

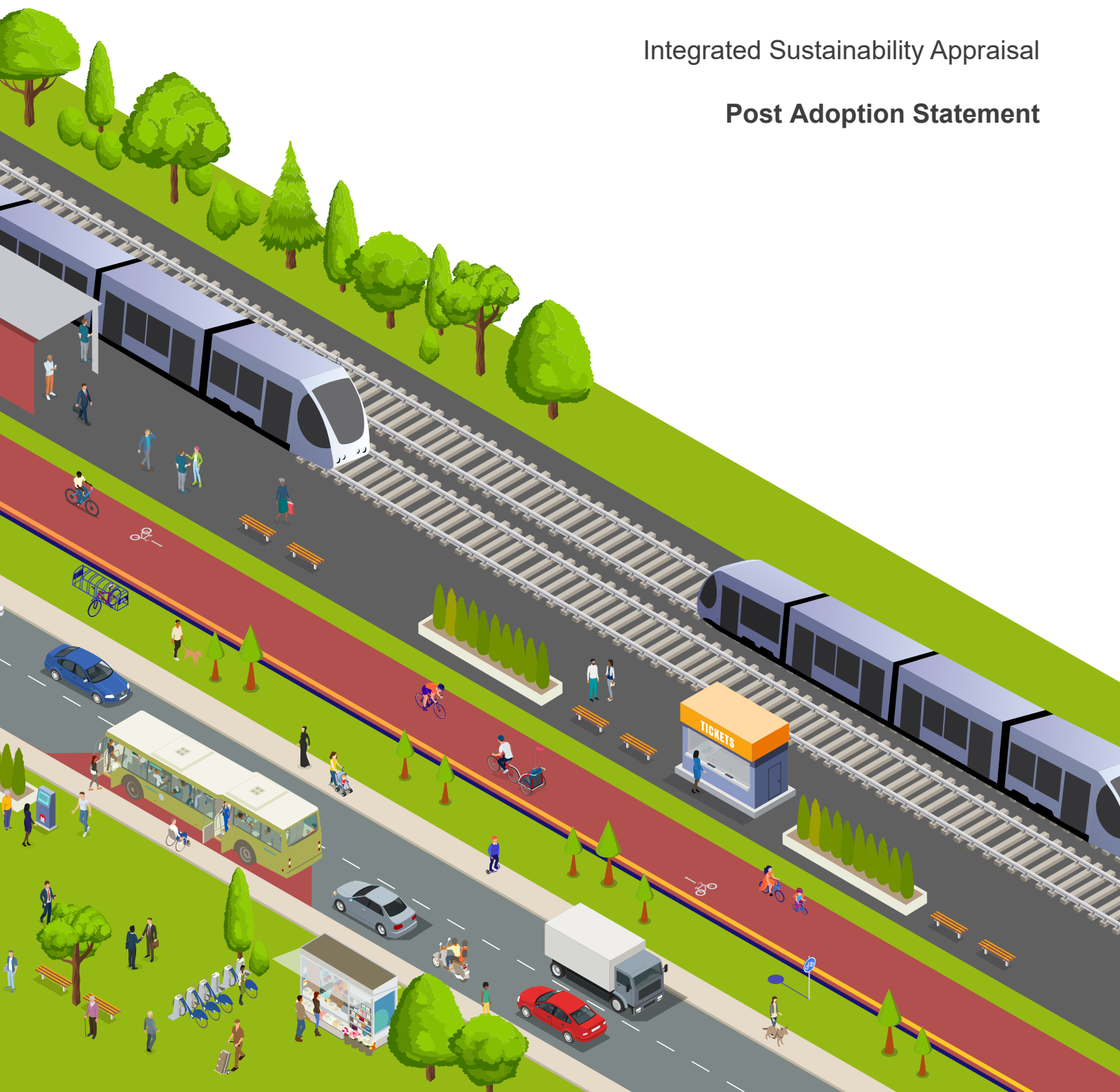
TRANSPORTEAST

Jacobs

Transport East Transport Strategy

Integrated Sustainability Appraisal

Post Adoption Statement



List of Abbreviations

Acronym	Terminology
ALC	Agricultural Land Use
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
AQO	Air Quality Objective
BA	Broads Authority
CSA	Community Safety Assessment
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
ECC	Essex County Council
EcoW	Ecological Clerk of Works
EPSML	European Protected Species Mitigation License
EqIA	Equality Impact Assessment
EV	Electric Vehicle
GVA	Gross Value Added
HE	Historic England
HIA	Health Impact Assessment
HRA	Habitats Regulation Assessment
IMD	Index of Multiple Deprivation
IROPI	Imperative reasons of overriding public interest
ISA	Integrated Sustainability Appraisal
JNCC	Joint Nature Conservation Committee
JSNA	Joint Strategic Needs Assessment
LEP	Local Enterprise Partnership
LNR	Local Nature Reserves
LPAs	Local Planning Authority
LSOA	Lower Layer Super Output Areas

Acronym	Terminology
NCA	Natural Capital Assessment
NCA	National Character Area
NEA	National Ecosystem Assessment
NERC	Natural Environment and Rural Communities
NIA	Noise Impact Area
NMVOG	Non-methane volatile organic compounds
NNR	National Nature Reserves
NO ₂	Nitrogen Dioxide
NPPF	National Planning Policy Framework
NSIPs	Nationally Significant Infrastructure Projects
NTS	Non-Technical Summary
ONS	Office for National Statistics
PHE	Public Health England
PPS	Plans, Policies and Strategies
PRoW	Public Right of Way
RIGS	Regionally Important Geological Sites
SAC	Special Areas of Conservation
SEA	Strategic Environmental Assessment
SFOE	Suffolk Friends of the Earth
SO ₂	Sulphur Dioxide
SPA	Special Protection Areas
SPZ	Source Protection Zone
SSSI	Sites of Special Scientific Interest
TAN	Transport Action Network
TE	Transport East
TESIP	Transport East Strategic Investment Programme
WHO	World Health Organisation

Glossary

Term	Definition
Integrated Sustainability Appraisal	Combined environmental social and economic assessments
Accident	An accident involves personal injury occurring on the public highway (including footways) in which at least one road vehicle or a vehicle in collision with a pedestrian is involved and which becomes known to the police within 30 days of its occurrence. (Definition from Department of Transport)
Assessment	An umbrella term for description, analysis, and evaluation.
Air Quality Management Area (AQMA)	A non-permanent designation created if monitoring reveals that statutory air quality thresholds are being exceeded or will be exceeded in the near future.
Baseline	The existing conditions which form the basis of the environmental assessment
Bedrock	Hard rock that lies beneath a superficial cover of soils and sediments.
Biodiversity	Biological diversity, or richness of living organisms present in representative communities and populations.
Catchment	The area contributing flow to a point on a drainage system.
Community	Assemblage of interacting populations that occupy a given area or region.
Conservation	Preservation or restoration of the natural environment and wildlife.
Ecosystem	A biological community of organisms interacting with one another and their physical environment.
Ecosystem Services	The direct and indirect benefits provided by natural capital stocks/ assets.
Effect	The result of change on specific environmental resources or receptors.
Environmental Net Gain	Refers to taking steps to mitigate the high potential impact of infrastructure projects on natural capital, leaving the environment in a measurably better state compared to the pre-development baseline.
Habitat	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities
Habitat Regulations Assessment	Under the Habitats Regulations, all competent authorities must consider whether any plan or project will have a 'likely significant effect' on a European site. If so, they must carry out an 'appropriate assessment' (AA). This is known as Habitats Regulations Assessment (HRA).
Landscape	Human perception of the land, conditioned by knowledge and identity with a place or setting.
Lower Layer Super Output Areas	A geographic hierarchy designed to improve the reporting of small area statistics in England and Wales.
Mitigation	Measure to avoid, reduce or offset potential adverse impacts.

Term	Definition
Natural Capital	Natural Capital is classified as the world's stock of natural resources, which includes geology, soils, air, water and living organisms.
River Basin District	The area of land and sea, made up of one or more river basins, together with the associated groundwater and coastal waters, identified by the Water Framework Directive as the main unit for the management of river basins.
Scoping Report	The purpose of a scoping stage is to describe the environmental context, by establishing the relevant baseline information, reviewing other relevant PPS and identifying environmental problems and opportunities. Scoping Reports also provide a proposed methodology to be used for assessing potential environmental effects.
Sites of Special Scientific Interest (SSSI)	Designated areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species in the UK. The site network is protected under the provisions of Sections 28 and 19 of the Wildlife and Countryside Act 1981 as well as the Amendment Act 1985 and the Environmental Protection Act 1990.
Soft Estate	refers to the environment (inclusive of natural habitats) which line transport infrastructure.
Special Area of Conservation (SAC)	An area designated under the EC Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Special Protection Area (SPA)	An area designated under the Wild Birds Directive (Directive74/409/EEC) to protect important bird habitats.
Source Protection Zone (SPZ)	Protection areas around public water supply sources
Strategic Environmental Assessment	The process by which information about the environmental effects of proposed plans, policies and programmes are evaluated under the SEA regulations.
Water Quality	The chemical and biological status of various parameters within the water column and their interactions, for example dissolved oxygen, indicator metals such as dissolved copper, or suspended solids

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1 Introduction and Background – ISA process

1.1 Background to the Transport East Transport Strategy

Transport East is the Sub-national Transport Body for Norfolk, Suffolk, Essex, Southend-on-Sea and Thurrock. The partnership provides a single voice for councils, business leaders and partners on the region’s transport strategy and strategic transport investment priorities. The partnership is developing its first Transport Strategy which aims to provide a sustainable strategic approach underpinning the region’s future transport investment and support Transport East’s ambitious and inclusive economic, social and environmental goals for the region to 2050.

Transport East currently has a pre-statutory status and while this also affects the status of the strategy and the legal requirements for environmental assessments, the intention is that preparation of the strategy will follow the same process as for a statutory transport plan. Transport East is therefore undertaking an Integrated Sustainability Appraisal to inform the development of the Strategy as part of ensuring that opportunities for enhancement are included and potential constraints are addressed by the Strategy.

The vision for the Transport East Transport Strategy is to create a thriving economy for the East, with fast, safe, reliable, and resilient transport infrastructure driving forward a future of inclusive and sustainable growth for decades to come. **Error! Reference source not found.** shows how the Transport Strategy will help deliver the goals for the region.

How will the strategy help achieve our goals?

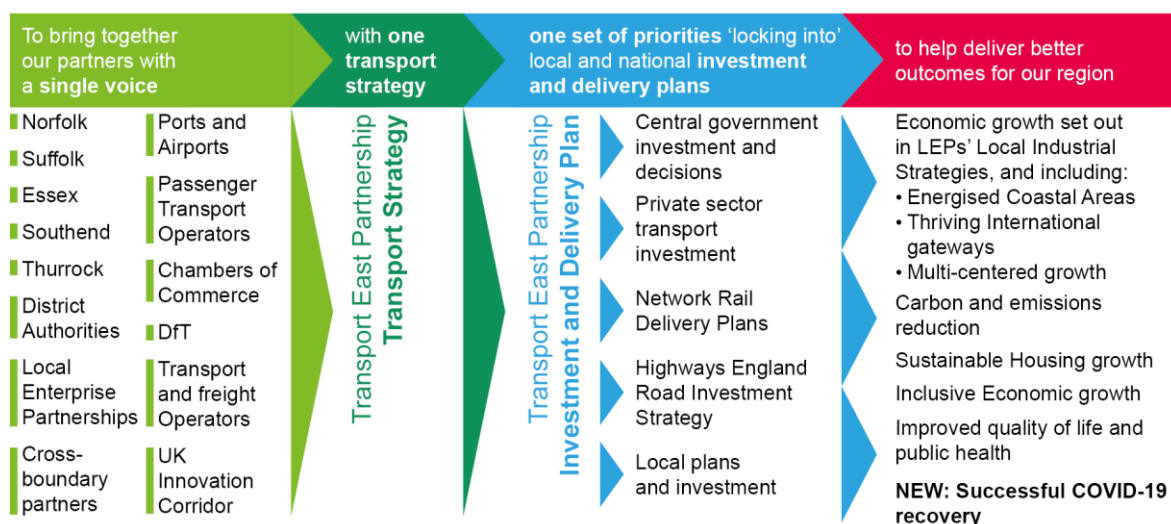


Figure 1.1 The role of the Transport Strategy

The audience for the Transport Strategy is wide-ranging and the aim is that the Strategy will provide:

- Confidence to national decision-makers and delivery bodies to invest in the region: 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.

The Transport Strategy was developed following a comprehensive review of existing strategies and policy documents to identify current and future opportunities and the challenges faced by the region. This review was supported through extensive engagement with local authorities, business leaders and other partners. This process identified important wider outcomes that the Strategy should contribute to delivering, four strategic priorities and six core movement corridors.

The review included developing an evidence base comprising a series of “deep dive” studies (<https://www.transporteast.org.uk/consultation-documents>) covering the region’s road and rail network, international gateways, rural and coastal communities, and the specific role of transport in economic growth.

The draft Transport Strategy and draft Strategic Investment Programme (SIP) approach were published for an 8 week consultation between 2nd December 2021 and 30th January 2022 together with the integrates Sustainability Appraisal (ISA) and draft HRA screening report. The consultation was supported by online engagement events.

Following the end of consultation, comments received have been reviewed and the analysis on responses are reported in a Consultation Report. The Transport Strategy and SIP have been revised and updated to take account of comments where appropriate and new information.

The ISA and draft HRA have also been updated to take account of comments received as well as the revisions to the Transport Strategy and SIP and the results of the Phase 1 carbon emissions study undertaken by Energy Systems Catapult (ESC). These documents are all available on the Transport East website.

Separate volumes of the ISA and HRA are provided for the Transport Strategy (ISA Volume 1) and the SIP (ISA Volume 2) to assist with future revision and updating.

The ISA Post Adoption Statement (this document) is provided alongside the final Transport Strategy and SIP.

1.2 Geographical Scope of Transport East

The Transport East region is bordered by three other sub-national transport bodies; Midlands Connect, England's Economic Heartland and Transport for the South East (**Error! Reference source not found.**). The draft Transport Strategy addresses links to the north, west and south, as well as the needs of the Transport East area.

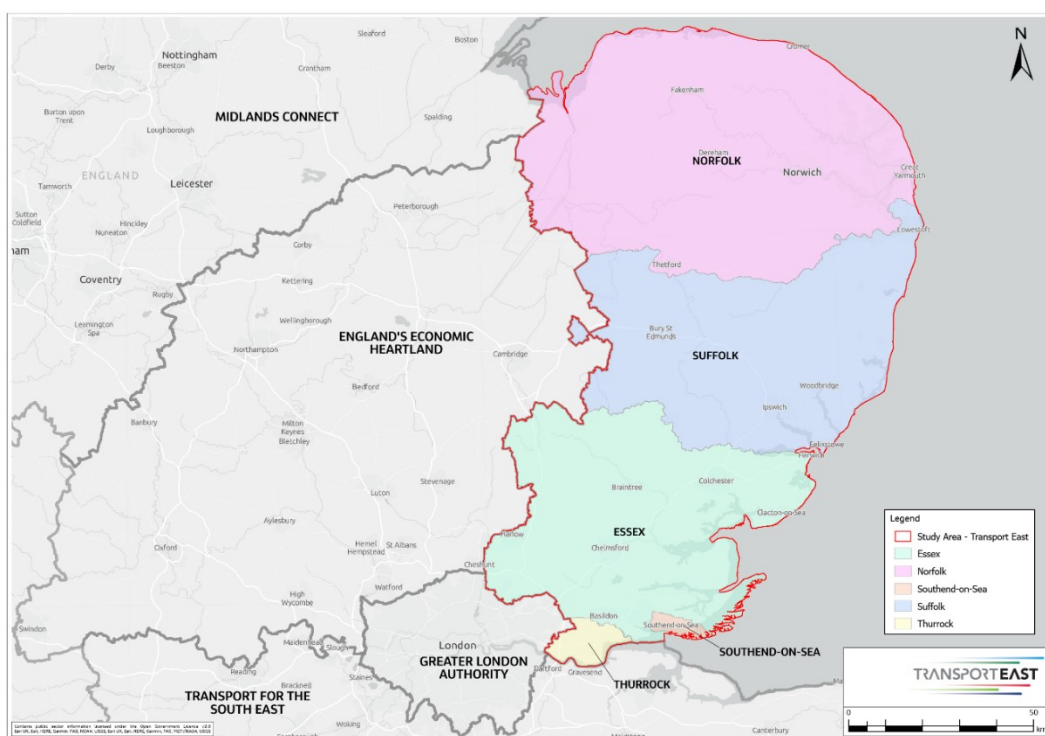


Figure 1.2 Location of Transport East

Transport East comprises of three county councils (Essex, Norfolk and Suffolk) as well as two Unitary Authorities (Southend-on-Sea and Thurrock), these five authorities are also transport authorities. It also comprises of 24 district/borough authorities and two Local Enterprise Partnerships (New Anglia LEP and South East LEP).

