

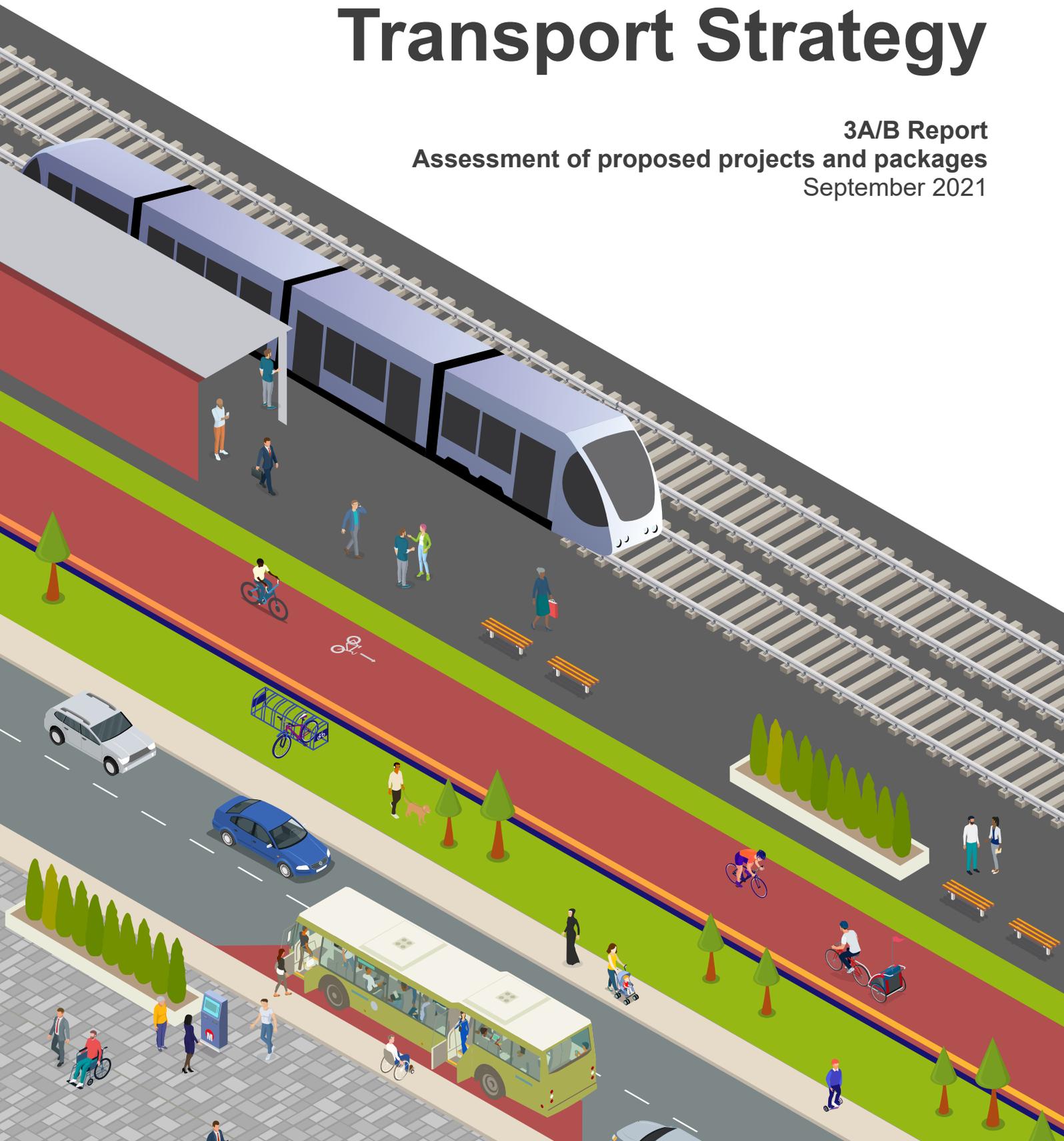
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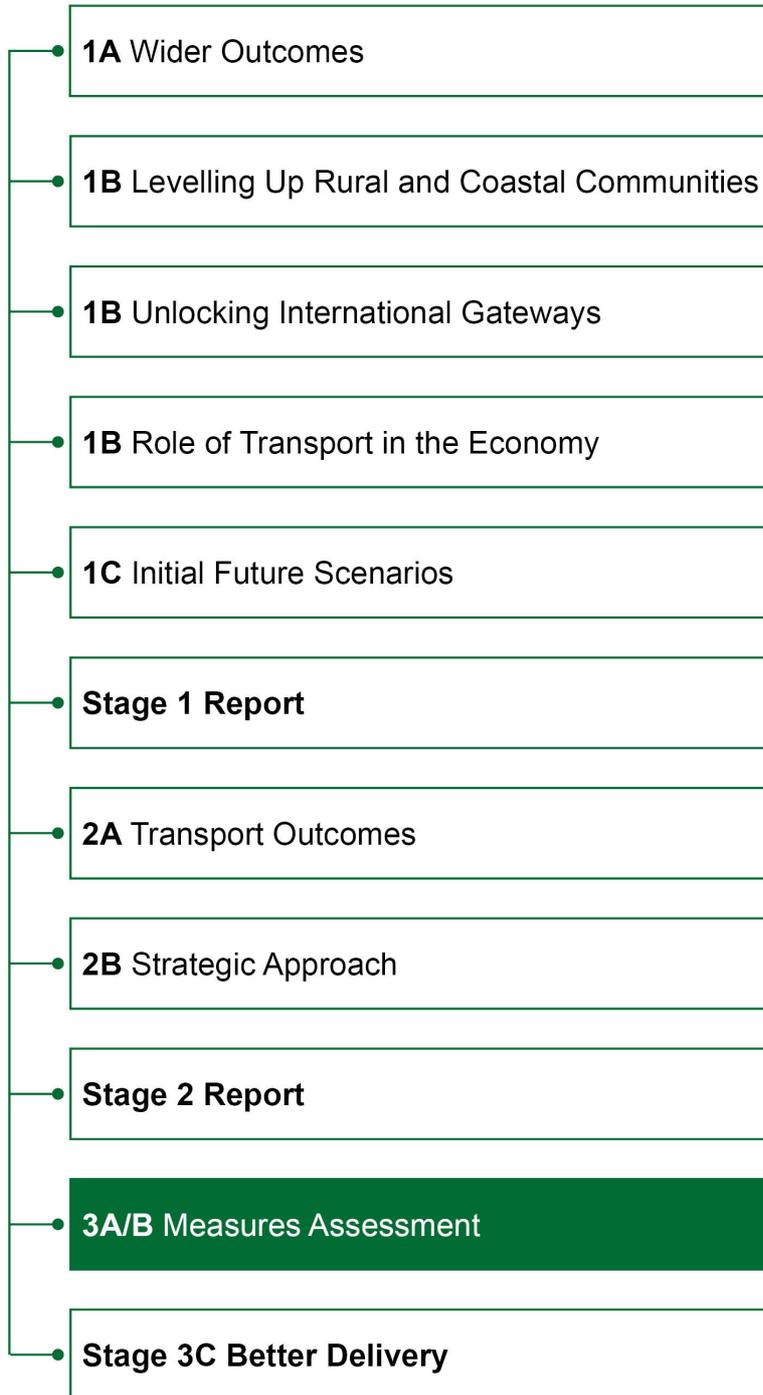
Jacobs

Transport East Transport Strategy

3A/B Report
Assessment of proposed projects and packages
September 2021



Transport Strategy Evidence Base



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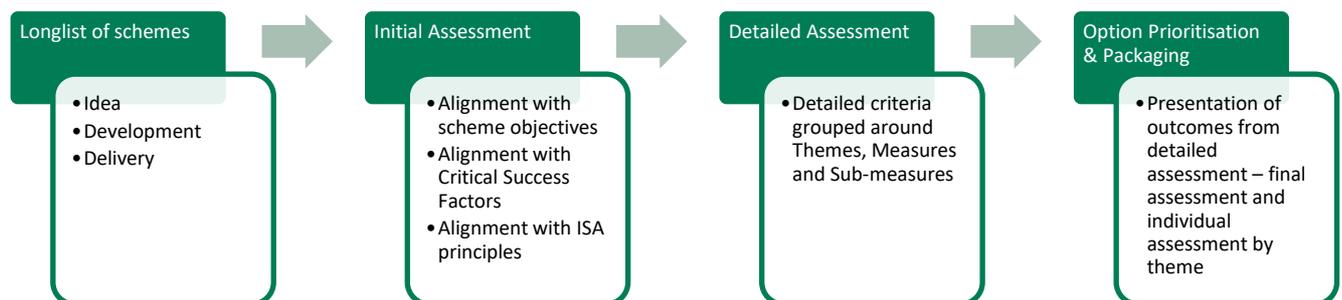
Executive Summary

Transport East is the Sub-national Transport Body (STB) for the East of England, comprising public and private sector partners across Norfolk, Suffolk, Essex, Southend and Thurrock, providing a 'Single Voice' for transport strategy and investment in the region. The partnership is developing its inaugural Transport Strategy, to provide the strategic framework for the transport investment required to help achieve its ambitious and inclusive economic, social and environmental goals from now to 2050.

