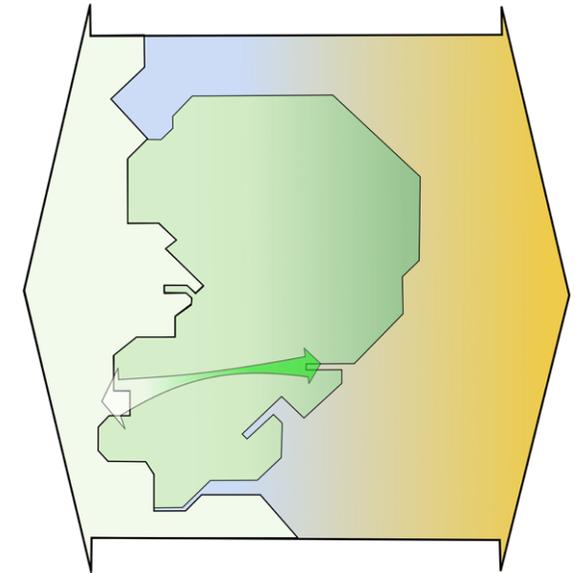
Currently, the A120 suffers from increasing unreliability due to the single-carriageway section, which also has adverse impacts on communities and homes along its length. With the planned for population and activity growth, this situation is expected to become critical, affecting east-west movement and limiting route choices to and from the region's primary gateways.

Investment in the A120 corridor will deliver:

- A consistent level of provision throughout this important link, supporting the region's strong distribution industry by linking key gateways.
- Supporting infrastructure to enable the construction of four new communities.
- Opportunities to provide high quality rapid inter-urban public transport on a commercial basis.
- Continued economic growth in a high performing area. Basildon has experienced 20% job growth over the past five years.

Strategic Schemes include:

- Dualling of the A120 between Braintree and Marks Tey.





UK Innovation Corridor: King's Lynn – (Cambridge) – Harlow – London

The UK Innovation Corridor is our closest growth partnership, promoting development, transport and better infrastructure around the themes of next-generation science and technology powered by London and Cambridge. The West Anglia Mainline 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, including Harlow and Gilston Garden Community.

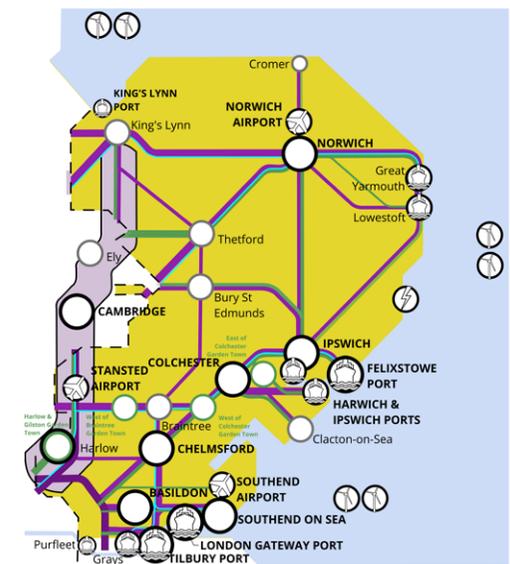
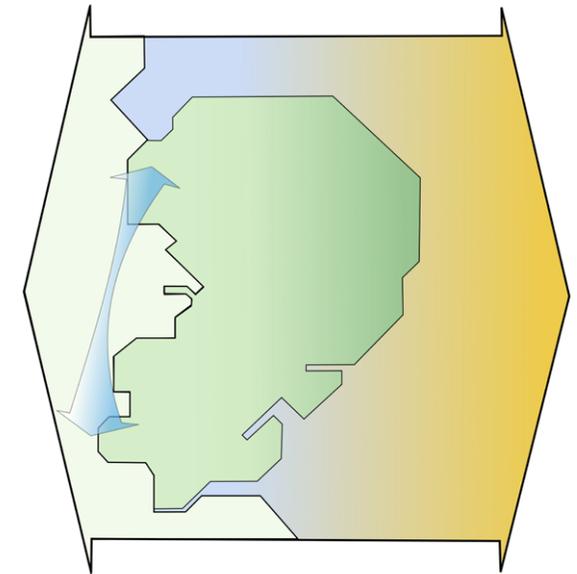
In advance of Crossrail 2, Network Rail has, in sections within London and Broxbourne, scoped four-tracking and station capacity increases on the West Anglia main line to bring forward 20,000 homes and 10,000 jobs sooner than 2030. This clearly has positive implications for growth in the Innovation corridor, benefiting Harlow and King's Lynn. Also proposed (currently GRIP2/3) are capacity and other improvements at Ely Junction to allow east-west movements and

improve the connection between Felixstowe and the Midlands (see also Corridor C above).