The region also has a number of significant designations, including three Areas of Outstanding Natural Beauty (AONBs – Norfolk Coast, Suffolk Coast & Heaths, and Dedham Vale), and The Broads which has status equivalent to a National Park.

1.3 Temporal Scope of Transport East

The Transport East Transport Strategy will be a plan to 2050. The best performing solutions to achieve the strategic actions of each of the four pathways are identified as priority schemes in a draft Strategic Investment Programme (SIP) for the Region, which sets out clear timescales for the creation of a pipeline of solutions to come forward over the strategy's lifetime. It is currently proposed that this will be updated annually and reviewed every 3 – 5 years to enable the strategy and delivery programme to adapt to the latest government objectives, funding approach and reflect new scheme proposals and progress against identified priorities.

1.4 Integrated Sustainability Appraisal (ISA) Process

Transport East is committed to improving the environmental, social, and economic wellbeing of the Region as indicated in the wider outcomes studies outlined in Section 2. As part of this commitment, Transport East is undertaking an Integrated Sustainability Appraisal (ISA) to inform the development of the Transport Strategy.

An ISA is a process for assessing the social, economic, and environmental impacts of a plan or strategy in a systematic and transparent way with the aim that sustainable development principles will underpin the strategy.

What are sustainable development principles?

According to the Brundtland Commission's report, *Our Common Future*, (1987), sustainable development means "*meeting the needs of the present without compromising the ability of future generations to meet their needs.*" The concept is often broken into three core concepts or "pillars": economic, environmental, and social.

"economic sustainability" focuses on the portion of natural resources that provide physical inputs for economic production, including renewable and exhaustible resources.

"environmental sustainability" adds greater emphasis on the "life support systems," such as the atmosphere or soil, that must be maintained for economic production or human life to even occur and this includes the need for example to address climate change, avoid loss of biodiversity, prevent pollution and reduce waste.

'social sustainability' focuses on the human effects of economic systems, and the quality of life, well being and health, promoting inclusion and combating inequality.

How is sustainable transport defined?

Transport enables the mobility of people and goods, enhancing economic growth and livelihoods while improving access to quality services, such as health, education and finance. It strengthens connectivity at all levels, helping integrate economies, improving social equity, enhancing rural-urban linkages and building resilience. There is also recognition of negative environmental, social and health impacts.

Sustainable transport seeks to fully realize the benefits while avoiding or alleviating the negative effects and can be defined as:

"the provision of services and infrastructure for the mobility of people and goods—advancing economic and social development to benefit today's and future generations—in a manner that is safe, affordable, accessible, efficient, and resilient, while minimizing carbon and other emissions and environmental impacts" (UN, October 2016)

Sustainable transport also needs to reflect commitments to achieve net zero carbon emissions, support nature recovery, provide biodiversity and environmental net gain and ensure access to transport is inclusive and equitable.

The ISA is based around the Strategic Environmental Assessment (SEA) process and has five key stages (**Error! Reference source not found.**), including an initial scoping stage providing context and focus for the assessment, and iterative assessment of the developing plan, followed by consultation on the assessment and draft strategy documents. Consultation responses are taken into account in the finalisation of the strategy and a statement is then published identifying how the ISA has been taken into account. The final stage is to monitor the implementation of the strategy and environmental and social impacts.



Figure 1.3 Key Stages in the ISA process

ISA Assessments

The Integrated Sustainability Appraisal (ISA) incorporates:

- Strategic Environmental Assessment (SEA) in accordance with the Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/ 1633, “2004 Regulations” as amended) (SEA regulations).
- Health Impact Assessment (HIA) using guidelines set out by the Public Health Observatories.
- Equality Impact Assessment (EqIA), as required by section 149 of the Equality Act 2010, as amended.
- Community Safety Assessment (CSA) as required by the Crime and Disorder Act 1998 and the Police and Justice Act 2006, as amended.
- Habitats Regulations Assessment (HRA) as required by the Conservation of Habitats and Species Regulations 2017, as amended.
- Natural Capital assessment to meet requirements in Government’s 25 Year Environment Plan and the 2021 Environment Act in relation to biodiversity net gain.

Further detail for each type of assessment is provided below.

Strategic Environmental Assessment

SEA is a means of systematically assessing the likely impact of a public plan, programme or strategy on the environment. SEA aims to offer greater protection to the environment by ensuring public bodies and those organisations preparing plans of a ‘public character’ (in this case, Transport East) consider and address the likely significant environmental effects.

SEAs are required under the SEA regulations¹, which transpose the SEA Directive (2001/42/EC). An SEA is mandatory for any plans, programmes or strategies which cover the following sectors: agriculture, forestry, fisheries, energy, industry, transport, waste or water management, tourism, town and country planning or land use and which set the framework for future development consent of projects subject to EIA regulations.

Qualifying plans under the SEA regulations as those which are ‘subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government and required by legislative, regulatory or administrative provisions’. Currently Transport East and the Transport Strategy under development does not have this formal status but there is commitment to undertake assessment complying with the regulatory requirements as part of supporting sustainable development objectives.

SEA is an iterative process involving collecting relevant data and establishing evidence of current baseline conditions and future trends, assessing potential environmental effects and proposing mitigation measures and recommendations to address the environmental effects identified at a strategic level.

Key guidance on SEA followed for the assessment approach for the TE Transport Strategy is set out in the *Planning Practice guidance on SEA and Sustainability Appraisal (2015)*² and the *Practical*

*Guide to SEA (2005)*³. In addition, consideration is given to the Department for Transport's Transport Analysis Guidance (TAG) including *TAG A3 Environmental Impact Appraisal (2019)*⁴ and *TAG A4.1 Social Impact Appraisal (2020)*⁵ in so far as they address qualitative assessments and define topic area issues and also *TAG Unit 2.1 Strategic Environmental Assessment for Transport Plans and Programmes*⁶.

An assessment framework is developed comprising objectives and assessment criteria relevant to the area and strategy proposals based on an understanding of environmental issues and opportunities from the policy and baseline review. This also forms the framework for integrating the requirements of each of the assessments below.

Natural Capital Assessment

The Government's 25-year Environment Plan and the Environment Act 2021 introduce requirements for the use of natural capital assessment and the concept of infrastructure development providing biodiversity and environmental net gain. These requirements and their implications for schemes will be considered in the ISA and recommendations for the draft Transport Strategy on how these can be taken forward.

A natural capital approach can be used to understand the interdependencies between the natural environment, society and the economy, so that natural capital is considered holistically and integrated appropriately within decision making.

There are several policy and guidance documents which have identified the potential for transport infrastructure to contribute to the restoration and enhancement of natural capital and ecosystem services (particularly through proactive management of the 'soft estate') and these include:

- A Natural England report in 2014, investigating how land within or adjacent to transport corridors could be used or enhanced for green infrastructure that delivers biodiversity gain, ecological connectivity, and ecosystem services.
- The Environment Agency's Achieving Net Zero document⁷, containing information on grassland management, with a focus on road verges. It identifies management measures that could improve the ecosystem service provision of road verges, including carbon sequestration.
- The National Infrastructure Commissions' Natural Capital and Environmental Net Gain discussion paper, considering the impact of infrastructure development on natural capital assets, identifying current approaches to natural capital and environmental net gain, and setting out next steps to ensure the impact of infrastructure on natural capital is understood and addressed.⁸

Health Impact Assessment

Health Impact Assessment (HIA) is a process in which the likely or potential health effects on populations of a proposed plan or project are identified along with the potential mitigation methods to reduce or avoid any negative impacts. The process will also seek to identify opportunities to maximise benefits.

There is no formal requirement for HIA or specific methodology to be followed but there is good practice and policy guidance which can be applied. The approach taken for this ISA is to include and combine the HIA assessment within the ISA 'Health' topic throughout the assessment. The approach used for the HIA follows guidelines set out by the Public Health Observatories⁹.

Community Safety Assessment

Community Safety Assessments (CSA) are used to identify where possible community safety issues could occur. CSAs can also address potential issues by identifying opportunities to improve design function for future development, such as lighting design considerations to reduce road traffic collisions. In addition, personal security risks are considered such as how to improve personal security 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). Community Safety Assessments are required by the Crime and Disorder Act 1998 and the Police and Justice Act 2006, as amended.

Community Safety is included as an ISA topic for the assessment of the Transport Strategy.

Habitats Regulations Assessment

Habitats Regulations Assessments (HRA) are required in respect of any plan or project which, either alone or in combination with other plans or projects would be likely to have a significant effect on a site designated within the Natura 2000 network. An HRA is required by the Conservation of Habitats and Species Regulations 2017, as amended. Guidance on the Habitats Directive¹⁰ sets out four distinct stages for assessment:

- Stage 1: Screening: the process which initially identifies the likely impacts upon a Natura 2000 site of a plan or project, either alone or in combination with other plans or projects, and considers whether these impacts are likely to be significant – this is undertaken without considering mitigation;
- Stage 2: Appropriate Assessment: the detailed consideration of the impact on the integrity of the Natura 2000 sites of the plan or project, either alone or in combination with other plans or projects, with respect to the site's conservation objectives and its structure and function. This is to determine whether there will be adverse effects on the integrity of the site;
- Stage 3: Assessment of alternative solutions: the process which examines alternative ways of achieving the objectives of the plans or projects that avoid adverse impacts on the integrity of the Natura 2000 site; and
- Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain: an assessment of whether the development is necessary for imperative reasons of overriding public interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of Natura 2000 network.

The HRA requirements are incorporated into the ISA objectives and will be considered as part of the development of the strategy. In addition, to meet HRA requirements a Stage 1 assessment will be undertaken once the range of potential strategy interventions and proposals are identified and this will determine the requirement for a Stage 2 strategic level appropriate assessment to be undertaken for the Transport Strategy.

Equalities Impact Assessment

An Equalities Impact Assessment (EqIA) assesses the likely equalities effects of a policy, project or plan, as required by section 149 of the Equalities Act 2010, as amended. Its primary aim is to ensure that the policy project or plan does not cause disadvantages or discriminate against anyone whilst also considering potential opportunities for improving equality. The following protected characteristics are covered:

- Age
- Disability
- Sex and Gender
- Gender Reassignment
- Marriage and Civil Partnership
- Pregnancy and maternity
- Race
- Religion or belief; and
- Sexual Orientation

Equality and Diversity will be included as an ISA topic throughout the assessment of the Strategy.

1.5 Purpose and structure of this Report

The purpose of an ISA is to ensure the sustainability of a strategic plan is considered, by assessing the environmental, social and economic impacts. The ISA considers the policy and legislative context, as well as identifies the current baseline of the Region. Following this, the ISA aims to assess interventions and alternatives, as well as both cumulative and synergistic effects.

ISA Post Adoption Statement

This ISA Post Adoption Statement (ISA Statement) outlines the process followed and how the assessment and consultation process have been taken into account in the final Transport Strategy and SIP and includes the recommend mitigation actions and monitoring plan

The ISA Statement takes account of the consultation on the draft Transport Strategy and ISA Undertaken between 2nd December 2021- 30thJanuary 2022

Updated ISA Reports: ISA Volume 1 (Transport Strategy) and ISA Volume 2 (SiP) have also been updated to reflect the final Transport Strategy and SIP

This report sets out:

Chapter 1: Introduction and Background;

Chapter Error! Reference source not found.: Transport Strategy Proposals

Chapter 3: How Consultation Responses were Considered

Chapter 4: How the ISA has Influenced the Transport Strategy and SIP

Chapter 5: Sustainability Action and Monitoring Plans

2 Transport Strategy proposals

2.1 Development of the Transport Strategy

Transport East is developing a single regional Transport Strategy and Strategic Investment Programme (SIP), to embed priorities in the delivery plans of government, local authorities, Network Rail, National Highways, the private sector and other transport providers.

The strategy identifies strategic priorities for the region, and the SIP sets out the approach for identifying the individual projects and programmes which are key to implementing the Strategy. The SIP also sets out the investment necessary for the delivery of the strategy (see draft SIP section 2.4).

2.2 Wider Vision and Priorities

The Transport East draft Transport Strategy has identified wider outcomes that the Strategy should contribute to delivery. These include outcomes such as reducing carbon emissions to Net Zero; promoting active, healthy and safe lives; promoting and supporting a productive and diverse economy; supporting skills attainment, retention and social inclusion with access to education, training and employment opportunities.

Regional wider outcomes the Transport Strategy will help deliver:

- reducing carbon emissions to net zero by 2040
- promoting active, healthy and safe lives for all
- promoting and supporting a productive, sustainable and diverse economy
- supporting access to education, training and employment opportunities for all;
- facilitating the sustainable energy sector;
- helping our growing areas to develop sustainably to create high quality, inclusive, distinctive and resilient places to live, work and visit;
- protecting and enhancing the built and natural environment.

These wider outcomes have been combined to inform the overarching vision for the Transport East Region:

Draft Transport Strategy Vision

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

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

- **Decarbonisation to net-zero** – Working to achieve net zero carbon emissions from transport by 2040, building on our status as the UK’s premier renewable energy region.
- **Connecting growing towns and cities** – Enhanced links between our fastest growing places and business clusters. Improving access for people to jobs, supplies, services, and learning; enabling the area to function as a coherent economy and improving productivity
- **Energising coastal and rural communities** – A reinvented, sustainable coast for the 21st century which powers the UK through energy generation. Supporting our productive rural communities and attracting visitors all year round.
- **Unlocking international gateways** – Better connected ports and airports to help UK businesses thrive, boosting the nation’s economy and helping to level up communities through better access to international markets and facilitating foreign direct investment.

2.3 Regional Challenges

The “deep dive” studies, along with the production of the road and rail focused regional evidence base and decarbonisation review, identified challenges which are summarised against each theme in the **Error! Reference source not found.** below.