Transport East's overarching aim is for "A thriving economy for the East, with fast, reliable, and resilient transport infrastructure driving forward a future of inclusive and sustainable growth for decades to come", and the delivery of a Transport Strategy needs to support this and additionally enable wider economic, social and environmental outcomes, along with transport outcomes for the region. These relate to four key themes, namely decarbonisation, unlocking international gateways, connecting growing towns and cities, and re-energising coastal and rural communities.

With the integration of the Wider and Transport Outcomes, a series of four strategic pathways have been developed to achieve Transport East's overarching aim. Each pathway plots a trajectory to achieving Transport East's goals to 2050, setting out a detailed and rigorous assessment of each theme, ensuring actions are appropriate, ambitious and complementary across all themes, as agreed with Transport East Senior Officer Group (TESOG) partners. These pathways fed into the development of a long list of schemes for assessment, through a bespoke multi-criteria assessment framework, which utilises the clear priorities outlined in the previous stages of work.

The overall purpose of the assessment framework is to prioritise strategic schemes and packages, offering transparency and reliability in decision making, giving clarity to other bodies including Network Rail and National Highways, through a single voice for the region. The development of this framework followed the following process, with four distinct stages assessing the options in the long list:



- Longlist of schemes – as the longlist of schemes developed contains schemes at varying stages of development, and therefore would have different levels of information available for assessment, thus potentially making them incomparable, schemes were categorised as follows.
 - 'Idea's pool' – projects that could deliver identified strategic priorities. These will include concepts, early feasibility studies and pre-Strategic Outline Business Cases. Although these will have considered options and alternatives, they will not have been subject to any in-depth assessment.
 - 'Development pool' – projects that are in development and have already been subject to a feasibility study or are currently developing or have completed a Strategic Outline Business Case that compares a short-list of alternative options for delivering the project.
 - 'Delivery pool' – projects where the development of a business case has achieved programme entry for delivery funding; acknowledging that planning consent may still be required. For these projects a preferred option has already been identified.
- Initial Assessment – removes unviable or out of scope options and identifies any early indicators of where mitigation may be required. A high-level assessment against strategy objectives and DfT Critical Success Factors (excluding VfM). Scores are given based on a 3-point risk-based scoring system (Low Risk, Medium Risk, High Risk or Positive Outcome, Neutral Outcome, Negative Outcome)

- Full Assessment – Allows options to be compared for a range of detailed criteria. Detailed scoring against specific criteria grouped by theme. Scored using a 7-point scale and considers benefits and opportunities (ranging from -3 to in line with WebTAG assessment).
- Option Prioritisation & Packaging – Scores from the Full Assessment are presented both as a final score and individually by theme to aid prioritisation. Opportunities to combine options into packages to maximise value have also been explored. A thematic score is calculated for each theme using an average of all the criteria scores for that theme where a score has been provided. Following the calculation of thematic scores, a total score is then calculated by summing each of the theme scores where a theme score has been calculated (i.e. where at least one criterion within that theme has been scored).

A total of 56 strategic long list schemes were taken forward both to the 'Initial Sift' stage and then the 'Full Assessment' stage to assess their alignment with the Transport Strategy priorities. The outcomes of the assessment indicate that the schemes that best meet the Transport Strategy strategic priorities, are best aligned to overarching strategic aims and have beneficial wider outcomes are those that focus on sustainable transport and active travel improvements, along with major rail schemes and rapid transit schemes. Many of these schemes are in the early stages of development or are still at initial idea / concept stage and therefore there is a need for investment to accelerate the development and delivery of these. However, the assessment also demonstrated that while strategic road schemes potentially will have an adverse impact on the region's ability to achieve net zero, there is a need for them to help support economic growth of both the region and the rest of the UK as they support and enable the unlocking of the international gateways within the region. As a result, it must be acknowledged that there will be a need for both people and goods movements on the strategic road network in particular and therefore measures to accelerate the switch to alternative fuels should also be prioritised.

1 Introduction

1.1 Introduction to the Transport Strategy

Transport East has a vision for a thriving economy for the East, with fast, reliable and resilient transport networks, forging a future of inclusive and sustainable growth for decades to come. Over the next 30 years Transport East will transform the region's transport connections to help sustain long term economic growth.

The Transport East region is formed of three counties (Norfolk, Suffolk and Essex) and two unitary authorities (Southend-on-Sea and Thurrock). Norfolk, Suffolk, and Essex have two tiers of local governance and each county is divided into a number of districts, boroughs and city councils. Essex has the largest number of districts (12), followed by Norfolk (7) and Suffolk (5). Southend-on-Sea and Thurrock are unitary authorities with single tiers of governance responsible for all local government functions within their administrative areas. In order to bring all these areas together with a single common purpose or voice the development of the Transport Strategy to 2050 comprises the following stages:

- Stage 1 – understanding the role of transport and the potential for change
- Stage 2 – develop an evidence driven strategic approach
- Stage 3 – define a package of strategic measures and better ways to deliver and ultimately the transport strategy itself.

Each of the stages identified above form part of a strong and credible evidence base structure upon which the strategy can then be built. The following sections provide a short summary of the key elements of work undertaken to date leading to this stage, the development of the Assessment Framework and assessment of options.

1.2 Wider Outcomes

As part of the development of the Transport Strategy, Transport East set a series of wider outcomes which the transport strategy would help to enable and deliver. These wider outcomes together with the transport outcomes will be used to inform the 'WHY' of the transport strategy and aided the testing of future transport scenarios. They will also be used to set clear agreed specific outcomes supporting the approach, planning and implementation of transport schemes and initiatives.

The wider outcomes were derived through the collation of existing economic, social and environmental goals and outcomes that partners have already set out in Local Plans, Local Industrial Strategies as well as key documents. This exercise produced key themes, outcomes, phrases and challenges which enabled the creation of word clouds to provide a visual representation of distilled themes. These initial themes were discussed with key partners through workshops. The results of these workshops and engagement processes were the creation of the wider outcomes. More detail on the wider outcomes can be found in the Stage 1A Wider Outcomes Technical Note.

1.3 Deep Dive Research

In order to provide a strong evidence base there was a need to strengthen and complete the existing regional evidence base, to align with new and emerging policies at all levels of Government but also the emerging post COVID-19 context. In order to attract investment in measures to assist the region continuing to be economically competitive while upholding sustainability credentials Investors, Partners, Government Bodies and Businesses in the region will need to understand how any future proposals will deliver the region's unique outcomes (wider and transport specific). Transport East highlighted three specific topics where more detail (both generally and specifically) was required. These are:

- Understanding of the role of transport in 'levelling up', particularly in re-energising coastal and rural communities
- The role and opportunities for the transport system to support future economic growth, including COVID-19 recovery and longer-term economic goals
- Unlocking the potential of our international gateways to support the national economy (including the shift of freight from road to rail and other opportunities).

Each deep dive review sets out an evidenced baseline picture, identifying the opportunities and challenges, and the case for transport investment. They not only review the sub-national area, but also neighbouring areas in which policies, strategies or projects will impact on our area.

1.4 Scenario Testing

In order to understand the implications of different scenarios on the wider and transport outcomes, a series of scenarios were tested to quantify the link between scale and distribution of economic activity and subsequent patterns of transport demand, and to explore the implications for transport strategy. Two spatial scenarios (Dispersed / Centralised) were tested across three economic trajectories (Central / High / Low) and two workplace scenarios (Back to Normal / Remote). The result of the economic analysis show that the remote centralised scenario was the preferred in terms of delivering against the four key themes and having the highest benefit across three of the key themes is seen in the Remote Centralised scenario, with a focus upon '15 minute living', 52% of people living in the 13 largest urban areas and 32% of people working remotely for at least 50% of the week.