Link improvements on the M11 and dualling of the A47 at West Winch will be important for opening up economic activity at Harlow and north of Cambridge.

Strategic schemes include:

- West Anglia main line package.
- M11 junction and corridor improvements between junctions 7 and 8, including the new junction 7a.
- A10 West Winch housing access road.
- Harlow and Gilston Sustainable Transport Corridor.



SUMMARY TABLE OF SCHEMES

Strategic package or project name (and main components)	Transport East Strategic objectives	Anticipated benefits	Current stage of delivery	Scheme costs £m	Funding sources	Transport East / Government next stage	Delivery timescale
(A) Pan-regional strategic urban packages and nationally-significant projects							
Walking and cycling schemes (including DfT Walking and Cycling and Transforming Cities funds) across all towns and rural areas in the region.	Multi-centred growth, Energised coastal communities	Creating attractive and appealing places to live; attracting skilled workforce. Equality of opportunity, access to work. Health, reduced pollution, support for town centres, access to universities and schools.	Varied across local authorities	To be confirmed	Transforming Cities Fund DfT Walking and Cycling Grants s.106/CIL Local funding	Support production and funding of Local Cycling & Walking Infrastructure Plans (LCWIPs) Support through Transport East Active Travel group work programme	Ongoing
Strategic support for EV charging across all towns and rural areas in the region.	Multi-centred growth, Energised coastal communities	Reducing air pollution at the tailpipe.	Varied across local authorities	To be confirmed	Local LTP capital funding, CIL, s.106 OLEV funding bids	Support through decarbonisation strategy	Ongoing
Strategic support for passenger transport operations including buses and school travel in all towns, cities and rural areas in the region.	Multi-centred growth	Providing efficient, high capacity transport. Equality of opportunity, access to work. Support for town centres, access to universities and schools.	Varied across local authorities	Not Known		Support through Transport East Passenger Transport group work programme	Ongoing

Lower Thames Crossing	Global gateways Multi-centred growth	Relieve severe congestion and capacity constraints at the Dartford Crossing – port access Journey time and reliability and safety benefits	Preferred route announced. Funding announced alongside 2020 Budget. Expected delivery from 2025	£3bn for crossing, c£6bn incl. access roads	RIS2	Decision to deliver from Government. Continued analysis and development of schemes on local network to support growth for delivery via future MRN and RIS funding.	By 2027
(B) Connecting our Energised Coastal Communities Midlands – King’s Lynn – Norwich – Great Yarmouth							
A47 Tilney to Each Winch dualling	Multi-centred growth, global gateways	Reduced congestion, reduced delay, more reliable journeys, improved connectivity, improved road safety, removes traffic from settlements. Supporting housing and jobs growth.	Not identified in current programme (either RIS1 or RIS2)	£130m (est 2010 prices)	DfT funding required. Potential local contributions	Support scheme for inclusion in RIS3 trunk road programme	RIS3 (2025-2030)
Norwich Western Link	Multi-centred growth Global gateways	Improving connectivity, accessibility and journey times on key routes in Greater Norwich while reducing existing traffic impacts in western Norwich and improving conditions for walking and cycling.	Outline business case funded by DfT to support scheme under MRN and LLM programme. Comms and Stakeholder engagement underway.	£150m	DfT 85% as an LLM scheme.	Provide support for DfT approval of Outline Business Case to be submitted in December 2020.	Construction 2023-2025

Acle Straight dualling	Energised coast Multi-centred growth, global gateways	Reduced congestion, reduced delay, more reliable journeys, improved connectivity, improved road safety. Supporting regeneration (incl housing and jobs growth) of the coast and connections to gateway port.	Not identified in current programme (either RIS1 or RIS2)	£78m (est 2010 prices)	DfT funding required. Potential local contributions	Support scheme for inclusion in RIS3 trunk road programme	RIS3 (2025-2030)
Great Yarmouth Third River Crossing	Energised coast Multi-centred growth	The Third River Crossing is important to Great Yarmouth's future success, helping to attract investment, enable growth and create skilled jobs. The new bridge will ease traffic congestion on the town's roads and improve network resilience, shortening journey times and improving journey reliability.	Funding announcement anticipated late summer 2020	£120m	DfT £98m Local funding for remainder.	Encourage a prompt decision from DfT following submission of Full Business Case to enable a start of construction in January 2021	Funding awarded 2017 Scheme declared nationally significant 2018. DCO approval anticipated summer 2020.