Table 2.1 Summary of challenges per key theme

Key Theme	Challenges
Decarbonisation to net-zero	<p>Brexit impact on UK trade, imposing heightened barriers for accessing a range of decarbonisation capabilities and selling products & services to European Union member states.</p> <p>Public funding is currently skewed in favour of electrification compared to other alternative fuels. There is also currently significant public funding invested in fossil fuel related transport.</p> <p>There are concerns about the sustainability of battery manufacturing and whether an effective recycling method can be developed to minimise the environmental impact of lithium/rare metals earth mining but there are also potential replacements for lithium under development such as silicon or sodium-ion batteries. Recycling technologies for lithium batteries are not keeping pace with the rapid rise in EVs.</p> <p>Safety concerns over the reactivity, storage and transportation of hydrogen to be overcome to make it an acceptable and credible fuel source.</p> <p>Technological gap in electric vehicles (EVs) to enable longer distance ranges, and broader applications.</p> <p>Rollout of EV charging infrastructure.</p> <p>Hydrogen fuel cells are currently more expensive to manufacture than their EV counterparts but there are potential areas for future development such as large scale storage of hydrogen produced using renewables such as offshore wind energy.</p> <p>There is potential to consider use of recycled biofuels</p> <p>There are limited initiatives advancing ways to mass-produce biomethane.</p>
Connecting Growing Towns and Cities	<p>The region has poor east-west connectivity as well as some pockets of poor north-south connectivity, a lack of first mile-last mile (beginning and ending of a journey, for example travelling to a bus stop or railway station) options in some areas, and high levels of car dependency.</p> <p>Growth constraints include skill levels in the region being below the UK average and relatively low levels of innovation and entrepreneurialism.</p> <p>High-quality transport infrastructure has a role to play in tackling constraints by attracting skilled workers to the region, and better connecting residents to employment and education opportunities.</p>
Energising Rural and Coastal Communities	<p>Coastal areas are significantly more likely to be below the average for England for many of the Index of Multiple Deprivation indicators, with rural areas tending to perform better in relation to these indicators, with the exception of education.</p> <p>Rural areas’ main issues are around retaining skilled workers, particularly with a lack of real and perceived transport options to gain access to education, training and employment.</p> <p>Strategies to level up coastal and rural communities need to reflect their different challenges and opportunities.</p>
Unlocking International Gateways	<p>Ports and airports are reliant upon the resilience and reliability of the road and rail networks. More resilience and better recovery from disruption is required to support</p>

Key Theme	Challenges
	<p>gateway expansion, encourage sustainability and encourage intra-regional connection. Specific issues include:</p> <p>Rail network operations are close to or at operational capacity for freight and passenger movement.</p> <p>Rail connectivity is London centric, with a lack of east-west connections, some initiatives are underway to help address this.</p> <p>The Strategic Road Network is essential for major ports, and the local road network is essential for regional ports. Many of the key routes have varying levels of infrastructure provision with unreliable journey times and are lacking resilience.</p> <p>There is a need for integrated logistics and manufacturing in the region to be support by growth at ports and airports, attracting inward investment within the region, and boosting jobs and regional exports.</p> <p>COVID-19 has posed one of the most significant challenges to freight and passenger movements in recent history with long-term consequences potentially for patterns of travel.</p> <p>Support is needed to lower operational, surface access and supply chain emissions in line with the national decarbonisation towards NetZero.</p> <p>Passenger movements are the primary function of airports but a minor function for some ports in the region. Much of passenger movement is London centric, with a need to boost accessibility catchments within the region, and tourism.</p>

Section 4 of the Transport Strategy identifies twelve goals within each of the four strategic priorities along with the actions proposed to achieve these.

The strategy covers a large region and a wide range of areas with differing land uses and characteristics and this is recognised through the place-based approach for the strategy which has tailored proposals to the needs of each area.

In addition to the strategic priorities, Transport East has identified six core strategic corridors (**Error! Reference source not found.**), linking key destinations within and beyond the Region which require particular focus. These corridors include growing urban areas, ports, airports and the road and rail connections between them and the rest of the UK. These corridors are described in section 5 of the Transport Strategy. Further investment will be needed along these corridors if the region is to reach its potential as a thriving, connected, multi-centred economy, whilst reducing carbon emissions.



Figure 2.1 Strategic Corridors

Section 6 of the Transport Strategy outlines how the delivery of the strategy will be addressed through the ‘Approach to Strategic Investment Programme’ (SIP). This includes the following key stages:

- Development of an investment pipeline for the east
- Adoption of a strategic assessment framework to consider how the pipeline schemes align with the four strategic priorities.
- How Transport East will work with the Local Transport Authorities, and national partners for the delivery of the strategy
- Technical work programme to support implementation of the strategy
- Development of a Monitoring and Evaluation Plan to monitor performance in implementing the strategy through the interventions

2.4 Overview of the Strategic Investment Programme (SIP)

The Strategic Investment Programme (SIP) sets out the approach to developing a regional investment project pipeline and the supporting mechanisms that will be put in place to deliver the strategic priorities in the Transport Strategy.

The SIP has also been developed to align with the Government’s national programmes to deliver major road and rail investment. It focusses on strategic scale projects and has not considered more localised schemes, as these will be included in the Local Transport Plans.

Role of Transport East

Transport East will not deliver the individual interventions identified in the SIP, but will manage the SIP, advise government on priorities and deliver a programme of technical work and business case development in partnership with local and national partners.

Transport East has engaged hundreds of partners across the region, throughout the entire process, from identification of strategic priorities to the prioritisation of individual schemes. The engagement throughout has maintained support within the region, including all local authorities.

Interventions and Assessment Approach

The approach for the developing the SIP included identifying a long list of potential schemes, programmes and actions. These interventions were categorised based on the stage of development, including idea, development and delivery levels and covered a wide range of types of measures. For the purposes of illustrating the range of schemes to be considered by the ISA, the main types of intervention included in the long list are identified in **Error! Reference source not found..**

Table 2.2 Types of Interventions for the Transport Strategy

Types of interventions	
Active travel - infrastructure provision and behaviour change support	Roll out and expansion of local authorities' walking and cycling programmes Pedestrian and cycle crossings and on road links River crossings
Bus and passenger transport operations	Bus priority infrastructure supporting immediate operational challenges aligned to COVID-19 Rapid transit schemes
Port and airports	Measures supporting the connectivity, accessibility and operation of International Gateways
Rail related measures	Electrification schemes Line capacity improvement/journey time/enhancement Rail connection improvements Station improvements Freight capacity study Connectivity gap studies for rail timetables
Road related measures	Infrastructure to support electric vehicles and alternative fuels Demand management strategies New links or bypasses Road widening or dualling Junction/interchange new/ upgrades Road improvement strategic packages
Digital technology	Digital infrastructure to optimise transport, incentivising public transport & active modes and substituting trips
Studies and action plans	Supporting the implementation of schemes associated with the Transport Strategy

The pipeline projects were grouped into the following categories:

- Committed projects – these are projects that have been identified to be in the delivery stage. They are well developed and already have some delivery funding certainty and commitment from national government.
- Projects to be delivered in neighbouring authorities – the transport network extends beyond the Transport East region, this section identifies those projects that are important to and affect transport in the East but will be delivered by others.
- Regional strategic packages – This category contains a mix of projects to be progressed by Transport East, the Local Transport Authorities / Local Government or other delivery bodies. These packages highlight priority areas of work, where Transport East can;
 - support the case for investment, for example for the 5G roll out;
 - make the case for long-term funding certainty to enable ambitious programmes for active travel and urban sustainable programmes; and,
 - add to the technical programme to develop an evidence base to support future Local Government decisions, for example the road user demand management measures.
- Strategic corridors – This category identifies projects that sit along the core strategic corridors (**Error! Reference source not found.**), that will either individually or in combination deliver the strategic priorities. These are a mix of road, rail and sustainable transport measures that are either at the idea or development stage. The progress of these projects to delivery will depend on the business case made for funding, recognising the government’s changing emphasis for projects to demonstrate significant contributions to decarbonisation and sustainable transport.

The interventions identified as ideas, in development or delivery but not yet committed projects were assessed against a framework which comprised:

- Potential to deliver Transport East Strategic Priorities
- Performance against Department of Transport (DfT), Critical Success Factors, and.
- Performance against ISA objectives

The SIP Approach also covers how ideas for the delivery of the Transport Strategy can be supported and developed further. New ideas from Transport East, its partners and others will continue to be added to the long list and any additional ideas will be assessed as part of the annual SIP management and review.

Funding

Funding the identified projects is necessary for the implementation of the strategy and is often linked to external decisions for delivery. The local authorities in the region are fully committed to the SIP Approach and already make a substantial contribution, however significant additional support will be required from government.

In addition to government funding, Transport East will work with partners to identify appropriate funding streams and private sector investment to further support the funding and delivery of the SIP. Information on identified funding streams is set out in section 3.6 of the draft SIP Approach.

Delivery and Performance

The SIP sets out the technical work programme for supporting delivery of the strategy and SIP projects (SIP Appendix G) including:

- Developing strategic analytical capability such as developing a Decarbonisation Analysis Toolkit including work towards developing a carbon budget for the region, and data collection as part of a travel behaviour survey;
- Undertaking connectivity studies for the six strategic corridors;
- Developing detailed plans for future investment such as for rail, electric vehicle infrastructure demand, alternative fuel for freight, active travel and for rural and coastal investment; and
- New policy and innovation through a rural mobility centre of excellence and a Strategy Hub.

The SIP proposals will be reviewed annually and updated with status of investment priorities in the programme published and regularly updates on the Transport East website. The SIP includes commitment to developing a monitoring schedule to assess performance against Key Performance Indicators.

3 How Consultation Responses Were Considered

3.1 Scoping Consultation

As part of the process for undertaking the ISA for the Transport Strategy, an ISA Scoping Report was provided for consultation setting out the context for the assessment including a plan, policy and strategy review and description of the baseline environment and key trends. The methodology for the assessment was also outlined.

The ISA Scoping Report was subject to a statutory 5-week consultation as required under the SEA regulations. Following this consultation, comments have been collated and taken into consideration during the development of both the ISA and the Transport Strategy.

Comments were received from the following statutory consultees:

- The Broads Authority (BA)
- Historic England (HE)
- Forestry Commission
- Essex County Council (ECC)
- West Suffolk District Council

In addition, comments were received from the following non-statutory bodies:

- Suffolk Friends of the Earth (SFOE)
- Norfolk CPRE
- Transport Action Network (TAN)

No comments were received from the Environment Agency and Natural England for the ISA Scoping Report.

The consultation feedback received has been considered and addressed. A summary of the key comments and responses is set out in Table 3.1 below.

Table 3.1 Key consultation feedback and responses

Theme	Consultee Comments on the Scoping Report	Responses for the Transport Strategy and the ISA
1. Transport Strategy: Emerging strategic approach	The BA requested additional strategy actions and ideas on public transport and active travel, a modal shift from air to rail, and consideration of water-based transport.	The draft Transport Strategy includes a range of proposed actions supporting modal shift across each of the 4 Pathways. Recommendations from our Active Travel and Passenger Transport Reports have fed into the development of the Transport Strategy and work to explore water-based transport is included in Goal 9 – Improving coastal connections.
2. Transport Strategy: Workplace scenarios	BA and ECC noted that a third workplace scenario could be considered (a higher level of remote working than 2019, but not as much as mid 2020), and queried the baseline travel assumptions.	The purpose of the scenario development and testing procedure was to identify a set of possible futures for the region, to quantify these in a rigorous manner, and then to explore their implications for the ability of the Transport Strategy to deliver both the wider and transport outcomes. In order to do this, relative extremes of potential variables outside of Transport East’s control were considered, including change in level of remote working. The results of this found that if high levels of remote working were achieved, there would be 26% fewer daily trips than in a “back to

Theme	Consultee Comments on the Scoping Report	Responses for the Transport Strategy and the ISA
		<p>normal” scenario where people revert to pre COVID-19 commuting patterns.</p> <p>It is acknowledged that potentially neither the “back to normal” or high levels of remote working workplace scenarios may be realised and as such the strategy has been developed to ensure that it focusses on other areas, such as modal shift and alternative fuels, not just reducing the need to travel</p>
3. Transport Strategy	Norfolk CPRE highlighted the importance of improving rural bus services, as explained in the CPRE report “Every village, every hour: a comprehensive bus network for rural England” (March 2021)	Improving accessibility for rural areas is promoted within the strategy through a variety of measure, including the promotion of demand responsive rural passenger transport services.
4. Transport Strategy: Regional challenges - Decarbonisation	SFOE requested decarbonisation be prioritised urgently and a timescale for net zero carbon emissions in the region be defined. SFOE welcomed the promotion of a shift to active travel and public transport, to reduce car travel and reduce carbon emissions, and queried how the strategy would support these. TAN requests greater definition of carbon emissions reduction ambition, pathways and intermediate targets, in light of IPCC report and Government’s Transport Decarbonisation Plan.	<p>Decarbonising transport emerged as a priority early in our technical and engagement work to develop the Transport Strategy.</p> <p>To strengthen our understanding Transport East commissioned Energy Systems Catapult to establish an initial baseline of CO2 emissions and modelled a series of net zero targets. See draft Transport Strategy section 2.2 - The decarbonisation challenge.</p> <p>Net zero carbon transport is a core priority within the Strategy and informs the other three Pathways. The draft Transport Strategy aim is to achieve net zero transport by 2040. See draft Transport Strategy section 4.2 - Decarbonisation to Net Zero.</p>
5. Transport Strategy: Regional challenges - Connecting our Growing Towns and Cities	<p>SFOE object to more road building due to impacts on wildlife, landscape, and traffic generation, and to investment in fossil fuels or biofuels. SFOE objects to new roads and encourages reinstatement of railway lines.</p> <p>Queried the sustainability of a ‘high growth’ trajectory.</p>	<p>The aims of the Transport Strategy are to balance a range of needs, challenges, constraints and opportunities including addressing current issues such as congestion and connectivity to support economic and social and working towards meeting future goals including as a priority decarbonisation to meet net zero carbon targets.</p> <p>As explained in comment 1 above, it is acknowledged that a range of scenarios have been considered and potentially neither the “back to normal” or high levels of remote working workplace scenarios may be realised and as such the strategy has been developed to ensure that it focusses on other areas, such as modal shift and alternative fuels, not just reducing the need to travel</p>

Theme	Consultee Comments on the Scoping Report	Responses for the Transport Strategy and the ISA
		Account is taken of potential of impacts through the ISA and the mitigation and monitoring proposed.
6. Transport Strategy: Regional challenges - Unlocking international gateways	SFOE queries sustainability of encouraging globalised trade at ports, requests encouragement of fewer 'food miles' and similar initiatives and agrees with increased use of rail for freight. Requests more emphasis on a circular economy, to reduce waste and resource use through the repair, re-use and recycling of materials.	<p>Although this is outside the scope of the Transport Strategy and Transport East's control, we are proposing to try and influence future placemaking to ensure that people can live and work locally, enabling them to support local businesses and local suppliers reducing movement of both people and goods.</p> <p>The ISA includes recommendations to apply the waste hierarchy and how this also would be supportive towards reducing carbon</p>
7. Transport Strategy: Regional challenges - Re-energising our Rural and Coastal Communities	BA and SFOE raise concern about an over-reliance on electric vehicles. BA requested that 'decarbonising of transport' theme on p9 includes a defined aim to reduce miles driven (referring to the balanced pathway in the 6th Carbon Budget) and reduce flights. BA requests clarity on definition of Net-Zero Emissions.	<p>The Transport Strategy sets out a multi-faceted approach to decarbonising transport. The primary focus is on reducing the need to travel along with reducing the distance travelled. If there is still a need to travel, the next focus is on shifting as many trips as possible to sustainable transport. Finally, if this cannot be achieved, then the focus is on using alternative fuels.</p> <p>Due to the nature of the region and depending on the location of future growth within the region, providing the required sustainable transport in rural areas to achieve modal shift may not be viable and so there will be a need to include alternative fuels.</p> <p>Transport East commissioned Energy Systems Catapult to establish an initial baseline of CO2 emissions and modelled a series of net zero targets. See draft Transport Strategy section 2.2 - The decarbonisation challenge</p> <p>Net Zero emissions used in the Transport Strategy refers to net zero carbon emissions related to transport specifically.</p>
8. Transport Strategy: Regional challenges - Re-energising our Rural and Coastal Communities	SFOE objects to the term 'energy coast' along the designated Suffolk Coast & Heaths AONB and Heritage Coast, queries how the strategy will support the coast's tourist economy, landscape and wildlife, and how it can make quiet recreation in countryside easier to access, to benefit physical and mental health.	<p>The Transport Strategy recognises the different economic sectors within coastal areas including tourism and the natural heritage of our coast.</p> <p>Within Goal 8 – increasing access for rural and coastal communities, particularly the active travel section, we recognise the role improved active travel networks play in increasing sustainable access to blue and green spaces and the linked health benefits.</p>
9. ISA Approach: ISA Assessments	TAN requests consideration of lifecycle costs of vehicles that use the transport infrastructure, when	The lifecycles costs of vehicles using infrastructure is outside the scope of the Transport Strategy