1.5 Transport Outcomes

The development of the Transport Outcomes has taken into account an initial evidence-based approach; reviewing both the local evidence and goals, as well as national policy and strategy, and outcomes emerging from other Sub National Transport Bodies. The outcomes were then refined with Transport East Senior Officers Group (TESOG) through an engaging and collaborative approach ensuring they represented a unique approach for the East of England. To ensure robust and credible outcomes, the SMART approach was utilised. The finalised Transport Outcomes were linked with the Wider Outcomes, the four key themes and the deep dive research to ensure that they clearly demonstrate the uniqueness and ambition of the region through a 'Golden Web' of linkages and relationships.

1.6 Strategic Approach

The Strategic Approach collates the Stage 1 evidence base and the scenario testing outputs, coupled with the integration of the Wider Outcomes, Transport Outcomes and the Transport East Key Themes, to enable the development of four strategic 'pathways' which sought to achieve Transport East's aims to 2050. Each pathway identifies a method of connecting the Transport East Key Themes with the aims (whether these be national or regional aims) and the key actions or activities plots a trajectory to achieving Transport East's goals. Thus, setting out a detailed rigorous assessment of each theme, with an ambitious and appropriate action plan, as agreed with the Transport East Senior Officer Group (TESOG) partners.

These pathways ultimately fed into the Stage 3 work, developing a long list of schemes for assessment, and criteria for the multi criteria assessment framework, measurable against Wider and Transport Outcomes.

1.7 Content of Technical Note

Building on the strategic approach and identified long list of schemes, this technical note forms the next crucial stage in the development of the strategy, covering the development of a clear assessment framework for regional and local schemes, informed by Stage 1 and 2 outcomes.

The following sections will describe the process/methodology by which the assessment framework was developed. In addition, this note will provide insight into how this framework is unique to Transport East's requirements and ensuring outcomes reflected the delivery of Transport East's four key themes namely, Decarbonisation, Energising Rural and Coastal Areas, Unlocking International Gateways and Connecting Growing Towns and Cities.

Following on from the prioritisation and ranking of schemes within the assessment framework, will be the development of an updated Investment and Delivery Plan, directly linked to the final Transport Strategy to 2050.

2 Methodology

This section outlines the method for developing the Option Assessment Framework and the principles for options to progress through the framework and into the final Transport Strategy.

2.1 The need for prioritisation

The evidence base developed to underpin the Transport Strategy outlined clear challenges for Transport East to address in order to meet the long-term transport vision for the region. Therefore, any schemes taken forward for development or delivery should have technical merit and contribute to the aims and objectives of Transport East and associated local authorities. The process of prioritisation offers transparency and reliability to decision making, ensuring the maximum value is delivered by all schemes adopted. However, there is also a need to retain flexibility and accept that not all schemes will address all the outcomes Transport East are seeking to meet. As such the outcomes of the assessment, while highlighting priorities, will also enable Transport East to identify those schemes that are specific to achieving one outcome, such as decarbonisation, so that should central government release funding be focussed on decarbonisation, these schemes can justifiably be put forward.

Identifying regional priorities also fulfils the core ministerial requirement and allows Transport East to speak with a single voice, bringing focus and credibility to governmental asks. The approach also gives clarity for other bodies including Network Rail and Highways England.

2.1.1 Long List Development

The first step in identifying projects was to develop an initial long list of strategic transport interventions that could support the four strategic priorities of decarbonisation, connecting growing towns and cities, energising rural and coastal communities and unlocking international gateways

Key partners were heavily involved in this process, with a series of workshops held throughout the process, including at Transport East's annual summit. The workshops reviewed the region's challenges and the proposed strategic approach, with partners given the opportunity to input ideas on what measures could achieve their outcomes and address their challenges.

The identification of ideas and potential schemes was also supported by a thorough review of existing plans of Local authorities, National Highways, Network Rail, DfT, transport operators and other partners, and a full review by the Transport East Senior Officers Group.

These ideas were then fed into logic maps, created for each pathway which set out actions to be taken, areas of further study that are required before schemes can be fully identified, and identified schemes that could be assessed to establish their ability to achieve Transport East's outcomes. A full list is available in Appendix A.

2.1.2 The Pipeline Approach

As Transport East already had an interim Investment and Delivery Plan¹, with new ideas added through the development of the logic maps, schemes identified as part of the long list were at different stages of development and thus would be assessed using varying levels of information. Therefore, each of the scheme options was categorised based on the progression to date of the scheme idea, creating a pipeline of schemes. This approach is similar to the approaches adopted by Highways England and the DfT to allocate the level of assessment scrutiny which can be achieved. The categories used in this case are as follows:

- 'Idea's pool' – projects that could deliver identified strategic priorities. These will include concepts, early feasibility studies and pre-Strategic Outline Business Cases. Although these will have considered options and alternatives, they will not have been subject to any in-depth assessment.
- 'Development pool' – projects that are in development and have already been subject to a feasibility study or are currently developing or have completed a Strategic Outline Business Case that compares a short-list of alternative options for delivering the project.

¹ Interim Investment and Delivery Plan. 2020. <https://www.transporteast.org.uk/wp-content/uploads/Investment-and-Delivery-Plan-1.0-1.pdf>

- ‘Delivery pool’ – projects where the development of a business case has achieved programme entry for delivery funding; acknowledging that planning consent may still be required. For these projects a preferred option has already been identified.

Schemes can be assessed using this framework as they progress through the ‘pipeline’ from Idea, to Development and onto Delivery. In addition, options identified at a later date can enter the pipeline at a later stage if the option is already progressed.

Figure 2.1 outlines the progression of an option through the assessment framework.

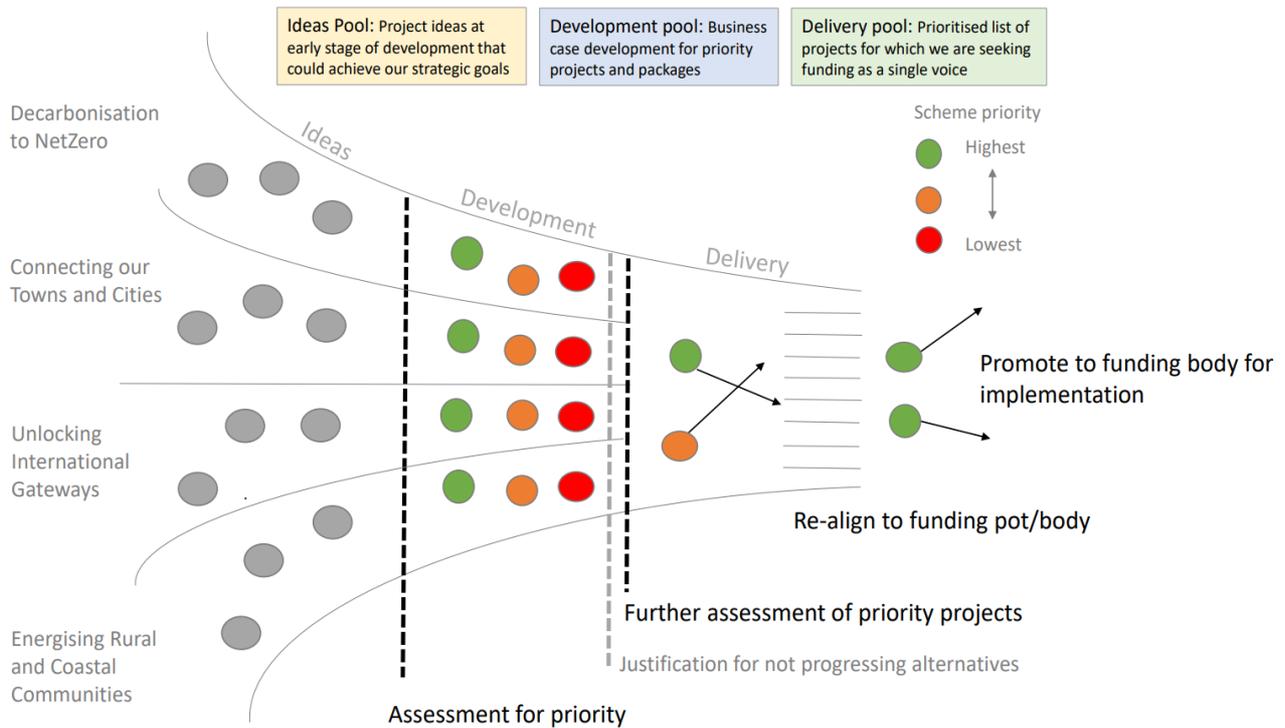


Figure 2.1: Progress of options from ‘pools’

2.2 Option Assessment Framework

The bespoke multi-criteria option assessment framework is broken down into three stages to assess options against Transport East’s priorities, environmental commitments and ISA areas. These stages are as follows:

- Initial Assessment – removes unviable or out of scope options and identifies any early indicators of where mitigation may be required. A high-level assessment against strategy objectives and DfT Critical Success Factors (excluding VfM).
- Full Assessment – Allows options to be compared across a range of detailed criteria. Detailed assessment against specific criteria grouped by theme.
- Option Prioritisation & Packaging – Scores from the Full Assessment are presented both as a final assessment and individually by theme to aid prioritisation.