© Connecting the Heart of East Anglia: London – Chelmsford – Ipswich – Norwich / Suffolk Coast

GEML strategic package: Taskforce schemes: <ul style="list-style-type: none"> Bow Junction Enhancement Beaulieu Park Station loops 	Multi Centred growth, Global Gateways Energised Coastal communities	£4bn economic growth, more than 10,000 direct and indirect jobs and accelerated delivery of new homes resulting from: <ul style="list-style-type: none"> Norwich in 90 or better for all journeys with proportionate journey time reductions for all stations along the line. 	Draft SOBC being discussed with Network rail and DfT. Submission of SOBC summer 2020 Work currently underway to refresh the Wider Economic Benefits case	TBC	National Rail enhancement funding Housing Infrastructure Fund Local Growth Fundw	Continue to support essential Network Rail GEML improvements to deliver capacity and economic growth	Beaulieu Park Station 2024/5
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<ul style="list-style-type: none"> • Haughley Junction doubling • Loops / partial 3or4 tracking south of Colchester and headway reductions south of Colchester • Loops / partial 3or4 tracking Ipswich to Haughley • Further assessment of Trowse Bridge • Further assessment of line speed enhancements 		<ul style="list-style-type: none"> • Delivery of the rail capacity and connectivity necessary to drive economic growth and support the delivery of new homes. • An enhanced journey experience for all passengers. 	<p>Network Rail examining options for delivery order and timing of schemes</p> <p>Final SOBC due late summer</p> <p>Separate studies underway: Liverpool Street and Stratford.</p>		S106	<p>Approval of "Decision to Develop" within RNEP process</p> <p>Early priority for the delivery of Bow Junction Enhancement project</p> <p>Support for Beaulieu Park – listed separately</p>	
<p>GEML outside strategic package Manningtree level crossing / low bridge signals and improved access</p>		<p>Improved access for pedestrians, cycles and public transport, reduced congestion.</p>	<p>Pipeline project without formal processes at this stage.</p>	£1m			

<p>A12 strategic package (south):</p> <ul style="list-style-type: none"> • Chelmsford to Marks Tey • M25 to Chelmsford • Marks Tey to Colchester 	<p>Global gateways, multcentred growth.</p>	<p>Capacity and connectivity improvements to the A12 corridor – Journey time and reliability and safety benefits.</p>	<p>A12 "Expressway" included in RIS 1 programme announcement</p> <p>Marks Tey-Chelmsford: Work expected to start in RIS1</p> <p>Investigating options for southern (M25 to Chelmsford) and northern (Marks Tey to Colchester) sections. Seeking RIS 2 funding.</p> <p>Highways England preparing business case for RIS2 delivery</p>		<p>RIS2</p>	<p>Next steps: Confirmation of scheme delivery</p>	<p>2020-25</p>
<p>NE Chelmsford garden community package:</p> <ul style="list-style-type: none"> • Beaulieu Park Station • Chelmsford NE bypass • Army and Navy flyover closure 	<p>Multi-centred growth</p>	<p>Delivery of c9000 homes</p> <p>Rail capacity and journey time savings Associated passing loop provides Capacity and resilience to GEML</p> <p>Road access to homes, network resilience and journey time savings.</p>	<p>Business case with MHCLG and DfT</p> <p>Chelmsford NE design underway</p> <p>BP GRIP3 nearing completion</p> <p>Army&Navy draft SOBC with DfT. Option appraisal underway (5 options)</p>	<p>£164m</p>	<p>HIF schemes to support development of 9,000 homes north of Chelmsford</p> <p>LGF s.106</p> <p>MRN local contributions</p>	<p>Support discussions to secure funding from multiple sources – calls for simplification / streamlining and better co-ordination of Government decision making process for complex schemes.</p>	<p>2022-26 (rail element) 2025 (NE bypass and Army&Navy)</p>