Theme	Consultee Comments on the Scoping Report	Responses for the Transport Strategy and the ISA
	<p>assessing new infrastructure proposals, inclusion of aviation emissions, and the efficiency of hydrogen production.</p>	<p>Aviation emissions are also not covered by this strategy but (refer to the NPS for Aviation) although the strategy does set out its strong support for the decarbonisation of the international aviation industry (see goal 14) through the national JetZero approach.</p> <p>Hydrogen is one of the potential fuel sources and production efficiency in terms of carbon would need to be part of future considerations of the benefit for this fuel use going forward to achieve net zero carbon emissions.</p>
<p>10. ISA Approach: Natural Capital</p>	<p>TAN is critical of the discussion of how transport infrastructure can contribute to the restoration of biodiversity and ecosystem services, and refer to impacts of severance, pollution and loss of habitat from road building.</p>	<p>The impact of infrastructure on biodiversity through severance, habitat loss, pollutions and disturbance are part of the ISA assessment. While there is mention of potential opportunities that can be included in infrastructure design these cannot be considered without first taking account of potential losses - see ISA objective on biodiversity.</p>
<p>11. ISA Approach: Health Impact Assessment</p>	<p>TAN highlights the need to scrutinise health assessment for gaps and assertions, including on impacts on non-drivers, including the disabled, children, women and other disadvantaged groups, and impact of road building on public transport, severance and pollution.</p>	<p>These comments have been taken on board to strengthen specific consideration of these groups –in the in baseline and ISA objectives/criteria.</p>
<p>12. Review of Plans, Policies and Strategies</p>	<p>Consultees requested additional plans, policies and strategies be considered, including on the NPPF, NPPG, South East LEP, Broads Authority plans, AONB related plans, local Green Infrastructure strategies, Biodiversity Actions Plans, the Norfolk Geodiversity Audit</p>	<p>Additional PPS noted have been considered and included where available.</p>
<p>13. Review of Plans, Policies and Strategies – Climate change</p>	<p>BA requested the Committee on Climate Change Balanced Pathways be considered. ECC requested Net Zero: Making Essex Carbon Neutral be included. SFOE requested inclusion of the Paris Agreement, the Government’s National Determined Contribution target of 68% reduction in greenhouse gas emissions by 2030 from 1990, the Transport Decarbonisation Plan, and Gear Change.</p>	<p>Additional PPS noted are considered and included.</p> <p>Transport East commissioned Energy Systems Catapult to establish an initial baseline of CO2 emissions and modelled a series of net zero targets. See draft Transport Strategy section 2.2 - The decarbonisation challenge</p> <p>Net zero carbon transport is a core priority within the Strategy and informs the other three Pathways. The draft Transport Strategy aim is to achieve net zero transport by 2040. See draft Transport Strategy section 4.2 - Decarbonisation to Net Zero.</p>

Theme	Consultee Comments on the Scoping Report	Responses for the Transport Strategy and the ISA
		Carbon emissions analysis has been commissioned by Transport East to understand the baseline trajectory for the region to 2050, and the impact of different scenarios on that trajectory.
14. Health: Active travel	BA requested greater emphasis on the public health benefits of supporting active travel. Essex CC asked for greater acknowledgement on how school travel can contribute towards wider health outcomes and the environment around schools.	The draft Transport Strategy includes strategy goals that are supportive of active travel and the benefits of this. The engagement with schools that was part of the strategy development and actions arising from this.
15. Community Safety: Accidents	BA and TAN query use of the term 'accidents' as outdated, TAN state collisions should be used.	The accident term was used as referenced by the Department for Transport, and data provided in the report refers to information from the DfT and STATS19. Transport East recognises that this includes collisions and prevention has due importance within the strategy. The draft Transport Strategy terminology has been updated to reflect emerging practice.
16. Community Safety: Road danger	TAN request mention of the issue of road danger and perception of road danger, which reduces walking and cycling, particularly new and bigger roads which increase traffic levels.	Perceptions of road safety and impacts were noted as an issue and included in the assessment framework but have been strengthened in the baseline information. Community severance and active mode safety considerations are taken into consideration in the assessment. The draft Transport Strategy refers to the Safer Systems approach - see Goal 7- Eliminating road danger
17. Biodiversity: Local wildlife sites	BA requested consideration of county wildlife sites, and roadside nature reserves.	These are local datasets that Transport East does not have access to. However, the importance of these sites and others is recognised but note that these will need to be part of more detailed project level consideration and discussion with local partners.
18. Biodiversity: Nitrogen deposition	BA – refer to nitrogen deposition as a major biodiversity issue, and also poses a risk to developments impacting on protected areas.	Nitrogen deposition is highlighted as an issue and considered in the ISA and HRA but the assessment is qualitative at this high level and is not based on traffic or air quality modelling.
19. Biodiversity	SFOE opposes biodiversity offsetting due to impacts on site habitats and lack of success for habitat creation, but suggests planting wildflowers on verges which can reduce maintenance.	The hierarchy for avoiding, mitigating and only compensating through off setting following application of the hierarchy is set out in the ISA - recommendations on opportunities such as habitat creation and appropriate maintenance regimes are identified

Theme	Consultee Comments on the Scoping Report	Responses for the Transport Strategy and the ISA
20. Water Environment: Road runoff	BA requested greater consideration of watercourse pollutants in surface water runoff from roads, including microplastics. TAN highlight impact of microplastic pollution from vehicles in road runoff.	Pollution from road runoff will be is a considered in terms of risk and also a requirement for addressing in design. The types of pollution involved are identified – we note that there are also many other important sources of microplastic pollution.
21. Air Quality	Broads Authority requested consideration of localised air pollution from the brakes and tyres of electric vehicles.	These are noted in the baseline information
22. Landscape/Townscape and visual: Designated areas	BA requested greater emphasis on protected designated landscapes, including the Broads (with a status equivalent to a National Park) and AONBs, and reference to the special qualities and tourism benefit of the Broads.	Greater emphasis and the relevant references have been added. A map of designated landscapes was included in Appendix A to the Scoping Report.
23. Landscape/Townscape and visual: Local landscape character	BA and ECC - consider regional and local landscape character areas and assessments, including for the Broads, to inform the value, quality, and sensitivity of landscapes. Essex CC requested reference to 'valued' landscapes as well as designations in ISA objectives.	Regional and Broads-related assessments will be considered, but the regional scale of the ISA precludes detailed assessment of local character areas at this stage. Reference to valued landscapes is included in the ISA.
24. Landscape/Townscape and visual: Dark skies and light pollution	BA - consider potential for light pollution impacts on dark skies (CPRE's Night Blight assessment) and landscape character, including in the Broads and other protected landscapes.	The potential for light pollution on dark skies has been included in the ISA.
25. Cultural heritage and Archaeology: Heritage at risk	Historic England requested that assets on the Heritage at Risk register are considered.	Potential impacts on Heritage at Risk assets is considered in the ISA although in terms of general risk as location information on proposals at this strategy level is limited.
26. Cultural heritage and Archaeology: Significance and setting of heritage assets	Historic England requested that impacts on the significance of heritage assets, including in relation to their setting, are considered in ISA objectives and criteria, and refers to their good practice advice.	Reference to significance and setting of heritage assets has been strengthened in the ISA criteria.
27. Cultural heritage and Archaeology: Non-designated heritage assets	Historic England and Essex CC requested consideration of data on non-designated heritage assets recorded on the county and unitary councils' Historic Environment Record, and the potential for unknown archaeology, and that the local authorities' conservation and archaeological advisers are closely	Transport East does not have access to the HER records, and the regional scale of the TS and ISA with limited information on individual schemes precludes consideration of these local sites. The ISA will consider the risk to these interests and also highlight that potential impacts of schemes need to be assessed through EIAs for individual

Theme	Consultee Comments on the Scoping Report	Responses for the Transport Strategy and the ISA
	involved throughout the preparation of the ISA.	schemes in consultation with local authorities.
28. Material Assets and Resources: Minerals	Essex County Council requested the protection of mineral bearing land be included in Key Themes and ISA objectives, and the inclusion of Essex Waste Local Plan and Minerals Plans to PPS review.	Minerals bearing land has been included in ISA objectives. The additional plans are now included in the PPS review.
29. Natural Capital and Ecosystem Services: Mitigation and monitoring plans	ECC requested that recommendations for Mitigation and Monitoring Plan ensure measurable biodiversity net gains and ecosystem services will be achieved from transport scheme proposals, in line with emerging Environment Bill	The expected future requirements on biodiversity net gain natural capital and ecosystems services are included in the ISA recommendations in line with the Environment Bill
30. General	Suffolk Friends of the Earth (SFoE) requested a stronger definition of sustainability.	A definition of sustainable transport has been included (see section 1) and is also reflected in the strategy vision.
31. Proposed ISA Methodology: Draft ISA Objectives	BA queried the wording of the assessment methodology categories of impact, including to address negative impacts and maximise the positives.	The assessment methodology allows the identification of both potential negative impacts and positive impacts and the assessment is against the ISA objectives which are aiming to avoid or minimise impacts and provide enhancements and positive effects.
32. Proposed ISA Methodology: Draft ISA Objectives	<p><i>Population and Socioeconomics:</i> TAN requests consideration of access to jobs via active travel and public transport for those without access to a car.</p> <p><i>Equality:</i> TAN requests specific rewording to consider affordability of public transport (and access to e-bikes), and specific reference to women.</p> <p><i>Health:</i> TAN requests rewording to 'significantly increase' levels of active travel.</p> <p><i>Community Safety:</i> TAN requests rewording to reduce road danger for active travel.</p> <p><i>Climatic factors:</i> TAN requests schemes be assessed on ability to reduce traffic and meet climate targets in short-medium term.</p>	Amendments have been added to ISA to incorporate comments provided to objectives, criteria or monitoring plan as appropriate.

3.2 Wider stakeholder engagement to develop the Transport Strategy

The development of Transport Strategy has involved significant wider engagement with the aim of ensuring that the strategy aligns with both regional ambition and local priorities, whilst contributing to national goals.

The approach to wider engagement has included the use of presentations, workshops, one-to-one meetings and an online questionnaire. Each method of engagement has proved useful in developing the strategy and has presented significant relevant feedback.

Initial engagement involved the introduction of Transport East and the developing Transport Strategy to 36 district representatives directing the relative importance of the key themes emerged (Table 3.2¹¹). One recommendation was to involve younger generations throughout the process, which was consequently actioned through a school engagement campaign.

Table 3.2 Summary of key themes identified in the Engagement Report Summary.

Stage	Key Themes and Messages
Stage 1 A- Developing Non- Transport Objectives	<p>Importance of decarbonisation and focus on electric vehicles</p> <p>New infrastructure must have minimal environmental impact</p> <p>Importance of ports and energy coast to the region's development</p>
Stage 1B – Evidence Building	<p>The role of the Transport Strategy in boosting and supporting the region's economy.</p> <p>Future transport options should be sustainable long term</p> <p>A shift to active travel</p> <p>Importance of reliable, improved public transport services</p> <p>Digital connectivity could compliment the transport sector, maximising assets and services.</p> <p>Opportunity to improve rail, while contributing to wider decarbonisation goals</p> <p>Importance of working with other Sub-national transport bodies and Transport for London to improve key corridors.</p>
Stage 1C – Exploring Future Scenarios	<p>A baseline is crucial</p> <p>Identifying rural and urban areas and the key 13 urban areas within the Region</p>
Online Public Engagement	<p>Changes of transport use and behaviour due to COVID including preference for transport type.</p> <p>Reduction in people using private cars and traditional commuting transport post COVID.</p> <p>General consensus included long term predictions of fewer journeys, reduction in public transport and increase in active travel. Importance of reliability, convenience and frequency for public transport.</p>
Stage 2B – Ensuring Effective Delivery	<p>Importance of decarbonisation</p> <p>Engagement of young people in the consultation of the strategy</p>

3.3 ISA Report and Draft Transport Strategy /SIP consultation

The draft Transport Strategy and ISA report were subject to a full public consultation and stakeholder engagement process over an 8-week period. A wide range of environmental and community organisations, local government and statutory consultees were invited to comment on the ISA Report, draft HRA, draft Transport Strategy and draft Strategic Investment Programme (SIP) Approach and supporting documents as part of the consultation.

The ISA Report was also made available to the public to comment on through access to the following <https://www.transporeast.org.uk>.

A total of 590 comments were received in response to the consultation covering the Strategy, SIP and ISA (514 responses to the questionnaire and a further 76 responses received by email). More specifically a total of 129 responses were received in response to the questionnaire question 'Do you have any comments about the Integrated Sustainability Appraisal'.

No comments were received from Environment Agency or Natural England.

The consultation feedback received has been considered and addressed. A summary of the key comments and responses is set out in Table 3.3 below.

A separate Consultation Report has been prepared including a full analysis of the consultation responses.

Table 3.3 ISA Consultation feedback and responses

Theme	Consultee Comments	Response
ISA Chapter 3. Plans, Policies and Strategies	East Suffolk Council recommended reviewing their Cycling and Walking Strategy	East Suffolk Cycling and Walking Strategy (Draft) added to Appendix B.
	National Highways have a number of schemes not included in the plans, policies and strategies review, including Net Zero Highways: Our 2030/2040/2050 Plan, National Highways Digital Roads and National Highways Home Safe and Well.	All schemes have been added to Chapter 5 and Appendix B.
	Basildon Borough Council referred to a new Essex Bus Service Improvement Plan (BSIP)	New Essex Bus Service Improvement Plan (BSIP) has now been reviewed in Appendix B.
ISA Chapter 5. Baseline	Historic England suggest identifying non-designated heritage assets.	Historic England previously commented on including non-designated assets but as included in the response table, Transport East do not have access to County HER records. Historic Environment baseline acknowledges non designated assets.
	Heritage England advised that appropriate priority should be given during the pre-application period to the identification, assessment and evaluation of non-designated assets	Text has been added to acknowledge this in the issues and opportunities section of the Heritage baseline (section 5.13)
	Light Rail Transit Association raised concerns that health problems are not considered, particularly relating to non-exhaust emissions and air quality.	The Air Quality baseline already stated 'increasing the use of electric and other low emission vehicles (as electric vehicles have zero exhaust emissions at street level; however even electric vehicles emit particulate matter from road, tyre and break wear' however text has been strengthened as an issue/opportunity in the same section.