The intention is to provide a holistic approach that captures the diverse value added by various schemes, and that can flex to meet changes in stakeholder priorities. The framework also offers a dynamic approach to scoring criteria whereby a scheme’s category (and therefore the level of detail known about the scheme) directly influences the criteria assessed against.

A small group of practitioners undertook the assessment to maintain consistency across the assessment of all options, while maintaining opportunities for review and challenge between individual assessments.

2.2.1 Initial Assessment

The initial assessment phase sees options scored based upon:

- Ability for scheme outcomes to contribute to the Transport Objectives identified earlier in the strategy development (Stage 2A).
- DfT Critical Success Factors of Cost, Fit with Govt. Objectives, Supplier Capacity/Capability, and Technical Feasibility.
- The ISA sub-Assessment principles of Strategic Environmental Assessment (SEA), Habitats Regulations Assessment (HAS), Health Impact, Equality Impact, and Community Safety; to highlight any potential mitigation needed early in the scheme process.

Scores are given based on 3-point risk-based scoring systems (Low Risk, Medium Risk, High Risk or Positive Outcome, Neutral Outcome, Negative Outcome).

Options are not progressed following the initial assessment phase if:

- They are found to be out of scope: the option negatively impacts on 3 or more of the Transport Strategy objectives (possible scores: positive, neutral or negative outcome), therefore representing a negative outcome for the majority of the strategic aims; Or
- They are found to be unfeasible: the risk against any one of the following CFS's is 'High': Technical feasibility, Supplier Capability/Capacity, and fit with national government priorities (possible scores: low, medium, high). Options are not prevented from progressing on the basis of cost as it is Value for Money, not raw costs, which would usually present a barrier to progression.

All reasonable options should pass through this stage.

- Other details are also input at this stage for each scheme including a description of the scheme, its designated category (idea, development, delivery) and a description of any dependencies that could preclude the scheme's delivery if they do not materialise.

2.2.2 Detailed Assessment

The detailed assessment stage assesses options against a range of detailed criteria. Unlike the 3-point scoring system used for the initial assessment it utilises a 7-point scale and considers benefits and opportunities. The scoring options range from -3 to 3 in line with WebTAG assessment (-3 being major adverse/showstopper, and 3 being major beneficial/very low risk). An automatic update function is also included which removes some assessment criteria based on their assigned category to account for less information being available for options allocated to the 'ideas' and 'development' categories. There is also a written evidence section alongside each score for every criteria to justify scoring built into framework.

The criteria to be assessed are grouped by:

- Themes: e.g. Energising Rural and Coastal Communities
- Measures: e.g. Supporting rural and coastal housing and jobs
- Sub-measures: e.g. 'directly supports' and 'indirectly supports'

Quantitative metrics are used where available to assess a multitude of criteria associated with transport impacts, wider impacts and Critical Success Factors (with assessment going beyond the detail of the initial assessment to include feasibility factors including political support, ongoing operational costs, and local supply chain implications). A full list of the criteria assessed and scoring definitions is available in Appendix B. A detailed ISA assessment was undertaken separately to the main detailed assessment and is intended to highlight areas where future additional work or mitigation may be required, or alternatives need to be considered.

2.2.3 Option Prioritisation and Packaging

The scores from the Detailed Assessment are aggregated in the final stage of assessment, across each of the six categories. Some of these categories have more sub-categories than others.

A thematic score is calculated for each theme using an average of all the criteria scores for that theme where a score has been provided. Note that if any criteria within a theme has been scored '-3', representing an outcome which would likely be a showstopper for a project, then an average is not taken and instead the scoring for the whole theme is also denoted as -3 to highlight that the potential for a critical risk for outcomes related to that theme. This methodology was chosen over a summative approach to create a dashboard

through which options could be compared based on the information available and so that scores would not be penalised where information was lacking or scoring criteria was non-applicable.

Across each of the themes, the options are then ranked against each other, easily visible through a graded-colour coded scale. These rankings are calculated and presented for performance against each theme and overall performance. The intention of providing this enhanced view of option performance across several areas is to create a platform through which schemes can be assessed holistically against a range of criteria and flexed to create a well-rounded pipeline of future options, rather than a providing a prescriptive output with a singular 'best to worst' rank.

2.2.4 Committed Schemes

As mentioned earlier, an interim Investment and Delivery plan was produced in 2020 and since then a number of schemes listed have received funding and therefore can be considered committed. As such they did not need to be assessed and scored in terms of their potential impact and ability to meet to meet the strategy priorities, however they were included as cumulative impacts on top of the existing situation against which other schemes were assessed (i.e. schemes were assessed on their ability to meet the strategic priorities based on both the existing network as it is and how it might look with these schemes in place). The schemes set out in Table 1 below were considered to be committed and as such were not assessed.

Table 1. Committed Schemes

Committed Scheme	Brief Description
Beaulieu Park Station	New station on the Great Eastern Mainline to serve the growing communities in North East Chelmsford and South Braintree.
A120 NW slips	Improved slip road access to the A120 in Braintree. Supports increased traffic movements and Braintree Local Plan.
Fairglen junction short term improvements	Revised layout for Fairglen Junction on the Essex/Southend border. Required in an area of major growth and increased traffic movements.
Lower Thames Crossing	Provision of a new route between Thurrock and Kent via tunnels. On the south side of the River Thames, the new road would link to the A2 and M2 in Kent. On the north side, it would link to the A13 in Thurrock and the M25 in Havering.
Great Yarmouth Third Crossing	The Great Yarmouth Third River Crossing will link the A47 at Harfrey's roundabout to the port and the enterprise zone via South Denes Road on the other side of the River Yare. The bridge will ease traffic congestion on the town's roads, shortening journey times and improving journey reliability.
Gull Wing Crossing - Lowestoft	Construction of a third river crossing in Lowestoft, to the west of the existing Bascule Bridge, with an opening section to enable an increase in navigation. This provides a more resilient crossing of Lake Lothing.
Long Stratton Bypass	The proposed new A140 bypass will be a single carriageway road that will provide a new junction at Church Lane to the north, extending from this junction on the east side of Long Stratton in a southerly direction for approximately 3.9km, where it will re-join the existing A140 just south of Oakside farm.
Stanford-Le-Hope station	Provision of a new station including lifts, improved passenger facilities and integrated pedestrian, cycle and bus links.
A13 widening (including A13/A1014 junction)	Widening of the A13 from 2 to 3 lanes in both directions between the A128 (Orsett Cock roundabout) and the A1014 (The Manorway, Stanford-le-Hope).

Committed Scheme	Brief Description
North Essex Rapid Transit	Dedicated transit system to serve growing communities in Colchester and Tendring.
M11 junction improvements at J7, J8 incl new J7a	7A is a new Junction and J8 is revised layout. Both required to support growth in the Harlow/Stansted area.
Harlow and Gilston Sustainable Transport Corridors	Revised prioritisation of carriageway to promote active travel and improve capacity on the network.

3 Scheme Processing & Outputs

3.1 Schemes assessed

A total of 56 scheme long list options and packages were identified for assessment using the assessment framework. These options are listed in below, and a full breakdown of the schemes, their category and description are outlined in Appendix A. It should be noted that schemes must be regionally strategic in nature. Smaller scale Local Transport Plan projects were not considered for further assessment.