		Improved strategic road connectivity between the A12 at Chelmsford and A120 at Braintree				Agree extension to HIF funding window from 2024 to 2025. Beaulieu Park TWA application. Army&Navy: Seeking SOBC decision and DfT funding to support OBC	
A12 Corridor North package: <ul style="list-style-type: none"> Ipswich to Suffolk coast 	Energised coastal communities Multi-centred growth	Opens up opportunities for growth around Ipswich and on the corridor. Provides mitigation for the significant energy projects on the Suffolk Coast, including Sizewell C. Comprises a number of schemes from A12 junction with A14 to Saxmundham.	SOBC (A12 Woodbridge) OBC funding (A12 East of Ipswich) Funding approved- HIF	To be confirmed	DfT, Developers, Local contributions	To be confirmed	2021-2024
A12 North Corridor package <ul style="list-style-type: none"> Ipswich to Suffolk 	Multi-centred growth	Opens up opportunities for growth around Ipswich and on the corridor. Provides mitigation for the significant energy projects on the Suffolk coast, including Sizewell C. Comprises a number of schemes from A12 junction with A14 to Saxmundham.	A12 Stratford St Andrew: two village bypasses. A12/A1094 Friday St Junction	To be confirmed	DfT Developer funding	To be confirmed	

Lowestoft Lake Lothing Crossing	Energised coastal communities Multi-centred growth	Open up opportunities for regeneration and development in Lowestoft, reducing community severance between north and south Lowestoft. It will reduce congestion and delay on the existing bridges over Lake Lothing, in the town centre and improve accessibility	Development Consent Order, final funding announcement expected end of Summer 2020	£100m	DfT, local contributions	To be confirmed	2021-2023
Long Stratton bypass	Multi-centred growth, global gateways	Reduced congestion, delays, greenhouse gas emissions and noise levels in the Town. Improved connectivity, road safety and quality of life for the community. Supporting delivery of planned residential development and employment land.	DfT awarded £0.57m for development of outline business case. Comms and Stakeholder engagement underway.	£40m	70% DfT, 30% Local contribution.	Provide support for DfT approval of Outline Business Case to be submitted in August 2020.	Planning application submission Winter 2020,
(D) Cross-country connectivity: Norwich and Ipswich / Felixtowe – the Midlands and South-West (via Cambridge-Oxford corridor)							
East-west rail package (Cambridge to Great Yarmouth and Lowestoft)	Energised coastal communities Multi-centred growth	Increased capacity for passengers and freight; enabling more frequent passenger services.	Route package ongoing	To be confirmed	Part of £2bn NR Anglia package	To be confirmed	To be confirmed

<p>East-west rail package:</p> <p>Felixstowe to Nuneaton passenger and freight package including:</p> <ul style="list-style-type: none"> • Ely Junction area upgrade. • Haughley Junction four-tracking or flyover • Track, bridges and crossing upgrades. Bridge replacements 	<p>Global gateways</p> <p>Multi-centred growth</p>	<p>Increased capacity for passengers and freight; enabling more frequent passenger services.</p>	<p>Ely Junction: £9.3m awarded by Peterborough and Cambridge combined authority, New Anglia LEP and Strategic Freight Network</p> <p>Route package ongoing</p>	<p>To be confirmed</p>	<p>Ely: Local partners £9.3m DfT £590m</p> <p>Route package: part of £2bn NR Anglia package</p>	<p>To be confirmed</p>	<p>Ely SOBC submission late 2020.</p>
<p>A11 Fiveways</p>	<p>Multi-centred growth</p>	<p>Reduced congestion, and improved safety on the SRN</p>	<p>RIS 3 Pipeline- early development work committed</p>	<p>To be confirmed</p>	<p>Highways England/ RIS</p>	<p>To be confirmed</p>	<p>2025-</p>
<p>A14 Junction 55/ A12 Copdock</p>	<p>Global Gateways, multi-centred growth</p>	<p>Improved reliability and reduced congestion on the SRN around Ipswich</p>	<p>RIS 3 Pipeline- early development work committed</p>	<p>To be confirmed</p>	<p>Highways England/ RIS</p>	<p>To be confirmed</p>	<p>2025 onwards</p>
<p>A14 corridor package</p> <ul style="list-style-type: none"> • A14/A142 junction, Newmarket • A14/A137 junction, Wherestead • A14/A1189 Nacton Road junction east-bound slip 	<p>Multi-centred growth</p>	<p>Support growth. Reduced congestion and improved safety on SRN.</p> <p>Links to A14 investment further west (Cambridge to Huntingdon)</p> <p>Cements Britain's premier multi-modal freight route.</p>	<p>To be confirmed</p>	<p>To be confirmed</p>	<p>Highways England/ RIS</p>	<p>To be confirmed</p>	<p>To be confirmed</p>