Theme	Consultee Comments	Response
	National Highways noted that the ISA has identified staycations to increase during COVID and will likely return to normal following this, however medium- and long-term trends should be considered.	Tourism is covered in socio-economics baseline section 5.3 Text has been added to this section to acknowledge other factors which may influence staycation trends affecting region.
	Transport Action Network suggested referring to more stringent WHO guidelines for the Air Quality baseline	Reference to the WHO guidelines has been added to the Air Quality Baseline
	Transport Action Network suggested referring to the issues of road kill and habitat severance.	References have been added to road kill to the biodiversity baseline. Habitat fragmentation is already included but further reference has been added.
	Norfolk Wildlife Trust identified existing impacts of the transport networks on wildlife and highlighted the need for the Strategy to actively contribute to goals of the Environmental Act 2021.	References relating to the existing impacts of the transport networks on wildlife are added to the biodiversity baseline section. The ISA includes specific recommendations in the Sustainability Action Plan for developing a coordinated approach to support nature recovery and Environment Act 2021 goals. The strategy includes as a regional wider outcome the aim to protect and enhance the built and natural environment. Also, proposals for contributing to the Environment Act 2021 biodiversity goals have been added as Transport Strategy section 6.6 and opportunities to link biodiversity and environmental net gain and carbon sequestration are highlighted and to take this approach forward in the proposed Corridor studies.
ISA Chapter 6. Assessment Methodology	The Broads Authority raised there is no mention of net gain in the biodiversity ISA objectives.	Reference to biodiversity net gain opportunities were already included under the Natural Capital objective but opportunity for biodiversity has also been added to the biodiversity objective together with signposting to the Natural Capital and Ecosystem services row.
	Transport Action Network suggested amendments to the ISA objectives for population and socio-economics, equality and diversity, health, community safety and carbon	Objective wording has been amended to clarify and address comments.
	Transport Action Network stated there is no consideration as to whether proposals (such as new roads) might undermine the economic viability of public transport, existing or planned.	For the ISA, proposals are assessed independently of funding availability. Economic viability of proposals will be addressed as part of the scheme business cases and may also be dependent on different funding streams.
ISA Chapter 7. Assessment of the Transport Strategy	The Broads Authority stated that the ISA includes and assesses lots of specific schemes, but these specific schemes are not in the Transport Strategy.	The Transport Strategy provides overarching approach and the SIP includes potential schemes to deliver the strategy. We have now separated the ISA into two documents to assess the strategy and SIP separately, to ensure this is clearer.
	Norwich, Broadland and Norfolk Green Party Groups stated the ISA fails to consider a fourth approach that involves	In response to the comments, five approaches and a no plan scenario have been further defined and assessed as part of the ISA

Theme	Consultee Comments	Response
	combining alternative fuels and modal shift to sustainable modes, with managing demand for road travel, with the overall aim of reducing absolute levels of vehicle miles.	update for the finalised transport strategy. This includes an additional approach taking account of the need to manage demand from connectivity improvement and prevent induced traffic increases.
	The Transport Action Network made numerous suggestions relating to the scoring and assessments within Chapter 7.	All scoring and assessments have been reviewed and amended where necessary
ISA Chapter 8. Assessment of the SIP	The Broads Authority and Transport Action Network queried what 'pre' and 'post' refer to.	Pre and Post refers to pre and post mitigation or enhancement, as stated in the column heading of each table. Text has been added to the start of the section to clarify this further.
	Chelmsford City Council corrected the Beaulieu Station name in the SIP	Scheme name has been corrected.
	The Thames Crossing Action Group raised concerns relating to the cumulative effects identified for the Lower Thames Crossing SIP scheme (CP4)	The cumulative effects related to the Lower Thames Crossing, a scheme identified in the SIP as a committed scheme, have been further reviewed and a standalone table (ISA Volume 2 Table 7.14) summarising the review has been included. Cumulative effects are assessed where two or more SIP schemes are likely to interact or have combined effects on the same receptors or where SIP schemes potentially interact with committed schemes or other planned schemes, as stipulated in the text.
	Transport Action Network stated it is unclear why only the A47 North Tuddenham to Easton is considered to have an interaction identified and A47-A11 Thickthorn Junction and A47 Blofield to North Burlingham are not.	Cumulative effects relating to the Norwich Western Link (SIP scheme B2) and NSIP projects have been reviewed. Section 7.3 has been updated to include potential interactions through traffic flow, however as the A47-A11 Thickthorn Junction and A47 Blofield to North Burlingham projects are not in close proximity, no interactions with the Norwich Western Link have been identified for construction related impacts.
ISA Chapter 9. Monitoring and Evaluation	South East LEP raised concerns over the limited information around the format of the monitoring process.	Chapter 9 Sustainability Action Plan refers to working with partners to set up templates/proformas for collecting data and information on scheme proposals on a consistent basis so this can support regional analysis, reporting and monitoring in the future. There will be dependency on information provided for individual schemes and detailed monitoring plans would be expected to be developed as part of the consenting process for each scheme but would be the responsibility of the relevant scheme promoter.
	Transport Action Network commented on the monitoring plan and suggested changes to indicators for inclusivity, safety, air quality and climate.	The monitoring plan indicators have been reviewed and updated to incorporate suggestions where these are considered feasible to measure.
	Transport Action Network commented on the need for consideration of lifecycle analysis to cover resources and carbon from vehicle manufacture.	We recognise that currently electric vehicle manufacture has a higher carbon footprint than equivalent Internal combustion engine (ICE) vehicles and this is primarily due to the carbon

Theme	Consultee Comments	Response
		<p>emissions associated with battery production. Given plans for future carbon analysis including developing a carbon budget for the region. We therefore suggest TE review consideration of lifecycle analysis as part of the scope of future carbon analysis work and comments from the consultees are responded to through this review.</p>
	<p>The Transport Action Network believe that 3 - 5 year monitoring is not often enough and suggest annual reporting to keep the region within its carbon budget.</p>	<p>The SIP is intended to be a rolling plan, updated on a regular basis – commitment to developing a carbon budget is included in the strategy and the programme for updating and reporting will be reviewed and a monitoring schedule will be developed.</p> <p>There is recognition through the initial ESC Phase 1 carbon baseline and scenario analysis that the sooner actions are taken towards decarbonisation the more these will contribute to meeting 2040 net zero targets.</p>
Other	<p>Collaborative Mobility UK (CoMoUK) highlighted there is currently limited reference to shared transport in any form, either collectively or individually.</p>	<p>The strategy has been strengthened to specifically to include support for shared transport</p>
	<p>Climate Emergency Policy and Planning and Transport Action Network have raised there is currently no carbon budget and that the road building proposed has not been quantified and assessed for carbon impact.</p>	<p>The Transport Strategy included commitment to developing a carbon budget.</p> <p>Currently quantification of construction and operation related carbon emissions is not available for assessment – this information would be expected to be part of the carbon cost analysis undertaken for the business case and for consenting, following relevant guidelines and standards.</p> <p>For the ISA, all short term schemes proposed within the SIP been assessed qualitatively for construction and operational impacts reported separately rather than combined. By presenting both construction and operational impacts the ISA more clearly identifies where there may be significant negative impacts relating to construction phase carbon and other topics.</p>
	<p>The Transport Action Network also raised concerns relating to the wider impacts of road building, particularly relating to carbon and emissions.</p>	<p>As above. By presenting both potential construction and operational impacts, the ISA more clearly identifies where there may be significant negative impacts relating to carbon and other topics.</p>
	<p>Norwich, Broadland and Norfolk Green Party Groups suggested the Transport Strategy must adopt a Regional Transport Carbon Cap for 2040 and set five yearly regional carbon budgets and annual regional targets for cutting carbon emissions and an action plan for meeting this framework.</p>	<p>The Transport Strategy and SIP include commitment to developing a carbon budget and this also referred to in the ISA Sustainability Action Plan and Monitoring Plan.</p>

4 How the ISA has influenced the Transport Strategy and SIP

4.1 ISA and HRA and development of the Transport Strategy

A summary of how the development of the Transport Strategy and the ISA and HRA processes interact is provided in **Error! Reference source not found.**

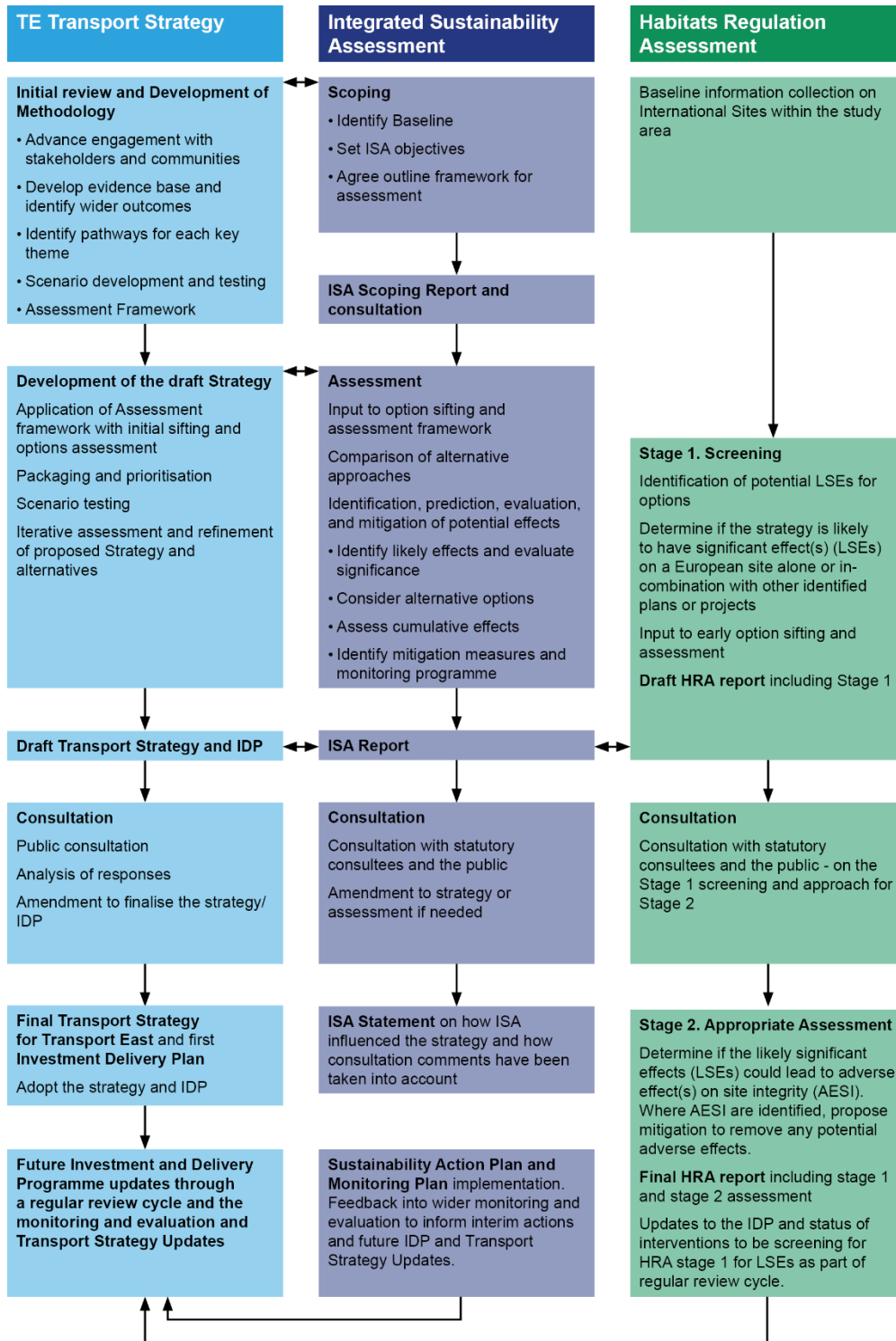


Figure 4.1 Summary of Strategy, ISA and HRA processes

ISA Assessment Outcomes

Baseline review and scope

An extensive baseline review was undertaken and updated in response to consultation feedback. It considered current conditions, existing pressures and future trends and how the baseline is likely to develop without the influence of the proposals in the Transport Strategy. Key issues and opportunities relevant to the assessment of the Strategy and SIP are identified in the table below.

Table 4.1 ISA baseline key issues and opportunities

ISA Topic	Key Issues and opportunities
<p>Population and Socioeconomics</p>	<p>Population growth across all age groups will place pressure on the transport network, housing availability, amenities, education and health facilities.</p> <p>There are opportunities to improve access to rural areas through transport services, digital services and bring services to people and support access to employment.</p> <p>COVID-19 has changed work habits as the need to access workplaces is reduced. This may place different demands on transport services for example changes to commuting are long term and more people travel into urban centres for leisure and social interaction.</p> <p>COVID-19 is envisaged to increase staycations in the short-term but medium and long-term trends need to be considered.</p>
<p>Equality and Diversity</p>	<p>Assessments of the Index of Multiple Deprivation highlight economic disparities between rural area, conurbations and coastal communities and also within urban areas.</p> <p>There is a need to support and improve access to services and facilities for vulnerable groups including the elderly population, disabled, women, families with young children, and single parent families.</p> <p>Sustainable transport interventions can support inclusive growth for communities which further helps social cohesion, access to employment and access to vital services.</p>
<p>Health</p>	<p>Modal shift towards public transport and active travel can support safer travel and traffic calming measures such as speed limits and addressing new challenges such as from e scooters.</p> <p>Interventions reducing air and noise pollution would contribute to addressing inequalities in exposure to poor air quality such as within the existing Air Quality Management Areas (AQMAs) in Essex, Thurrock and Southend-on-Sea and Noise Important Area (NIAs).</p> <p>Consideration of age friendly design, including design for dementia, and potential for increasing access to health services in development of transport proposals to better an older population.</p> <p>Interventions to encourage a shift towards public transport, walking and cycling which will provide benefits including air pollution and physical activity levels. These would include measures to improve the public realm within urban areas and increase public transport connectivity within rural and coastal areas, as well as provision of good pedestrian and cycling infrastructure.</p> <p>Support for access to recreational facilities and nature is an important aspect of health improvement.</p>
<p>Community Safety</p>	<p>Need to reduce road danger including collisions and casualties due to traffic. Improve road safety and reduce road fatalities on rural roads (which in comparison carry lower traffic).</p> <p>Improve safety for active travel and leisure.</p>

ISA Topic	Key Issues and opportunities
	Address increasing crime levels on public transport particularly towards women, disabled and those from ethnic minority groups.
Biodiversity	<p>There is potential for direct loss or disturbance of habitats and associated species due to new infrastructure required by the strategy. Requirements for 10% biodiversity net gain for consented projects will be in place, however this cannot address loss of irreplaceable habitats and does not cover all aspects of biodiversity.</p> <p>Designated sites (which may already be under pressure from recreational access and disturbance, pollution, agriculture and climate changes) can be by proposals for improved accessibility and connectivity</p> <p>There will be some opportunities for enhancement of biodiversity, through design including habitat provision, connectivity improvement and management to improve condition and reduced pollution.</p>
Water Environment	<p>Additional infrastructure has the potential to affect drainage or require river crossings and affect waterbodies. New infrastructure may increase water pollution and affect flood risk while also offering an opportunity to potentially increase the resilience to flooding</p> <p>There will be opportunity to incorporate SuDS and wetlands in scheme design to reduce pollution from road runoff and manage flood risk.</p>
Air Quality	<p>Transport is a significant contributor to poor air quality with resultant adverse effects on human and ecosystem health.</p> <p>Potential for improvement to air quality from changes to traffic levels, type of fuel, modal shift and technology change</p>
Noise and Vibration	Increased traffic and new infrastructure generally leads to increased noise with adverse health and amenity effects. There is potential for reduced noise from urban traffic with use of EVs
Climatic Factors	<p>Climate change suggests more extreme weather with the potential to adversely affect transport infrastructure, human health, agriculture and biodiversity. A key opportunity for the Transport Strategy is to reduce overall carbon emissions from transport with the region through:</p> <ul style="list-style-type: none"> Reducing the need to travel by diesel and petrol vehicles; Accelerating a shift from the private car to active transport (walking and cycling) and to improved low-carbon public transport (electric buses and trains) Decarbonising road vehicles, including increasing the uptake of electric vehicles; Tackling emissions from ports and airports; Understanding what works where - place based solutions; Supporting research and development for green transport technology and innovation; and Delivering resilience to climate change.
Landscape/Townscape and Visual	<p>Improved accessibility can negatively affect landscape value through new infrastructure development and additional pressures on the landscape. There is the potential for nationally designated landscape and recreation areas such as AONBs; National Trails; National Parks; coastal heritage and local landscape and townscape character to be affected by transport proposals.</p> <p>Active travel provides opportunities for increase access to and enjoyment of valued landscapes and townscapes.</p>

ISA Topic	Key Issues and opportunities
Cultural Heritage and Archaeology	Cultural heritage, historic landscapes and archaeological and paleo-archaeological interests may be affected through direct effects such as loss or setting changes or changes to access or hydrology changes. There may be opportunities for improving access to cultural heritage linked to active travel initiatives.
Soils, Geology and Contaminated Land	Geological SSSIs peat and fenland soils and high value agricultural land could be affected by infrastructure proposals involving direct land take. Soils such as peat and fenland soils are important for carbon and measures to mitigate climate change impacts so potential to support for carbon sequestration
Material Assets and Resources	Potential issues include loss of sterilisation of material assets from infrastructure development or conflict with other land uses, materials needed for construction and waste being generated by new schemes. Opportunities for reuse of existing infrastructure and recycling of materials to minimise waste and embodied carbon emissions.
Natural Capital and Ecosystems Services	Potential impacts on natural capital and ecosystem services from direct land take or land use change or impacts on condition. Opportunities though including natural capital assessment and ecosystem valuation as part of early scheme development with objectives to provide biodiversity and environmental net gain. This will be supportive in providing quantified information on impacts and requirements for delivering enhancements that can be linked to wider initiatives.