- Reopen rail lines in rural/coastal areas
- Widespread roll out of EV charging infrastructure
- Implement smart ticketing across the region
- Urban Active Travel Package
- Inter-urban Active Travel Package
- Rural Active Travel Package
- Develop an ambitious programme of traffic demand management measures across the region
- Ports Access Package
- Coastal Access Package
- Urban Sustainable Transport Package
- Rail improvements across Suffolk
- Infill rail electrification associated with Felixstowe and Thameside
- Army and Navy Sustainable Transport Package
- A12 Strategic Package North (A14 to A1152)
- A12 northern section (A1152 to Lowestoft) improvements
- A140/A1120 MRN
- East-West rail package (enhanced Norwich and Ipswich connectivity and capacity to Cambridge as Eastern section of national East-West Rail project)
- Felixstowe Port to the Midlands and the north rail freight improvements
- Haughley Rail Junction - double track (freight capacity)
- Other rail level crossing improvements not covered by the Ely / Felixstowe scheme
- Trowse Rail Bridge and Trowse lower junction double tracking
- Felixstowe rail branch line - doubling
- A11 Fiveways
- A14 package - junctions 37 A14/A412 (Newmarket), 43 and 44 (Bury St Edmunds), A14 to Expressway standard and improved interchange at Copdock (also see A12 corridor)
- South Essex bus metro - rapid transit
- Upgrade Wickford to Southminster rail line
- GEML Rail Link to London Gateway
- Southend Airport Access Package
- Harp House roundabout improvements
- Improved access to Canvey
- Southend Rapid Transit
- Dualling the A120 between Braintree and Marks Tey
- North Essex Rapid Transit – phase 2
- Braintree Branch Line rail improvements
- Clacton Town Centre Action Plan
- A133 Frating to Clacton enhancements

- Widespread roll out of fibre broadband and 5G
- A47 Tilney to East Winch dualling
- Norwich Western Link
- Acle Straight Dualling
- A47/A17 Pullover Junction, Kings Lynn
- GEML strategic rail package (Improvements in London, Essex, Suffolk and Norfolk)
- A12 Strategic Package South
- A1306 improvements and bus priority
- M25 junction 30 capacity enhancements
- Essex Thameside Rail improvements (identified in Essex Thameside study)
- A127 strategic package
- A127 Outer Relief Road - Southend and Essex
- A127 Northern Relief Road - Southend and Rochford
- Southend Congestion Relief Package
- West Anglia main rail line package
- A10 West Winch housing access road
- Rapid Transit - Cambridge to Uttlesford
- M11 J8 Long Term Scheme
- Stansted Airport Sustainable Access Package
- A13/A126 east facing slips

3.2 Assessment Outcomes

All the schemes listed above were assessed against the criteria set out in Appendix B, with those that are in the development and delivery stages assessed against more criteria as these had been developed beyond concept stage and typically had business cases or option assessment reports to provide evidence on which to base the scoring.

The results of the assessment are summarised in table 3 on the following page and table 2 below shows the scoring classifications.

Table 2. Scoring classifications

-1	Minor Adverse (scores equal to or between -0.5 and -1)
0	Neutral (scores between -0.4 and 0.4)
1	Slight beneficial (scores between 0.5 and 1.4)
2	Moderate beneficial (scores between 1.5 and 2)
3	Major beneficial (scores above 2)

Table 3. Summary of assessment results

Option	Pool	Strategic Aims	Connecting Towns & Cities	Decarbonisation	Global Gateways	Wider Benefits	Rural & Coastal	Critical Success Factors
Reopen rail lines in rural/coastal areas (see Long list for potential lines)	Idea							
Widespread roll-out of EV charging infrastructure to increase EV take up (including HGVs)	Idea							
Implement SMART ticketing across the region	Idea							
Braintree rail branch line improvements	Idea							
A47 Tilney to East Winch dualling	Development							
East - west rail package	Development							
South Essex bus metro	Development							
A14 Package	Development							
A120 Braintree to Marks Tey dualling	Delivery							
A12 Strategic Package North	Development							
Army & Navy Sustainable Transport Package	Development							
Urban Active Travel Package	Idea							
Inter-urban Active Travel Package	Idea							
Rural Active Travel Package	Idea							

3A/B Measures Assessment
Scheme Processing & Outputs

Option	Pool	Strategic Aims	Connecting Towns & Cities	Decarbonisation	Global Gateways	Wider Benefits	Rural & Coastal	Critical Success Factors
Ports Access Package	Idea							
Coastal Access Package	Idea							
Norwich Western Link Road	Development							
Develop an ambitious programme of traffic demand management measures across the region	Idea							
A10 West Winch Housing Access Road	Development							
A12 Strategic Package South (M25 - A14)	Development							
Southend Airport Sustainable Access Package	Idea							
Stansted Airport Sustainable Access Package	Idea							
Acle Straight Dualling	Development							
A47/ A17 Pullover Junction, King's Lynn	Development							
Clacton Town Centre Action Plan	Development							
GEML strategic railpackage	Development							
Rapid transit links from Cambridge to Uttlesford (formerly CAM).	Idea							
Improved Access to Canvey	Idea							

3A/B Measures Assessment
Scheme Processing & Outputs

Option	Pool	Strategic Aims	Connecting Towns & Cities	Decarbonisation	Global Gateways	Wider Benefits	Rural & Coastal	Critical Success Factors
A12 northern section (A1152 to Lowestoft) upgrade	Development							
North Essex Rapid Transit – phase 2	Idea							
A11 Fiveways	Development							
A133 Frating to Clacton enhancements	Idea							
Southend Rapid Transit	Idea							
Widespread roll out of fibre broadband and 5G	Idea							
Essex Thameside rail improvements	Development							
A127 Outer Relief Road Southend and Essex	Idea							
A127 Northern Relief Road Southend and Rochford	Idea							
A1306 improvements and bus priority	Development							
A127 strategic package	Development							
Southend Congestion Relief Package	Development							
A140 / A1120 MRN	Idea							
Upgrade Wickford to Southminster line	Idea							
GEML Rail link to London Gateway	Idea							

3A/B Measures Assessment
Scheme Processing & Outputs

Option	Pool	Strategic Aims	Connecting Towns & Cities	Decarbonisation	Global Gateways	Wider Benefits	Rural & Coastal	Critical Success Factors
M11 J8 Long Term Scheme	Idea							
West Anglia rail main line package	Development							
Urban Sustainable Transport Package	Idea							
Rail improvements across Suffolk 1. Line speeds 2. Increased track capacity for more services 3. Electrification/ decarbonisation	Idea							
Infill rail electrification associated with Felixstowe and Thameside	Idea							
Felixstowe Port to the Midlands and the north rail freight improvements 1. decarbonisation 2. Capacity	Development							
Haughley Rail Junction - double track (freight capacity)	Development							
Level crossing improvements not covered by the Ely/ Felixstowe scheme	Idea							
Trowse Rail Bridge and Trowse lower junction double tracking	Idea							
Felixstowe branch rail line - doubling	Idea							
Harp House Roundabout Improvements	Development							
M25 junction 30 capacity enhancements	Idea							
A13/ A126 east facing slips	Development							

3.3 Results

The outcomes of the assessment process show that generally sustainable and active travel transport packages, rapid transit schemes and rail schemes tended to have a greater impact in terms of how well they would meet the four strategic priorities in particular but also tended to have higher scores for wider impacts and their ability to meet overarching strategic aims.

Road capacity enhancement schemes were generally found to have a negative impact on decarbonisation based on current assumptions of the type and increased numbers of vehicles likely to use them. This is in part due to some of the decarbonisation criteria being focussed on modal shift along with air quality, which typically worsens when more traffic is attracted to a route. However, the majority of strategic road schemes scored well for their ability to support unlocking international gateways and connecting growing towns and cities, and while there is a focus on decarbonisation, the assessment showed that strategic road improvements would still contribute to addressing journey time, reliability and network resilience issues, which even in a high working from home scenario (see Stage 1C technical note) are likely to still be prevalent in the future. Therefore, while the strategy advocates a push to achieve modal shift both in terms of people trips and freight movements, the assessment suggests that strategic roads will still perform an important function in the movement of people and goods in the future. The assessment suggests that those trips that are being made on the road network could be encouraged to switch to alternative modes, including buses, rapid transit, active and shared transport solutions, and switch to fuels such as electric and potentially hydrogen, to better achieve the strategy goals.

Alternative fuel schemes themselves did not score particularly well in terms of their benefits against the majority of the strategic priorities as these focus on connectivity improvements which alternative fuel schemes don't necessarily achieve as standalone schemes. However, they do specifically benefit both the regional and national ambition to achieve net zero. Schemes that electrify the rail network or provide more electric vehicle charging points were assessed to be important in supporting the decarbonisation journey and could be implemented in conjunction with other measures to ensure all strategic outcomes are supported.