(E) Connecting Thameside South Essex (south): London – Thurrock – Thameside ports							
Stanford Le-Hope station	Global Gateways	Modern transport hub serving growth at London Gateway Port	Detailed design, pre-consent	£30m	Local Growth Deal, National Stations Improvement Programme, developer contribution from DP world	To be confirmed	2022/23
Essex Thameside rail network and capacity improvements package • Passenger and freight (studies) <i>Scheme as South Essex (north).</i>	Multi Centred Growth, Global Gateways Energised Coastal Communities	Improved passenger and freight rail capacity in response to population growth including potential garden communities. Sustainable transport, access to two major ports.	Business case with DfT Network Rail has recently completed the draft “Essex Thameside Study”.	To be confirmed	To be confirmed	Decision to develop proposals for early delivery via RNEP Further development on medium- and long-term options.	Three phases early phase 2020-25
A13 widening	Global Gateways	Continuous three lanes each way between the M25 and Stanford Le-Hope	Under construction	£120m	SELEP LGF, developer contributions, Council capital funding	To be confirmed	Late 2021
A13/A126 East Facing Access Scheme	Global Gateways Energised coastal communities Multi-centred growth	Unlocking congestion issues across Thurrock and wider Thames Estuary area while reducing traffic on local roads. Supporting 32,500 new homes and 24,500 new jobs.	Outline funding submission to DfT due end of 2020	£70-85m	DfT: 90% Thurrock Council and developer contributions: 10%	To be confirmed	2020-2026

Tilbury Link Road	Global Gateways Multi-centred growth	Facilitating growth in Tilbury, East Tilbury, CSM and beyond. Providing a strategic link to port activities at Tilbury and supporting development of 10,000-12,000 new homes. Note: tunnel proposal withdrawn)	Options Assessment Report commissioned	£100-£150m	Highways England to identify funding	To be confirmed	To be confirmed
A13/A1014 junction improvements	Global gateways	Supporting economic growth around London Gateway port and associated development. Linked with A13 widening. Mitigating LTC traffic generation	Identification of schemes to deliver junction improvements	£75-100m	To be confirmed	To be confirmed	To be confirmed
A1306 capacity enhancements and bus priority	Multi-centred growth	Reducing congestion and rat-running on local roads. Providing bus priority and walking and cycling infrastructure.	Funding bid underway	£15m	DfT local pinch-point fund, developer contributions	To be confirmed	To be confirmed
(F) Connecting Thameside South Essex (north): London – Basildon – Southend-on-Sea - Shoeburyness							
Essex Thameside rail network and capacity improvements package <ul style="list-style-type: none">• Passenger and freight (studies)• Scheme as South Essex (south).	Multi Centred Growth, Global gateways Energised coastal Communities	Improved passenger and freight rail capacity in response to population growth including potential garden communities. Sustainable transport, access to two major ports.	Business case with DfT Network Rail has recently completed the draft "Essex Thameside Study".	To be confirmed	To be confirmed	Decision to develop proposals for early delivery via RNEP Further development on medium- and long-term options.	Three phases early phase 2020-25

A127 strategic package of improvements	Multi-centred growth	Capacity improvements on links and junctions Accommodating high traffic levels to build resilience and enable development.	Various from pipeline to detailed design and implementation.	Not known	Potential DfT Local Pinch-points fund and SBC capital	Lobbying support required from TE	2025
A127 Outer Relief Road, Southend and Rochford	Multi-centred growth	Improving connectivity, accessibility and journey times from Southend to the north	Pipeline	£300m	Unknown	Lobbying support required from TE	Post 2025
A127 Northern Relief Road, Southend and Rochford	Multi-centred growth	Improving connectivity, accessibility and journey times to open up potential garden communities	Pipeline	£150m	Unknown	Lobbying support required from TE	Post 2025
Harp House Roundabout improvements and to London Southend Airport	Multi-centred growth	Reduce congestion on local roads thereby improving journey times on key routes in Southend and to London Southend Airport.	Detailed design commenced	Not known	Potential DfT -local pinch point fund and SBC capital	Lobbying support required from TE	March 2024
(G) Enterprise corridor: Stansted – Braintree. Connections to Harwich and Clacton-on-Sea							
A120 Dualling (new dual carriageway road) • Route option D	Multi-centred growth Global gateways	Provide infrastructure to support growth Reduce congestion and delay Improve safety Reduce impact of traffic on communities along existing A120 Improve strategic connectivity Improve local connectivity by non-motorised modes.	Proposal submitted to Highways England for funding decision (RIS2)	£700m	To be confirmed	To be confirmed	To be confirmed