Assessment methodology

The ISA applied an objective based assessment. Table NTS 2 below lists the ISA objectives for each topic area that were defined at scoping stage following a review of baseline information and key trends/opportunities as set out in the section above and refined in response to scoping consultation comments.

Table 4.2 ISA objectives

ISA Topic	ISA Objectives
Population and Socioeconomics	Support local economic development and accessibility to economic opportunities, employment and community facilities
Equality and Diversity	Support and promote improved access for all
Health	Protect and enhance health and well being
Community Safety	Support and promote community safety
Biodiversity	Protect and enhance biodiversity Protect and enhance International and European sites
Water Environment	Protect and enhance water resources and water quality and contribute to reduction in flood risk and disruption from flood events
Air Quality	Contribute to the mitigation of air pollution issues from transport and optimize potential for reduction in air pollution
Noise and Vibration	Contribute to mitigation of noise pollution as a result of transport and optimize potential for reducing noise/vibration

ISA Topic	ISA Objectives
Climatic Factors	Climate change mitigation: Contribute to achieving net zero carbon targets by reducing greenhouse gas emissions from construction of new/upgraded transport infrastructure or operation of existing and new transport networks, modal shift changes or new technologies. Climate change adaptation: improve resilience to climate change for the transport network and promote improved environmental resilience to climate change.
Landscape/ Townscape and Visual	Protect and enhance the character and diversity of the landscape/ townscape and minimise adverse visual effects on sensitive, valued and designated landscapes and public views
Cultural Heritage and Archaeology	Protect cultural heritage and archaeological assets and contribute to improved access to cultural heritage sites
Soils, Geology and Contaminated Land	Avoid conflicts with geological sites of value. Minimise loss of soil resources and contribute towards the appropriate management of soil resources and quality.
Material Assets and Resources	Promote the sustainable use of natural resources including land and mineral bearing land, encourage reuse, recycling and waste minimisation and effective use of existing infrastructure.
Natural Capital and Ecosystems Services	Protect natural capital and associated ecosystem services, whilst seeking to provide opportunities for enhancement

Effects against the ISA objectives have been assessed using one of the two metrics set out below. The first set of metrics shown in Table NTS 3 has been used to assess effects against the wider outcomes and strategic pathways and goals included in the Transport Strategy and also for the high-level assessment of SIP alternative approaches. The second set of metrics shown in Table NTS 4 has been used for the more detailed assessment of interventions included within the SIP.

Table 4.3 Significance criteria for assessment of the Transport Strategy and compatibility with ISA objectives

Description of Effect/Risk	Assessment against objectives
The transport strategy objective or goal has potential for contribute significant positive effect on the ISA receptors associated with this or contribute to achieving the objective.	+
The transport strategy objective or goal has potential for neutral or significant positive effects on the environmental receptors associated with this objective depending on how the policy or objective is delivered.	0/+
The transport strategy objective or goal has potential for mixed significant positive & negative effects on the environmental receptors associated with this objective.	+/-
The transport strategy objective or goal has potential for neutral effect on the environmental receptors associated with this objective.	0
The transport strategy objective or goal has potential for neutral or significant negative effects on the environmental receptors or conflicts with the ISA objective depending on how the policy or objective is delivered.	0/-
The transport strategy objective or goal has potential for significant negative effect on the environmental receptors or conflicts with the ISA objective.	-
The transport strategy objective or goal effects are uncertain/there is insufficient information on which to determine effect on potential environmental receptors associated with this objective at this stage.	?

Table 4.4 Significance criteria for assessment of SIP interventions against ISA objectives

Description of Effects/Risks	Scale of Effect
Major benefits / contribution to meeting ISA objectives (widespread/large scale)	+++
Moderate benefits /contribution to meeting ISA objectives	++
Minor benefits /contribution to meeting ISA objectives (local and small scale)	0/+
Neutral or not applicable	0
Minor adverse effects or potential conflicts with ISA objectives (local and small scale)	0/-
Moderate adverse effects or potential conflicts with ISA objectives	--
Major adverse effects or potential conflicts with ISA objectives (widespread / large scale)	---
Mixed positive and negative	-/+
Uncertain	?

Assessment outcomes for the Transport Strategy

Assessment of alternatives

Five potential approaches and a do minimum or business as usual (BAU) were considered in the development of goals that would deliver the four strategic pathways which comprise the draft Transport Strategy as shown in Table NTS 5. Approaches 1, 2, 4 and 5 would reduce transport

related carbon and air pollutant emissions to an extent, with direct positive effects against the climate and air ISA objectives and indirect positive effects against the biodiversity, water and natural capital ISA objectives. Approach 3 would address current connectivity issues and support access and economic growth.

New infrastructure construction required for alternative fuels (for example, a charging network for EVs) would be relatively small-scale local interventions. New infrastructure required to facilitate modal shift towards passenger transport and active travel modes could include potential to re-allocate existing road space. However, where land take is associated with supporting modal shift or connectivity there could be associated effects on biodiversity, landscape, heritage and soils and geology.

Modal shift towards the use of passenger transport and active travel under Approaches 2 and 3 is assessed as having a neutral to positive effect against the community safety objective. Whilst DfT road accident statistics¹² show that bus passengers have a lower casualty rate per mile than private vehicle passengers, walkers and cyclists do not. There is evidence to suggest that accident rates may decrease when the number of people undertaking active travel increases¹³. Overall effects are likely to be dependent on how the approach is delivered and the degree of modal shift achieved. Nevertheless, a focus on passenger and active transport provides an opportunity to improve the quality of environment of existing and new supporting infrastructure through design such that perceptions of safety are improved.

Overall, Approach 5 (combined approach for sustainable transport) was assessed as performing best against the ISA objectives as it provides flexibility, and inclusivity, in the delivery of accessibility and connectivity improvements with traffic demand management.

Table 4.5 ISA assessment of potential approaches to delivery of strategic pathways and associated goals

Transport approaches		ISA objectives													
		Population	Equalities	Health	Safety	Biodiversity	Water	Air	Noise/vibration	Climate	Landscape	Heritage	Soils/geology	Material assets	Natural capital
0	Do minimum/BAU - without Transport Strategy implementation	-	-	-	-	0/-	0	-	0/-	-	0	0	0	0	0/-
1	Focus primarily on promotion and facilitation of the use of alternative fuels - Benefits for air quality and noise in urban areas and to climate change carbon targets	0	0	+/ 0	0	+/ 0	+	+	+/ 0	+	0	0	0	0	0
2	Focus primarily on promotion and facilitation of modal shift towards passenger transport and active travel modes	+/-	+/-	+	+/ 0	+	+	+	+/ 0	+	0	0	0	0	0

Transport approaches		ISA objectives													
		Population	Equalities	Health	Safety	Biodiversity	Water	Air	Noise/vibration	Climate	Landscape	Heritage	Soils/geology	Material assets	Natural capital
3	Improved connectivity and accessibility – including through infrastructure development	+/-	+/-	+/-	+/ 0	-	0/-	0/-	-	-	-	-	-	-	-
4	Combined approach to delivery including both promotion and facilitation of the use of alternative fuels and also modal shift towards passenger transport and active travel modes and improved connectivity	+/-	+/-	+/ 0	+/ 0	-	0/-	0/ +	0/ +	+	-	-	-	-	-
5	Combined approach including additional demand management to address induced traffic and additional inclusivity initiatives and support for biodiversity recovery initiatives as part of coordinating biodiversity and environmental net gain	+/ 0	+/ 0	+	+	+/-	+/-	+	+	+	+/-	0/-	0/-	+/-	+/-

Assessment of proposed Strategy

Table NTS 6 provides the assessment of residual effects against the ISA objectives for the wider outcomes that the Strategy should contribute to the delivery of. As part of the ISA assessment process, recommendations were made to amend the wording of these targets to increase the focus on inclusivity and sustainability within the outcomes. These included the need for place-making measures to be resilient to future climate change and ensure alignment with the UK Government’s 2050 zero carbon emissions target. These recommendations were incorporated into the final wider outcomes shown in Table NTS 6, and the residual effects are assessed either positive, neutral-positive or neutral.

Table 4.6 ISA residual effects assessed against draft Transport Strategy wider outcomes

Wider outcomes		ISA objectives													
		Population	Equalities	Health	Safety	Biodiversity	Water	Air	Noise/vibration	Climate	Landscape	Heritage	Soils/geology	Material assets	Natural capital
1	Reducing carbon emissions to net zero by 2040	0	0	0	0	0	0	0	0	+	0	0	0	0	0
2	Promoting active, healthy and safe lives for all	0	+	+	+	+/0	0	+/0	+/0	+/0	0	0	0	0	+/0
3	Promoting and supporting a productive, sustainable and diverse economy	+	0	+	0	0	0	0	0	0	0	0	0	0	0
4	Supporting access to education, training and employment opportunities for all	+	+	+	0	0	0	0	0	0	0	0	0	0	0
5	Facilitating the sustainable energy sector	+/0	0	0	0	0	0	0	0	+	0	0	0	0	0
6	Helping our growing areas to develop sustainably to create high quality, distinctive and resilient places to live, work and visit	+	+	+	+/0	0	0	0	0		+/0	0	0	+/0	0
7	Protecting and enhancing the built and natural environment	0	0	+/0	0	+/0	+/0	+/0	0/+	0/+	+/0	+/0	+/0	+/0	+/0

Table NTS 7 sets out the goals included under each of the four strategic pathways which comprise the draft Transport Strategy.

Table 4.7 Goals under each of the four strategic pathways included in the draft Transport Strategy

<p>Decarbonisation</p> <ol style="list-style-type: none"> 1. Reduce demand for carbon intensive trips - through local living by making it easier for people to access jobs and services locally or by digital means 2. Shift modes - by supporting people to switch from private car to active, shared and passenger transport, and goods to more sustainable modes like rail 3. Switch fuels -with all private, passenger transport, fleet and freight vehicles switching to net zero carbon fuels at the earliest opportunity 4. Zero carbon growth - by supporting authorities and developers to plan, locate and design new development that reduces the need for people to make carbon intensive transport trips in the future
<p>Connecting growing towns and cities</p> <ol style="list-style-type: none"> 5. Within our towns and cities – improve connectivity and accessibility for walking, cycling and passenger transport to support sustainable access to services, education, training, employment and leisure 6. Deliver faster and more reliable transport connections - between our growing towns, cities and economic corridors, and to the rest of the UK, to support business growth, skills development and employment 7. Fully integrate transport - networks, services and operations across the the Transport East region, through a customer focused approach, enabling seamless and safe end-to-end journeys by sustainable modes that are attractive to all people
<p>Energising rural and coastal communities</p> <ol style="list-style-type: none"> 8. Increase accessibility to education, training, services and employment for rural communities – through; better ways of taking people to places sustainably, supporting local communities to make more trips locally, and supporting regional partners and the digital sector to provide alternative options to travel 9. Improve connectivity along our 500 miles of coastline - and connect our coastal towns and communities to the rest of the region and UK, to support levelling-up and boost our coastal industries, including Energy, Shipping and Tourism
<p>Unlocking international gateways</p> <ol style="list-style-type: none"> 10. Improve connectivity, journey time and reliability – for freight, passengers and employees to ports and airports 11. Move goods and people sustainably to ports and airports – by shifting modes 12. Increase use of alternative fuels – for both ports and airports

A suite of ISA mitigation recommendations has been identified to minimise or remove potential adverse effects and maximise potential beneficial effects associated with goals under the four strategic pathways. These included changes to the wording or nature of goals included in the draft Transport Strategy, as well as the measures shown below in Table NTS 8 which would apply to all goals. Table NTS 9 shows the residual effects assessed for each goal against the ISA objectives.

Table 4.8 General ISA mitigation measures for the Transport Strategy be implemented by Transport East and Partners responsible for the individual schemes

- Strategy Goals and measures will be supportive of the Integrated Sustainability Assessment (ISA) Objectives
- Carbon emissions resulting from the construction, operation or implementation of goals and measures implemented under the four strategic pathways will overall lead to a net reduction in transport related carbon emissions within the TE region in line with the UK Government's 78% emissions reduction by 2030 and 2050 net zero targets.
- Policies, programmes and new infrastructure design will be inclusive in nature and reduce risk of transport (particularly) collisions, crime and anti-social behaviour.
- Where new infrastructure development is required, the following general principles will apply where practicable:
 - Design will seek to minimise capital carbon emissions, will be compliant with PAS 2080:2016 and PAS 1878:2021
 - Land take from habitats, housing, commercial premises (including agricultural land holdings), heritage assets and valuable soils including Best and Most Versatile (BMV) agricultural land and peatland soils will be avoided
 - Risks of disturbance to wildlife (including protected species) and to unknown archaeology will be minimised
 - Infrastructure proposals will adopt context sensitive design and be sited to minimise the risk of negative impacts on landscapes, townscapes and visual amenity and on the setting of built heritage assets
 - Infrastructure will be designed and sited such that flood risk is not worsened, or preferably improved
 - Brownfield sites will be used in preference to greenfield land
 - Infrastructure will be designed for resilience to the latest likely worst case climate projections (currently considered to be UK Climate Projections 2018 (UKCP18) Representative Concentration Pathway (RCP) 8.5)
 - Statutory biodiversity net gain target of 10% across the SIP implemented consented schemes will be exceeded and for each individual consented scheme biodiversity net gain requirements will be met.
- New infrastructure development will be subject to environmental assessment, including Environmental Impact Assessment (EIA) (either statutory or non-statutory), Habitat Regulations Assessment (HRA), Water Framework Directive (WFD) compliance assessment, Flood Risk Assessment (FRA), Equalities Impact Assessment (EqIA) and Health Impact Assessment (HIA) as appropriate. These assessments will be undertaken at project level, and mitigation recommendations therein adhered to during construction and operation.

Table 4.9 ISA residual effects assessed against goals under each of the four strategic pathways included in the Transport Strategy

ISA objectives	Decarbonisation				Connecting growing towns and cities			Energising rural and coastal communities		Unlocking international gateways		
	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Goal 9	Goal 10	Goal 11	Goal 12
Population	+	0	0	+	+	0/+	+	+	+	+	0/+	0
Equalities	+	0/+	0	0	0/+	0	0/+	0/+	0/+	0	0/+	0
Health	0/+	0/+	0/+	0/+	0/+	0/+	+	0/+	0/+	+/-	0/+	0/+
Safety	0	0/+	0	0/+	0/+	0/+0	+	0	0/+	0/+	0/+	0
Biodiversity	0/+	0/+	0/+	0/+	0/+	+/-	0/+	0/+	+/-	+/-	+/-	0/+
Water	0/+	0/+	0/+	0/+	0/+	+/-	0/+	0/+	+/-	+/-	+/-	0/+
Air	0/+	+	+	+	0/+	0/+	0/+	0/+	0/+	+/-	+/-	+
Noise/vibration	0/+	0/+	0/+	0/+	0/+	?	0/+	0	?	+/-	+/-	0
Climate	0/+	0/+	+	+	+	0/+	0/+	0/+	0/+	+/-	0/+	+
Landscape	0	0	0	0	0/+	0/-	0/+	0	0/-	0/-	0/-	0
Heritage	0	0	0	0	0	0/-	0	0	0/-	0/-	0/-	0
Soil/geology	0	0	0/+	0	0	0/-	0	0	0/-	+/-	0/-	0
Material assets	0	0	0	0	0	+/-	0	0	0/-	+/-	0/-	0
Natural capital	0/+	0/+	0/+	0/+	0/+	+/-	0/+	0	+/-	+/-	+/-	0/+

With the identified ISA mitigation recommendations in place, residual effects against the ISA objectives can be summarised as:

- Positive or neutral/positive residual effects against the population, equalities, health and safety objectives, with some goals scoring neutral effects.
- Positive or neutral/positive residual effects against the biodiversity, water and natural capital objectives, with the exception of goals 6, 9, 10, where mixed positive/negative effects are assessed. Whilst habitats and water quality would benefit from reduced transport related NO_x emissions, loss of habitats, disturbance to wildlife and potential loss of land from the flood plain can occur where new infrastructure construction is required.
- Residual effects against the landscape, heritage, soils/geology and material assets ISA objectives would be neutral with ISA mitigation in place, with the exception of goals 9, 10, for which a neutral/negative effect is assessed. This is due to the potential for visual impacts, changes to landscape and townscape character and to the setting of built heritage assets, loss of valuable soils and agricultural land and loss or truncation of archaeological assets as a result of new infrastructure construction.