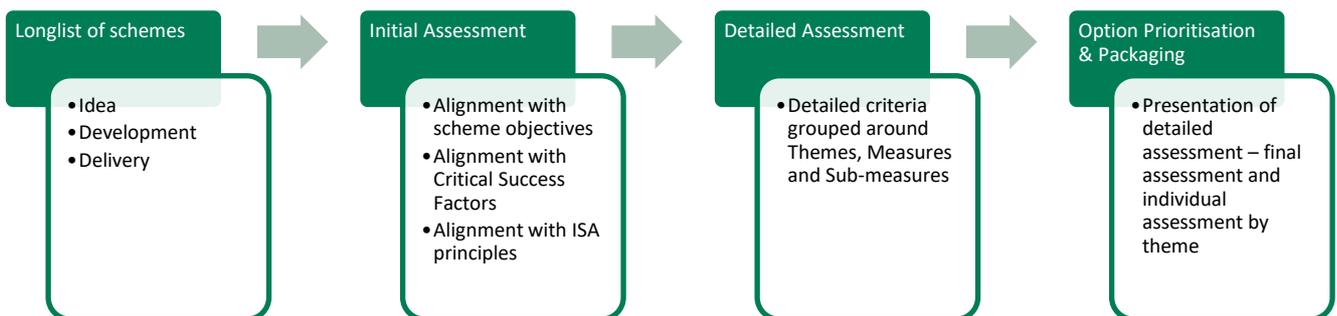
In summary the results of the assessment indicate that a concerted effort to accelerate delivery of as much sustainable and active travel infrastructure and services as possible across the region would support the Transport East Transport Strategy goals. However, it must also be acknowledged that there is a need to invest in the strategic road network to support the unlocking of the region's international gateways, aiding the flow of goods to the rest of the UK, and could be complemented by future projects that support changes to the way in which roads are used through more people-efficient modes such as rapid transit, which generally scored well in the assessment.

4 Summary and Conclusion

This technical note builds upon the strategic approach and identified long list schemes, forming the next crucial stage in the development of the strategy. It has outlined the methodology behind the development of the bespoke multi-criteria assessment framework for region and local schemes, informed by Stage 1 and Stage 2 outcomes.

Methodology

The overall purpose of the assessment framework is to prioritise schemes, offering transparency and reliability in decision making, giving clarity to other bodies including Network Rail and Highways England, through a single voice for the region. The development of this framework followed the following process, with four distinct stages assessing the options in the long list:



- Longlist of schemes – as the longlist of schemes developed contains schemes at varying stages of development, and therefore would have different levels of information available for assessment, thus potentially making them incomparable, schemes were categorised as follows.
 - 'Idea's pool' – projects that could deliver identified strategic priorities. These will include concepts, early feasibility studies and pre-Strategic Outline Business Cases. Although these will have considered options and alternatives, they will not have been subject to any in-depth assessment.
 - 'Development pool' – projects that are in development and have already been subject to a feasibility study or are currently developing or have completed a Strategic Outline Business Case that compares a short-list of alternative options for delivering the project.
 - 'Delivery pool' – projects where the development of a business case has achieved programme entry for delivery funding; acknowledging that planning consent may still be required. For these projects a preferred option has already been identified.
- Initial Assessment – removes unviable or out of scope options and identifies any early indicators of where mitigation may be required. A high-level assessment against strategy objectives and DfT Critical Success Factors (excluding VfM). Scores are given based on a 3-point risk-based scoring system (Low Risk, Medium Risk, High Risk or Positive Outcome, Neutral Outcome, Negative Outcome)
- Full Assessment – Allows options to be compared for a range of detailed criteria. Detailed scoring against specific criteria grouped by theme. Scored using a 7-point scale and considers benefits and opportunities (ranging from -3 to in line with WebTAG assessment).
- Option Prioritisation & Packaging – Scores from the Full Assessment are presented both as a final score and individually by theme to aid prioritisation. Opportunities to combine options into packages to maximise value can also be explored. A thematic score is calculated for each theme using an average of all the criteria scores for a that theme where a score has been provided. Following the calculation of thematic scores, a total score is then calculated by summing each of the theme scores where a theme score has been calculated (i.e. where at least one criterion within that theme has been scored).

Scheme assessment

A total of 56 strategic scheme long list options and packages were identified for assessment using the assessment framework. These schemes represent strategic and local highway and rail schemes, sustainable transport infrastructure and packages, technological interventions and schemes with a focus on placemaking.

The outcomes of the assessment indicate that the schemes that best meet the Transport Strategy strategic priorities, are best aligned to overarching strategic aims and have beneficial wider outcomes are those that focus on sustainable transport and active travel improvements, along with major rail schemes and rapid transit schemes. Many of these schemes are in the early stages of development or are still at initial idea / concept stage and therefore there is a need for investment to accelerate the development and delivery of these. However, the assessment also demonstrated that while strategic road schemes potentially will have an adverse impact on the region's ability to achieve net zero, there is a need for them to help support economic growth of both the region and the rest of the UK as they support and enable the unlocking of the international gateways within the region. As a result, it must be acknowledged that there will be a need for both people and goods movements on the strategic road network in particular and therefore measures to accelerate the switch to alternative fuels should also be prioritised.

Appendix A. Long list schemes

Project Ref	Priority Projects	Stage	Timescale	Brief Description
A	Regional Strategic Packages			
A1	Re-open rail lines in rural / coastal areas	Idea	5 - 10	To look at the potential for reinstating lines and improving rural connectivity for rail
A2	Widespread roll-out of EV charging infrastructure to increase EV take up (incl HGV's)	Idea	0 - 5	Charging infrastructure readily available to cater for and increase the demand for all electric vehicles including HGVs. Where possible, the electricity would be renewable and powered by the Transport East region's own energy coast source
A3	Implement SMART ticketing across the region	Idea	0 - 5	Greater integration of fares, ticketing, customer service and service planning for strategic and local passenger transport
A4	Urban Active Travel Package	Development	0 - 5	Building on existing Local Walking and Cycling Implementation Plans, a step-change in the investment in active travel measures to be implemented in urban areas across the region, in line with the recommendations from the Transport East Sustrans Report (e.g. Strategic traffic-free routes; 20-min neighbourhoods; Removed rat-running traffic from residential areas; Safe routes to schools; Clean air zones in urban centres; First-mile, last-mile integration with public transport).
A5	Inter-urban Active Travel Package	Idea	0 - 5	Building on existing Local Walking and Cycling Implementation Plans and the Sustrans National Cycle Network (NCN) Route Strategy, an upgrade of NCN between urban areas and implementation of new links (Strategic traffic-free routes; Integration with public transport hubs)
A6	Rural Active Travel Package	Idea	0 - 5	Building on existing Local Walking and Cycling Implementation Plans, this would comprise NCN upgrades in rural areas; implementation of river, road and rail crossings at key gaps in network; improved links in and between rural villages (Network of low-traffic walking and cycling routes between settlements and key attractors and transport hubs; Year-round accessibility, achieved by regular/seasonal maintenance; Integration with public transport; Biodiversity enhancement, for example natural corridors)
A7	Develop an ambitious programme of traffic demand management measures across the region.	Idea	0 - 5	A review of strategic measures to identify those most appropriate to support the reduction of traffic demand as set out in the Government's Transport Decarbonisation Plan, which could include options such as re-allocation of road space; innovation in transport sharing;

Project Ref	Priority Projects	Stage	Timescale	Brief Description
				fiscal measures; parking management; increased relative attractiveness of alternative modes.
A8	Ports Access Package	Idea	0 - 5	A strategic package of measures to support Freeports and expansion of other ports in the East. Measures to include addressing pinch points on road network and providing sustainable transport links to ports for workers in particular. N.B. Assumed to include King's Lynn port road access upgrade; Tilbury link road; A13/A1014 junction improvements; electrification of London Gateway; GEMIL rail link to London Gateway; rail freight capacity enhancements to north London lines; and access and North Tendring Access Package.
A9	Coastal Access Package	Idea	0 - 5	A strategic package of measures to address pinch points on key access routes to coast; implement / improve sustainable transport links to key coastal towns; implement / improve active travel links within key coastal towns. Could also include broader ideas such as a ferry link between Harwich and Felixstowe.
A10	Urban Sustainable Transport Package	Idea	0 - 5	A step-change in strategic investment and delivery of sustainable transport in our 75 towns and cities, to deliver goal 4 in the draft Transport Strategy.
A11	Infill electrification of rail associated with Felixstowe and Thameside	Idea	5 - 10	To benefit intermodal freight traffic, some "infills" are outside the Anglia region, where improvements would allow electric rather than diesel operation of freight to and from East Anglia
A12	Widespread roll out of fibre broadband and 5G	Idea	0 - 5	To enable greater level of home working and remote access to services, reducing the need to travel. Including expanding provision into rural areas