(H) Innovation Corridor East: Harlow-(Cambridge-Ely)-King's Lynn/Thetford-Norwich

<p>WAML corridor package</p>	<p>Multi-centred growth</p> <p>Energised coastal communities</p>	<p>The West Anglia Main Line corridor is vital for the UK economy. London and the East of England are two of the fastest growing regions in the UK, and the West Anglia Main Line links them together. The railway is essential for bringing jobs, homes and businesses together.</p> <ul style="list-style-type: none"> • Crossrail 2 is seen as the long-term solution for the WAML, delivering capacity for metro style services in London and increased capacity and reduced journey times for longer distance services to Harlow, Stansted and Cambridge • Stansted Airport is seeking reduced journey times to central London and the provision of earlier and later trains to better support flight patterns. 	<ul style="list-style-type: none"> • Crossrail 2 Independent (Gerrard) Affordability review submitted to 2018 spending review but not published. • The CR2 SOBC has been upheld by the DfT • A political decision is still outstanding. • West Anglia Mainline Medium Term Capacity Study has commenced. 	<p>TBC</p>	<p>National Rail enhancement funding</p> <p>HIF,</p> <p>LGF,</p> <p>S106</p>	<p>Collaborative work with DfT and NR to understand growth and demand for travel along the WAML and identify appropriate short and medium-term interventions that could be delivered ahead of Crossrail 2</p>	<p>Study 2020</p> <p>Infra pre-Crossrail 2</p>
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<p>M11 between Junction 7a & 8 Gilden Way</p> <p>Corridor improvements</p>	<p>Multi-centred Growth</p>	<p>New junction to provide improved connectivity to new homes and employment in north Harlow</p>	<p>Under construction</p> <p>Scheme is currently live. COVID-19 has caused additional cost, with additional site cabins etc. required.</p>	<p>£76.3m</p>	<p>S106 RIS1 £5m SELEP LGF</p>	<p>Transport East support</p> <p>Seeking additional funding for delivery via SELEP as part of Gov Covid recovery infrastructure programme.</p>	<p>Completion Sept 2022</p>
<p>M11 J8</p>	<p>Access to Ports, multi-centred growth</p>	<p>Junction improvements to provide capacity, resilience and improve journey times and reliability to support airport growth and new homes.</p>	<p>Draft contract – FBC with finalised costs</p> <p>Tenders have come back significantly over the available budget. Additional third-party funding being sought</p>	<p>£12.7m</p>	<p>Manchester Airport Group NPIF LGF Essex County Council</p>	<p>TE support to secure funding.</p> <p>Seeking funding for delivery via SELEP as part of Gov Covid recovery infrastructure programme.</p>	<p>2021</p>
<p>West Winch Housing Access Road</p>		<p>Increased highway capacity in the West Winch area of King's Lynn The enabling of 4,000 new dwellings in the South East King's Lynn Growth Area (SEKLGAs) An effective bypass of West Winch relieving congestion and delay for strategic A10 traffic and providing environmental and community relief to the village</p>	<p>A revised SOBC is in preparation</p>	<p>Up to £52m</p>	<p>MRN plus a local contribution of at least 15% as set out in an Infrastructure Delivery Plan (IDP) for the SEKLGAs prepared by the Borough Council.</p>	<p>TE support for the scheme including to secure conditional approval and OBC funding</p>	<p>Construction start 2023</p>

<p>Harlow Gilston Garden Community sustainable transport package</p> <ul style="list-style-type: none"> • Harlow Sustainable Transport Corridor • LCWIP cycling projects (see (A) pan-regional projects) 	<p>Multi-centred Growth</p>	<p>Joint project straddling Herts / Essex boundary. Delivery managed by Herts CC (also covering delivery risk).</p> <p>MHCLG funded scheme to support housing and employment to the north of Harlow</p> <p>Delivery of c10000 homes Sustainable linkage from homes to Harlow town centre and station.</p>	<p>This ECC secured funding element of £38.5m cover scheme, costs in Essex.</p> <p>Business case with MHCLG</p> <p>Design underway</p>	<p>Corridor: £172m</p>	<p>“not HIF” – MHCLG growth funding</p>	<p>Liaison with EEH.</p> <p>Continued Government support.</p>	<p>Corridor completion May 2024</p>
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