The nature of positive and negative effects associated with goals under the four strategic pathways is summarised in Table NTS 10 (Within Plan cumulative effects).

Cumulative effects

As shown in Table NTS 10 the ISA assessment has considered the potential for intra-plan cumulative effects between goals included within the draft Transport Strategy, and also inter-plan cumulative effects between the Strategy and other national and regional level plans, policies and strategies. Mitigation has been identified for the potential negative cumulative effects identified at strategy level as follows, and these measures have been incorporated into the ISA Sustainability Strategy for the Transport Plan and SIP.

- Facilitate delivery of biodiversity and wider environmental net gain within the region by engaging with Defra, Natural England and the designated authorities to inform the approach to natural capital assessment and delivery of Biodiversity and Environmental Net Gain approach which is supportive of the Nature Recovery Network and local Nature Recovery Network Strategies and any local natural capital plans.
- Engage with the relevant Local Transport Authorities (LTAs) and Local Planning Authorities (LPAs) on an approach for considering landscape opportunities for the Transport Strategy linking with the biodiversity net gain delivery which can identify an integrated approach to the management of landscapes and townscapes and cultural heritage and linked to wider environment net gain providing for recreation and active travel.
- Liaise with Historic England to identify priority 'at risk' heritage assets within the Transport East region which either have the potential to be affected by transport related development or are within proximity to SIP interventions and there are opportunities linked to schemes for providing wider benefits such as supporting access, or their conservation or other forms of safeguarding..
- Work with the Department for Transport to monitor the metrics which would inform future iterations of the Transport Strategy and SIP and enable corrective action to be undertaken where needed to avoid facilitating induced demand on the highway network.
- Support the monitoring of carbon emissions associated with implementation of the Transport Strategy to monitor progress towards achievement of the long term target of achieving net zero carbon from transport by 2040.
- Identify best practice measures, based on latest research and where appropriate targeted consultation, to support local transport authorities in ensuring equality of access is achieved for all interventions proposed within the SIP.

Table 4.10 Transport Strategy intra-plan and inter-plan cumulative effects against ISA objectives

	Positive or neutral/positive	Mixed positive/negative	Negative or neutral/negative
Intra-plan	<p>Cumulative residual positive effects on the population, equalities, health, safety, climate and air ISA objectives associated with improved access to economic and social opportunities. Improved accessibility of passenger transport and active travel infrastructure for people with disabilities, and support for increased physical activity levels and decreased transport related air and noise pollution emissions as a result of support for modal shift towards the use of low and zero emission fuelled vehicles, passenger transport and active travel.</p>	<p>Cumulative mixed positive/negative effects on the biodiversity, water, natural capital and noise ISA objectives. Goals supporting modal shift towards low and zero emission fuels, passenger transport and active travel would contribute towards reduced transport related airborne nitrogen deposition, noise emissions, and watercourse pollution through road run-off. However, new infrastructure construction and short sea shipping has potential for habitat loss and disturbance to wildlife and localised adverse noise impacts.</p>	<p>Cumulative negative/neutral effects on the landscape, heritage, soils/geology and material assets ISA objectives where new infrastructure construction with potential for new visual impacts, changes to landscape character and the setting of built heritage assets and land take from existing built or natural assets would be required to support the delivery of goals.</p>
Inter-plan	<p>Positive cumulative effects on the air and climate objectives associated with national and regional level plans which seek to reduce air pollutant and carbon emissions such as the UK Government's The Clean Growth Strategy and Decarbonising Britain: A Better Greener Britain, local authority climate strategies and carbon reduction strategies and regional and local transport plans</p> <p>Positive cumulative effects against the population, equalities, health and safety ISA objectives associated with national and regional level plans including the UK Government's Transport Investment Strategy, The Inclusive Transport Strategy: Achieving Equal Access for Disabled People and Bus Back Better: National Bus Strategy for England, National Highways' Roads Investment Strategy 2, Local Enterprise Partnership (LEP) economic strategies, regional transport strategies and local authority transport strategies, health and wellbeing strategies and walking and cycling plans.</p>	<p>Mixed positive/negative cumulative effects against the biodiversity and water ISA objectives. Positive cumulative effects associated with plans and strategies which seek to reduce transport related air pollutant emissions as set out against the Air ISA objective. Negative cumulative effects associated with national and regional level plans and strategies promoting significant new infrastructure construction likely to necessitate land take or disturbance from terrestrial or aquatic habitats and/or from areas of flood plain, including the UK Government's Build Back Better: our plan for Growth, LEP economic strategies, regional transport strategies, local transport plans and regional and local level waste, minerals, water resource and development plans.</p>	<p>Potential cumulative negative effects on the landscape, heritage, soils/geology and material assets ISA objectives with other plans and strategies which promote significant new infrastructure construction likely to necessitate land take or introduce new visual elements to landscapes and townscapes.</p>

Assessment outcomes for the SIP

Assessment of long list alternatives

A high-level risk based assessment against the ISA objectives, of the 62 longlist interventions identified 16 of these options which scored a moderate or major adverse risk level against more than one ISA objective. Eight of these higher risk options were not taken forward as priority interventions for delivery within the next five years, providing an opportunity for further investigation of the potential negative effects identified and mitigation opportunities and consideration of potential alternatives in advance of the next revision of the Transport Strategy and SIP. The options taken forward were assessed further to consider construction and operational effects and including general assumptions on mitigation to identify potential residual effects.

Assessment of proposed Plan

Table NTS 11 lists the priority SIP interventions, and Table NTS 12 shows the potential residual effects assessed for each intervention against the ISA objectives based on information available on the schemes and taking account of mitigation expected to be applied. Only those priority interventions included within the SIP for delivery within 0-5 years have been assessed in the ISA. This is because the Transport Strategy and SIP will be regularly updated to ensure that they remain relevant to the evolving transport challenges that the region faces and continue to support the Government in achieving national aspirations for new homes and jobs, levelling up, boosting international trade, and achieving net zero as we recover from the COVID-19 pandemic. As such, there is some uncertainty regarding the nature and delivery of schemes currently included in the SIP for the 5-10 year timescale.

Table 4.11 SIP interventions (priority interventions to be delivered within 0-5 years are highlighted bold)

Corridor A: Regional Strategic Packages	
<p>A1: Re-open rail lines in rural/coastal areas A2: Widespread roll-out of EV charging infrastructure to increase EV take up (including HGVs) A3: Implement SMART ticketing across the region A4: Urban Active Travel Package A5: Inter-urban Active Travel Package A6: Rural Active Travel Package A7: Develop an ambitious programme of traffic demand management measures across the region A8: Ports Access Package A9: Coastal Access Package A10: Urban Sustainable Transport Package A11: Rural/coastal – Inter urban sustainable package A12: Infill electrification of rail associated with Felixstowe and Thameside A13: Widespread roll out of fibre broadband and 5G</p>	
Corridor B: Connecting our Energised Coastal Communities (Midlands – Kings Lynn – Norwich – Great Yarmouth)	Corridor C: Connecting the Heart of East Anglia (London – Chelmsford – Colchester – Ipswich – Norwich and Suffolk Coast)
<p>B1: A47 Tilney to East Winch dualling B2: Norwich Western Link B3: Acle Straight Dualling B4: A47/A17 Pullover Junction, Kings Lynn</p>	<p>C1: GEML strategic rail package (Improvements in London, Essex, Suffolk and Norfolk) C2: A12 strategic package South: J19 - J25 (Chelmsford to Marks Tey) and M25 to the A14 including a bypass of Chelmsford C3: Army and Navy Sustainable Transport Package C4: A12 strategic package North (A14 to A1152) C5: A12 Northern section (A1152 to Lowestoft) improvements C6: A140/A1120 MRN C7: A146 Active Travel link Beccles to Lowestoft</p>

<p>Corridor D: Cross-country connectivity (Norfolk and Suffolk to Cambridge – Midlands – South-West)</p>	<p>Corridor E: South Essex Corridor (Stansted – Braintree – Colchester – Harwich and Clacton)</p>
<p>D1: East – West (Eastern section) Rail package (enhanced Norwich and Ipswich connectivity and capacity to Cambridge as Eastern section of national East-West Rail project) D2: Felixstowe Port to the Midlands and North rail freight improvements D3: Haughley Rail Junction - double track (freight capacity) D4: Other Rail level crossing improvements not covered by the Ely / Felixstowe scheme D5: Trowse Rail Bridge and Trowse lower junction double tracking D6: Felixstowe rail branch line - doubling D7: A11 Fiveways D8: A14 Package – junctions 37 A14/A412 (Newmarket), 43 and 44 (Bury St Edmunds), A14 to Expressway standard D9: Rail improvements across Suffolk D10: A14/A12 Copdock interchange D11: A11 Thetford</p>	<p>E1: A1306 improvements and bus priority E2: M25 J30 capacity enhancement E3: Essex Thameside rail improvements (identified in Essex Thameside study) E4: A127 Strategic Package E5: A127 Outer Relief Road - Southend and Essex E6: A127 Northern Relief Road - Southend and Rochford E7: Southend Congestion Relief Package E8: South Essex Bus Metro – rapid transit E9: Upgrade Wickford to Southminster rail line E10: GEML Rail Link to London Gateway E11: Southend Airport Access Package E12: Harp House roundabout improvements E13: Improved access to Canvey E14: Southend Rapid Transit E15: A13 / A126 East facing slips</p>
<p>Corridor F: UK Innovation (Kings Lynn – Cambridge – Harlow – London)</p>	<p>Corridor G: East-West Growth (South Essex – London – Thurrock – Basildon – Southend)</p>
<p>F1: West Anglia main rail line package F2: A10 West Winch housing access road F3: Rapid Transit - Cambridge to Uttlesford F4: M11 J8 Long Term Scheme F5: Stansted Airport Sustainable Access Package</p>	<p>G1: Dualling the A120 between Braintree and the A12 G2: North Essex Rapid Transit – phase 2 G3: Braintree Rail Branch Line improvements G4: Clacton Town Centre Action Plan G5: A133 Frating to Clacton Enhancements G6: Tilbury Link Road</p>

ISA mitigation recommendations for priority interventions typically include measures to minimise land take from habitats (including protected areas and priority habitats) and flood plain areas, integrate new infrastructure within the existing landscapes, and reduce risks to heritage assets (built and archaeological). Recommendations also aim to minimise capital carbon emissions and maximise use of low or zero emission fuels and ensure that active travel and passenger transport proposals are safe and suitable for all users.

As shown in Table NTS 12, the potential residual effects on ISA objectives assuming mitigation would be delivered, are largely neutral or minor beneficial/minor adverse. Almost all interventions show beneficial effects against the health, population, equalities, safety and climate objectives. Effects against the physical environment objectives are generally neutral or minor adverse, with the exception of intervention B2 (Norwich Western Link) for which moderate negative effects against the biodiversity objective is assessed due to potential impacts on the River Wensum SAC and for interventions C3 (A140/A1120 MRN), and F1 (Dualling the A120 between Braintree and Marks Tey) for which potential moderate adverse effects against the biodiversity, water, soils and material assets objectives are identified.

Cumulative assessment

The ISA assessment has considered the potential for intra-plan cumulative effects against ISA objectives arising from more than one priority intervention included in the SIP (i.e. inter-plan cumulative effects), and also cumulative effects between SIP priority interventions and other large scale planned development (Development Consent Order applications, Transport and Works Act Order applications and Hybrid Bills), SIP committed development schemes and local level plans and strategies (i.e. inter-plan cumulative effects). Table NTS 13 sets out the key intra-plan and inter-plan

cumulative effects identified. Mitigation for cumulative effects includes the following, in addition to the mitigations identified for the Transport Strategy previously described.

- Working with Local Authorities and Local Transport Authorities to undertake a high-level assessment of capital carbon emissions associated with (i) priority SIP interventions planned for delivery within the next five years and (ii) other interventions planned for delivery within the 5-10 year period. Transport Strategy and SIP identify opportunities for contributing to carbon sequestration through habitat creation and/or land use management.
- Working with scheme proponents for specific schemes identified as having potential for negative cumulative effects with SIP priority interventions planned for delivery within 0-5 years to avoid the potential adverse effects identified through modifications to scheme design and constructability proposals where required.

Table 4.12 ISA residual operational and moderate/ major long term construction effects assessed for SIP interventions planned for delivery within 0-5 years

ISA objectives	Corridor																																					
	A											B		C					D		E					F				G								
	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A13	B2	B4	C1	C2	C3	C4	C6	D3	D10	E1	E7	E11	E12	E13	E15	F1	F2	F3	F5	G1	G4						
Health	++	0/+	+++	++	++	0	++	++	++	++	0/+	++	0/+	++	-/+	++	++	0/+	0/+	0/+	++	++	++	0/+	++	0/+	0/+	0/+	++	0/+	0/+	++	0/+	0/+	++			
Population	0	0/+	0/+	0/+	++	0	0/+	++	++	++	++	0/+	0/+	0/+	++	++	0/+	0	++	++	0/+	++	0/+	0/+	++	++	0/+	0/+	++	0/+	++	0/+	0/+	++	0/+	++		
Equality	0/+	0/+	0/+	0/+	++	0	0/+	++	++	++	0	0/+	0	0	0/+	0	0/+	0	0/+	0	0/+	0	0/+	0/+	++	0	0/+	0/+	++	0	0/+	0/+	++	0	0/+	0/+		
Safety	0	0	0/+	0/+	0/+	0/+	0/+	++	++	++	0	0/+	++	0/+	0/+	++	0/+	0/+	0/+	-/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0	++	0/+	0/+	0/+	0/+	0/+	0/+			
Climate	++	0/+	++	++	0/+	++	++	++	++	++	0	-/+	0	++	0/-	++	0/+	-/+	++	0	++	0/+	++	0/+	0/+	0/+	++	0/-	++	0/+	++	0/+	-/+	0/+	-/+	0/+		
Biodiversity	0/+	0/+	0/+	++	0/+	0/+	0	0	0/+	0/+	0	---	0	0	0/-	0/-	0/-	0/+	0	0/-	0	0	0	0	0	0/-	0	0/-	0	0	0	0	0	0	0	0	0	
Water	0	0	0	0	0	0	0	0/+	0	0/+	0	0	0	0	0	0/-	0/-	0	0	0	0	0	0	0	0	0/-	0	0	0	0	0	0	0	0	0	0	0	
Air	0/+	0/+	++	0/+	0/+	++	0/+	0/+	+++	0/+	0	-/+	0/+	0/+	0/-	0	0/+	-/+	0/+	0/+	++	0/-	-/+	0/+	-/+	-/+	++	0/-	++	0/+	++	0/+	-/+	0	0	0		
Noise	0	0	++	0/+	0/+	++	0/+	0/+	0/+	0/+	0	0/+	0	0/+	0	-/+	0/+	-/+	0/-	0	0/+	0/+	0/-	0/-	0/+	0/-	0/+	0/-	++	0/+	0/+	0/+	0/+	0/+	0/+	0	0	
Landscape	0	0	0	++	0/+	0	0	0	++	0	0	---	0	0	?	0/-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heritage	0	0	0	0	0	0	0	0	0/+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soils/Geology	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material Assets	++	++	0/+	0/+	0/+	0/+	++	0	0/+	0/+	0	0/+	0	0/+	0/+	0/+	0/+	0/-	0/+	0	0/+	++	0/+	0/+	0/+	0/+	0/+	0/+	-/+	0/+	0/+	0/+	0/+	0/+	0/-	0	0	
Natural Capital	0/+	0	0/+	++	0/+	0/+	0	0	0/+	0/+	0	---	0/+	0/-	0	0/+	0	0/-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 4.13 SIP intra-plan and inter-plan cumulative effects against ISA objectives