Project Ref	Priority Projects	Stage	Timescale	Brief Description
B	Connecting our Energised Coastal Communities			
B1	A47 Tilney to East Winch dualling	Idea	5 - 10	Reduce congestion, reduced delay, more reliable journeys, improved connectivity, improved road safety, removes traffic from settlements. Supporting housing and job growth. Improved pedestrian and cycling facilities
B2	Norwich Western Link	Development	0 - 5	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.
B3	Acle Straight Dualling	Development	5 – 10	The Acle Straight forms part of a strategic corridor between the two key growth areas of Norwich and Great Yarmouth. It is a single carriageway road approximately 11.5km in length which passes through the Broads National Park. The aim of the proposed scheme is to reduce overall journey times, congestion and delay along this section of the A47. It is also expected to also improve the resilience of the local road network, improve journey time reliability to and from Great Yarmouth, and reduce numbers of road accident casualties on the road.
B4	A47/A17 Pullover Junction, Kings Lynn	Idea	0 – 5	The A17/ A47/ Clenchwarton Road roundabout, known as the “Pullover Roundabout” is a large roundabout located to the south-west of King's Lynn. The idea is to provide a grade separated junction with a bridge/flyover and slip roads to ease congestion and improve reliability.

Project Ref	Priority Projects	Stage	Timescale	Brief Description
C	Connecting the Heart of East Anglia			
C1	GEML strategic rail package (Improvements in London, Essex, Suffolk and Norfolk)	Development	0 - 5	Improving frequency and journey time of passenger rail services between Norwich and London (outside of region also includes Bow Junction (Stratford) remodelling and facilitate better use of lines and platforms at Liverpool St to give improved services on Anglia services
C2	A12 strategic package South			Broken into the following sections; M25 – Chelmsford, Chelmsford bypass, Marks Tey to Colchester, Colchester to A14, the overall aim of the scheme is to improve capacity on the A12 between London and Ipswich, removing / reducing congestion to improve journey times and journey time reliability.
	<i>M25 to the A14, including a bypass of Chelmsford</i>	Idea	5 - 10	
	<i>J19 - J25 (Chelmsford to Marks Tey)</i>	Development	0 - 5	
C3	Army and Navy Sustainable Transport Package	Development	0 - 5	Junction improvement, new P&R and expanded P&R, improved walking, cycling and passenger transport facilities
C4	A12 strategic package North (A14 to A1152)	Development	0 - 5	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 A1152
C5	A12 northern section (A1152 to Lowestoft) improvements	Idea	5 - 10	A1152 – Lowestoft. To identify solutions to current constraints along this section of the A12. There are currently plans associated with the Sizewell C proposal to provide a two-village bypass from Stratford St Andrew to the A12/A1094 Friday St Junction
C6	A140/A1120 MRN	Development	0 - 5	New bypass local to Earl Stonham, to address congestion and safety issues at this junction. This will support future local planned growth in the district.

Project Ref	Priority Projects	Stage	Timescale	Brief Description
D	Cross-country connectivity			
D1	East-West rail package (enhanced Norwich and Ipswich connectivity and capacity to Cambridge as Eastern section of national East-West Rail project)	Development	5 – 10	To deliver benefits of improving the Eastern Section to deliver a direct rail service from Oxford to Ipswich and Norwich. Additional freight route direct to Southwest England Additional platforms needed at Cambridge station to tenable East-West services
D2	Felixstowe Port to the Midlands and the north rail freight improvements	Development	5 – 10	Network Rail Decarbonisation strategy and Felixstowe to Nuneaton rail study, including the electrification of the Felixstowe branch line and a wider package of schemes to boost freight service capacity to be developed/delivered in a phased approach.
D3	Haughley Rail Junction – double track (freight capacity)	Development	0 – 5	Creation of a full two track junction to facilitate increased numbers of freight and passenger services along with improving efficiency of the junction.
D4	Other Rail level crossing improvements not covered by the Ely / Felixstowe scheme	Idea	5 - 10	Replacement of remaining level crossings not covered by Ely / Felixstowe scheme with bridges to enable increased rail paths to increase freight and passenger services along with faster services.
D5	Trowse Rail Bridge and Trowse lower junction double tracking	Idea	5 - 10	Replacement of the existing single track swing bridge with a double track bridge and remodelling of the Trowse lower junction. This will improve capacity and journey times to / from Norwich and unlock housing growth.
D6	Felixstowe rail branch line - doubling	Idea	10+	Improve capacity to accommodate increased freight services and support decarbonisation
D7	A11 Fiveways	Development	5 - 10	Upgrading the A11 fiveways junction, a roundabout where the A11 meets the A1065 and the A1101 near Barton Mills in Suffolk. To address capacity and safety issues.
D8	A14 package - junctions 37 A14/A412 (Newmarket), 43 and 44 (Bury St Edmunds), A14 to Expressway standard and improved interchange at Copdock (also see A12 corridor)	Development	5 - 10	Improvements to junctions 37 A14/A412 (Newmarket), 43 and 44 (Bury St Edmunds) to provide more capacity, upgrade of the A14 to Expressway standard improving journey times and reliability and improved interchange at Copdock to help facilitate freight movements to Felixstowe.

Appendix A. Long list schemes

Project Ref	Priority Projects	Stage	Timescale	Brief Description
D9	Rail improvements across Suffolk	Idea	5 - 10	East Suffolk and Newmarket line speed improvements. Re-signalling to reduce headways in the Bury St Edmunds area to accommodate proposed service increases. Electrification of sections including between Haughley Junction and Peterborough. Network Rail is leading on a Suffolk Connectivity Study, due for completion 2022

Project Ref	Priority Projects	Stage	Timescale	Brief Description
E	South Essex corridor			
E1	A1306 improvements and bus priority	Development	0 - 5	Reducing congestion and rat-running on local roads. Providing bus priority and walking and cycling infrastructure
E2	M25 junction 30 capacity enhancements	Idea	5 - 10	Major capacity enhancements at J30, potentially a grade separated link from the A13 to the M25 north, to address current congestion and enable future growth in Thurrock, South Essex and the Thames Estuary areas.
E3	Essex Thameside improvements (identified in Essex Thameside study)	Idea	5 - 10	A number of passenger and freight improvements were identified in the Essex Thameside Study. These include signalling enhancements, train lengthening, increased standing density on trains through fleet reconfiguration, improvements to stations and electrical power and capacity upgrades for freight services
E4	A127 strategic package	Development	5 - 10	Capacity and safety improvements including sustainable options and potential re-trunking of the A127 and schemes to address local pinch points linked to the delivery of growth along the corridor.
E5	A127 Outer Relief Road - Southend and Essex	Idea	5 - 10	New link from Southend Airport to Rettendon Turnpike.
E6	A127 Northern Relief Road - Southend and Rochford	Idea	5 - 10	New and upgraded A127 between A127 / B1013 Tesco junction towards Shoeburyness.
E7	Southend Congestion Relief Package	Development	0 - 5	Reduce congestion on local roads thereby improving journey times on key routes in Southend and to London Southend Airport
E8	South Essex bus metro - rapid transit	Idea	5 - 10	Rapid transit linking existing settlements and destinations alongside providing flexibility to extend to new areas being planned in the sub-region. Picking up Havering, Thurrock, Brentwood, Basildon, Southend and Chelmsford.
E9	Upgrade Wickford to Southminster line	Idea	5 - 10	Provision of passing loops and/or twin tracking to enable increased frequency of services to two trains per hour between Wickford and Southminster encouraging modal shift.
E10	GEML Rail Link to London Gateway	Idea	10+	Long term proposal to remove rail freight from London.

Appendix A. Long list schemes

Project Ref	Priority Projects	Stage	Timescale	Brief Description
E11	Southend Airport Access Package	Idea	0 - 5	Integrated package to support access to Southend Airport – could be linked into local growth proposals. Potential to develop airport as a transport hub.
E12	Harp House roundabout improvements	Development	0 - 5	Pinch point Scheme to improve congestion and access to Southend Airport. Delivery timescale March 2024
E13	Improved access to Canvey	Idea	0 - 5	Improved or new access to Canvey Island including improved sustainable transport links.
E14	Southend Rapid Transit	Idea	5 - 10	Tram network linking to Rochford, Rayleigh, Shoeburyness and Hadleigh.
E15	A13/A126 east facing slips	Development	0 – 5	The scheme aims to achieve a step-change in connectivity, improve the operation of the highway network by reducing congestion, achieve environmental improvement for local communities and to provide capacity for planned growth. The scheme seeks to address the lack of a direct east facing connection from the strategic A13 towards the major Lakeside Basin commercial and retail area in West Thurrock. Access is currently along congested local roads, or by using the west facing access at the A13/A126 interchange and U-turning at M25 Junction 30, increasing congestion at that location.

Project Ref	Priority Projects	Stage	Timescale	Brief Description
F	East-West Growth Corridor			
F1	Dualling the A120 between Braintree and the A12	Delivery	0 - 5	The section of the A120 between Braintree and the A12 is stifling economic growth. Unreliable journey times, congestion-related delays and safety issues affect tens of millions of journeys every year. These existing issues will only worsen over time if left unaddressed as the demand for travel on the A120 corridor grows. The scheme is likely to have a positive impact on the RIS Performance Specification key performance indicators set out by Highways England. These include making the network safer, supporting the smooth flow of traffic and encouraging economic growth.
F2	North Essex Rapid Transit – phase 2	Idea	5 - 10	Additional to HIF funded scheme - Expansion of RTS beyond initial urban corridor to QBP & routes (including operations) further across Colchester Urban Area and expanding out to Clacton, Braintree and Stansted.
F3	Braintree Rail Branch Line improvements	Idea	5 - 10	Provision of a passing loop on Braintree branch line to increase service frequency from 1 train per hour to 2 trains per hour encouraging modal shift and reducing rail heading to Witham and potentially Beaulieu Park Station in future.
F4	Clacton Town Centre Action Plan	Development	0 - 5	Scope includes parking, access and travel, streetscape and public realm, digital technology and data
F5	A133 Frating to Clacton enhancements	Idea	5 - 10	Longer term corridor improvement of A133 to dual carriageway standard for multi modal use.

Appendix A. Long list schemes

Project Ref	Priority Projects	Stage	Timescale	Brief Description
G	UK Innovation Corridor			
G1	West Anglia main line rail package	Development	0 - 5	Stansted Line capacity works, journey time improvements, station and local access improvements, and improvements to customer experience. There is an expectation for the delivery of Crossrail 2.
G2	A10 West Winch housing access road	Development	0 - 5	An effective bypass of West Winch relieving congestion and delay for strategic A10 traffic and providing environmental and community relief to the village
G3	Rapid Transit - Cambridge to Uttlesford	Idea	0 - 5	Linking growth locations in North Uttlesford with employment opportunities in Cambridge
G4	M11 J8 Long Term Scheme	Idea	5 - 10	Junction improvements to provide capacity, resilience and improve journey times and reliability to support airport growth and new homes.
G5	Stansted Airport Sustainable Access Package	Idea	0 - 5	Package of investment to support sustainable access to Stansted. Development of Stanstead as a transport hub.

Appendix B. Option Assessment Criteria

Theme	Measure	Detail	Sub-Measure
Decarbonisation	De-carbonisation	To what extent does the option help to de-carbonise existing trips? For example through electrification	Embodied Carbon Operational Carbon
	Modal shift to active travel	To what extent does the option potentially increase modal shift to active travel?	
	Modal shift to PT	To what extent does the option increase modal shift from private car to passenger transport?	
	Aggregation of services / Reducing the impacts of travel	To what extent does the option reduce the need to travel? E.G. through better 'at home' provisions or co-location of services	
	Air Quality	To what extent does the option benefit air quality in the vicinity?	
	Net Environmental Gain	Are there any opportunities for net environmental gain?	
Connecting Growing Towns and Cities	Connecting our growing towns and cities	To what extent does the option connect growing towns and cities faster and more frequently?	
	Supporting homes & jobs (urban)	To what extent could the option support homes and jobs?	Directly supports Indirectly supports
	Pinch points	To what extent does the option impact any existing pinch points on the network where congestion or connectivity is poor	
	Viable alternative to the private car	To what extent does the option offer the potential for mode shift away from the private car by providing a comparable service?	
	Connecting people to essential social services	Could the option better connect people living in urban areas to essential social services?	Education/Skills Health
Accessibility and Connectivity for Rural and Coastal Communities	Energised rural and coastal communities	To what extent does the option connect people, businesses and freight in coastal or rural areas?	
	Supporting homes & jobs (rural and coastal)	To what extent could the option support homes and jobs?	Directly supports Indirectly supports
	Connects people in coastal / rural areas to jobs (in any area)	To what extent does the option improve people living in rural or coastal areas access to jobs (in any area)	
	Connects tourism hotspots and transport hubs	To what extent does the option connect rural and coastal tourism spots to regional transport hubs (including via active travel); encouraging tourism in the region?	
	Connecting people to essential social services	Could the option better connect people living in rural and coastal areas to essential social services (in any area)?	Education/Skills Health
Unlocking International Gateways	Global Gateways	To what extent does the option improve connectivity (for both passengers and freight) to global gateways?	From within the region From outside the region From towns and cities within region
	Reliability (corridor)	What are the scale of benefits expected from improvements to reliability to and from international gateways (for both passengers and freight)?	
	Increases freight capacity	To what extent does the option improve freight capacity at (and on links to and from) key gateways? EG by removing pinch points	

Theme	Measure	Detail	Sub-Measure
Wider Benefits	Health	Is the scheme likely to impact health and particularly health equality outcomes?	Through increased exercise Through improved air quality Mentally, through improved wellbeing
	Affordability	Is the scheme likely to be affordable to all (Equality)? Will different ticketing options and discounts be available? Is there a cost to using the option?	
	Safety	How likely is the option to reduce collision/incident rates on the network?	
	Urban Realm	To what extent does the option improve placemaking or the urban realm?	
	Personal Security	How likely is the option to improve personal security and equality through either the reduction of opportunities for crime or through improvements to perceptions of security (where this perception would otherwise prevent potential users from travelling)? Consider both Staff and Travellers (including groups which may be disproportionately impacted including women, ethnic minority communities and LGBTQ+ people)	
	Trip Purposes	Does the option serve a range of trip purposes for a range of people (equality assessment)? For example local education or care trips, commuting trips and shopping trips?	
	Journey Quality	Cleanliness/information/crowding/rest-rooms	
Accessibility	Is the scheme accessible to a range of people (equality assessment) including people with (mental or physical) disabilities and/or those travelling encumbered with small children/bags?		
Critical Success Factors	Political Support	What level of stakeholder support is the scheme likely to see?	Political Public
	Buildability	Are there any constraints which preclude construction?	
	Planning/CPO	Does the scheme require statutory planning permissions or processes? How likely are these to be granted?	
	Engineering/technology	Are there any major engineering or technological constraints?	
	Supplier Capability/Capacity	What is the risk that suppliers will be unable to meet the needs of the scheme (e.g. production capability/resources/skilled labour)	
	Opportunities to support the Local Supply Chain	To what extent is the scheme likely to be constructed and operated by local suppliers?	
	Strategic Fit with Govt. priorities	How well does the option fit with wider national strategic priorities?	
	Construction Costs	How much does the option cost? State level of confidence in notes section	
	Operational Costs	Is the scheme likely to generate revenue, or will it require funds to operate? State level of confidence in notes section	
	Funding Availability	Is funding likely to be forthcoming?	
Strategic Fit	Modal shift to active travel	To what extent does the option potentially increase modal shift to active travel?	
	Modal shift to PT	To what extent does the option increase modal shift from private car to passenger transport?	
	Levelling Up Agenda	To what extent does the option benefit areas identified within the levelling up agenda in line with the levelling up index criteria?	Productivity, Unemployment and Skills Journey times to employment centres (noting that car journeys are weighted more heavily than PT or cycling journeys) Better utilisation of existing empty employment sites and homes
	Aggregation of services / Reducing the impacts of travel	To what extent does the option reduce the need to travel? E.G. through better 'at home' provisions or co-location of services	
	Reliability	What are the scale of benefits expected from improvements to reliability?	
	Journey Times	What are the scale of benefits expected from improvements to journey times?	
	Trip Purposes	Does the option serve a range of trip purposes? For example local education or care trips, commuting trips and shopping trips? Are people transported radially into city centres or	