	Beneficial	Mixed beneficial/adverse	Adverse
Intra-plan	<ul style="list-style-type: none"> Population - improved access to schools, jobs and other facilities, particularly for Southend-on-Sea, Canvey Island and Clacton-on-Sea. Equalities - improved access to coastal and rural areas Health - longer term improvements to air quality, increased physical activity levels as a result of support for modal shift towards active travel modes and better access to facilities at Southend Hospital Safety - reduced road congestion, relocation of highways away from communities and modal shift away from private vehicle use (reducing traffic flows on the roads) and towards public transport (improving perceived safety, in conjunction with interventions to improve public transport quality). 	<ul style="list-style-type: none"> Air quality, climate and soils and geology - positive effects against each of these objectives associated with regional scale schemes prioritising sustainable travel modes (electric vehicles, passenger transport, active travel) which would reduce transport related carbon and NOx emissions. However, there are numerous large road schemes included in the priority interventions list for delivery in 0-5 years which would incur significant carbon costs, and which may alter traffic patterns locally resulting in worsened air quality impacts. Noise - localised negative effects where construction period of multiple interventions overlaps. Longer term positive effects associated with regional scale schemes prioritising passenger transport and active travel modes, and with reduced congestion on the highway network. 	<ul style="list-style-type: none"> Natural capital, biodiversity, heritage and material assets - multiple interventions would require land take from greenfield land, likely resulting in loss of habitats, disturbance to wildlife (including protected species), risk of disturbance to archaeological remains and loss of agricultural land.
Inter-plan	<ul style="list-style-type: none"> Population and equalities– improved access to transport in rural and coastal Essex, including improved affordability of transport, in combination with SIP committed schemes enhancing access to ports and coastal regions and passenger transport in Essex. Health – cumulative beneficial effect on opportunities for physical activity in combination with other SIP committed schemes in Essex which promote active travel. Climate and safety - positive cumulative effects between multiple SIP interventions and local transport plans which prioritise modal shift towards passenger transport and active travel and road safety improvements. 	None identified	<ul style="list-style-type: none"> Water, natural capital, biodiversity, landscape, air, noise and material assets - cumulative negative effects between A47 Tuddenham to Easton and Norwich Western Link Road SIP intervention which are located in close proximity and both have potential to have: <ul style="list-style-type: none"> Adverse effects on the River Tud Result in loss of habitat and adverse effects on natural capital Generate noise and air pollution during both construction and operation Adverse effects on the viability of agricultural land holdings

HRA Screening and Appropriate Assessment

The HRA Screening assessment identified eighteen of the schemes in the SIP as screened in for appropriate assessment because at this stage, with the information available, it could not be concluded that they would not result in Likely Significant Effects (LSEs) on one or more European site. Following consultation, the final Transport Strategy and SIP was re-screened, to reflect any changes resulting from the public consultation. An appropriate assessment was also undertaken on any schemes that are screened in.

The HRA reports present the outcome of the Stage One: Screening and Stage Two: Appropriate Assessment of the HRA for the Transport Strategy and SIP.

Likely significant effects were identified for 15 European sites. These LSEs arose from schemes identified within SIP Appendix C both individually and in-combination with other plans or projects. Through the implementation of appropriate mitigation, it was concluded that these schemes would result in no AESI on the qualifying features of these sites. Project HRA will be required for any of these schemes should they be adopted. The outcome of this assessment does not prejudice these assessments, which will be undertaken with a more detailed understanding of the individual projects and up to date baseline data. No aspects of the main SIP text or SIP appendices A, B, D or E were found to result in LSEs on European sites.

Both the final Transport Strategy and SIP will be periodically monitored and reported on to assess progress towards the strategy's four strategic priorities. Following each monitoring and assessment exercise, the Transport Strategy and SIP will be updated to reflect any changes to the documents or priority schemes. It is expected that this will occur every 2 to 5 years. As the Transport Strategy and SIP are updated, a HRA will also be completed on the updated documents.

5 Sustainable Action and Monitoring Plans

The SEA Regulations require the monitoring of a plan or strategy, so that significant effects can be identified, and any action required is undertaken. Monitoring Plans provide a means to demonstrate the sustainability of the adopted strategy using sustainability objectives, targets and indicators. They also permit the early identification of emerging significant effects to enable corrective actions to be taken during strategy implementation.

Table 5.1 sets out the Sustainability Action Plan for the Transport Strategy which includes strategic level actions which will support delivery of the Monitoring Plan. This includes actions to work with partners across areas such as reporting on natural capital/ecosystem services, biodiversity net gain provision and carbon emissions accounting and including developing templates or proformas for collecting data and information on scheme proposals on a consistent basis so this can support regional analysis and reporting in the future.

Table 5.2 presents the final ISA Monitoring Plan for the Transport East Transport Strategy and SIP. This covers the specific ISA objectives and proposals for measuring performance against these. Where monitoring identifies targets included in the ISA monitoring plan or Transport Strategy and SIP monitoring and evaluation plan that have not or will not be achieved, future Transport Strategy goals and SIP interventions will need to incorporate appropriate revisions.

Table 5.1 Sustainability Action Plan

ISA objective	ID	Action	Target	Responsible party
General (applicable to all or multiple ISA objectives)	SSA-GEN-1	Integrate ISA Sustainability Action Plan and ISA Monitoring Plan with Transport Strategy and SIP Monitoring and Evaluation Plan	Facilitate coherent single set of monitoring targets and indicators, and single reporting schedule	TE
	SSA-GEN-2	Engage with partners to develop templates/proformas for monitoring reporting, including schedule of data inputs and associated timescales where data to be provided by third parties and including a template for individual scheme reporting to collect and update information as scheme proposals are developed. (see Table 8.2). Templates to be digital/online to facilitate updating and access and data analysis/mapping. – this could also facilitate future digital and interactive reporting.	Facilitate ISA monitoring and reporting and input to future SIP and Strategy updates	TE in partnership with local authorities
	SSA-GEN-3	Reporting on funding % across the strategic priorities and strategic partners	Balance of funding reflecting Strategy priorities and achieving sustainability objectives	TE and LTAs
	SSA-GEN-5	Given limited information available in public domain regarding sustainability of shipping fuels and opportunities to minimise air and water pollution and disturbance to aquatic wildlife - engage with government and partners to identify approaches.	Identify appropriate targets	TE in partnership with relevant organisations

ISA objective	ID	Action	Target	Responsible party
Population and Equalities	SSA-EQ-1	Work with partners to bring together existing knowledge on accessibility needs across groups and identify where additional consultation is required and ensure that schemes are identified and designed with requirements taken into account The EqIA identified that further consideration could be given to the methods of engagement with PCGs and those from deprived communities	Support inclusive modal shift, access to alternative fuel transport and active travel participation	TE in partnership with local authorities
	SSA-EQ-2	Develop methodology for tracking strategy monitoring objectives (also included in ISA monitoring plan) regarding elimination of transport deserts and % of people with access to services	Support reporting on access and provide evidence baseline for future iterations of the Strategy and SIP	TE
	SSA-EQ-3	Lack of information regarding reasonable alternatives to home EV charging for private vehicles where this is not physically possible (i.e. for around 1/3 of UK dwellings), which will limit shift from conventionally fuelled vehicles. TE to work with partners to develop thinking and coordinated response around this issue.	Support transition from conventional fuels	TE in partnership with local authorities
Biodiversity Natural Capital	SSA-B-1	Engage with responsible authorities (likely to be Local Authorities) during development of Local Nature Recovery Strategies (LNRS) to identify how interventions supported by Transport East can contribute towards net gain targets on strategic scale	Identify a coordinated approach and opportunities for delivering biodiversity and environmental net gain on a strategic scale and contribute to local and national targets	TE in partnership with local authorities
	SSA-B-2	Engage with partners and authorities to develop a coordinated reporting approach for Nature capital, Biodiversity and Environmental Net Gain for interventions proposed under the Transport Strategy and SIP including establishing a consistent baseline.		
Landscape	SSA-GEN-4	Engage with local authorities on principles for an integrated approach to the protection and management of landscapes and townscapes (including built heritage assets and historic landscapes), flood risk and habitat, development, maintenance and management. This would be an opportunity to consider links to biodiversity net gain, environmental gain, recreation and active travel in relation to the initiatives from the Transport Strategy and SIP	Support a coordinated approach to explore potentially synergies for addressing impacts and opportunities between, landscapes and townscapes, heritage assets, biodiversity, carbon sequestration, and flood risk over the TE region	TE in partnership with local authorities
Heritage				
Water				
Soils/geology				

ISA objective	ID	Action	Target	Responsible party
Climate	SSA-C-1	Develop common methodology across local authority partners for regular assessment of cumulative carbon emissions associated with interventions implemented under the Transport Strategy, building on baseline assessment in the ESC Phase 1 study. Include a review of lifecycle analysis covering vehicle manufacture carbon footprint differences between EV and conventional vehicles with recommendations on how this could be appropriately considered in future carbon analysis.	Monitor progress towards carbon net zero in 2040 through the 3-5 yearly updates to the SIP and Strategy	TE in partnership with local authorities
	SSA-C-2	Encourage scheme sponsors to require CEEQUAL assessment (or similar), with view to obtaining Very Good or Excellent rating – as a systematic way to include best practice sustainability approaches in design.	Planning consented Schemes supported by Transport Strategy and included in SIP to obtain CEEQUAL or Very Good or Excellent rating (or similar)	TE with partners

Biodiversity and nature recovery

In relation to SSAB -1 and -2, Figure 8.1 shows Natural England’s habitat network areas for the region. These identify areas where there is potential to enhance or connect habitats. This is based on national level mapping information but can be used along with engagement with relevant local stakeholders including for example Natural England, the Broads Authority, local councils and wildlife Trusts, to identify additional regional and local opportunities and priorities. The Environment Act requires that Local Nature Recovery Strategies are to be developed in the future and these will be important sources of information on where enhancement actions should be targeted. Impacts on biodiversity and natural capital will need to be assessed further (along with other potential impacts) as part of the Connectivity studies for the six strategic corridors but also opportunities for contribution to valuable enhancement as part of a coherent approach working with other partners to provide meaningful and long term benefits.

In line with the 2021 Environmental Act aims, strategic approaches to meeting biodiversity net gain requirements should also consider potential for wider environmental gain including linking biodiversity enhancement with ecosystem service provision such as carbon sequestration, water retention reducing flood risk and recreation amenity provision.

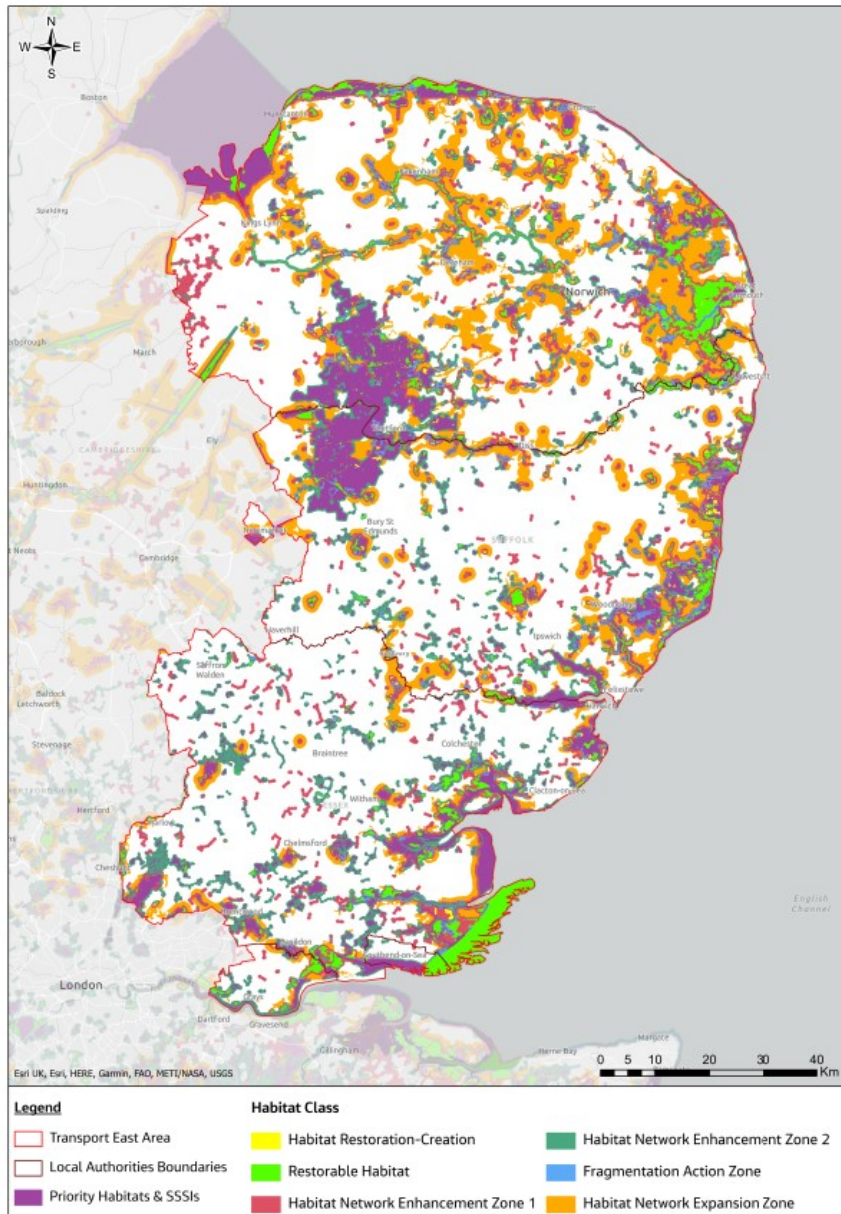


Figure 5.1 Habitat Network Map

Inclusion and Equality

The high-level nature of the Transport Strategy precludes the identification of specific impacts on some protected characteristic groups and instead the Strategy has an objective to deliver inclusive growth which addresses the needs of all transport users. The extent of impacts on particular groups may only come to the fore during Strategy implementation stage as detailed schemes and interventions start to emerge.

Table 5.2 Monitoring plan

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
People	P1	Reduction in percentage of areas classified as a 'transport desert'	Percentage of areas classified as transport desert	DfT data on access to public transport services for example - over 500m away from hourly bus or train service mapped using TRACC	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE	TE reporting through updates to SIP and Strategy and reporting in business plan on overall progress
	P2	Improved access to services, education, training and facilities in rural and coastal areas	Engage with partners to agree appropriate baseline and indicators	Sources of data to be agreed with partners – considering DfT data for journey times to services, education, health, employment (to be confirmed)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required))	To be agreed with TE partners	TE
Equalities	E1	Maintain or increase accessibility of public transport for people all Protected Characteristic Groups (PCGs)	Annual average number of public transport trips taken, and journey length of trips taken by public transport - identify a way to measure PCG trips	DfT National Transport Survey disability and accessibility statistics	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	To be agreed with TE partners	TE
	E2	Improve accessibility to public Transport in transport deserts	Bus service proximity and frequency in areas classed as transport deserts	DfT data on access to public transport services for example - over 500m away from hourly bus or train service mapped using TRACC	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE	TE

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
	E3	Accessible and affordable access to EVs for low income households and people with disabilities	New EV vehicle registrations as a proportion of new vehicle registrations by IMD income deprivation decile	DfT Vehicle Licensing Statistics Charging point location mapping	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required))	To be agreed with TE partners	TE
	E4	Increase proportion of active travel journeys undertaken by older and younger people, women and people with disabilities	Number/proportion of walking and cycling journeys undertaken by people aged under 16, over 65, women and people with a disability	DfT National Transport Survey disability and accessibility statistics DfT National Transport Survey: mode by age and gender statistics	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	To be agreed with TE partners	TE
Health	H1	Significant increased rates of active travel	Annual average number of trips undertaken by walking and cycling	DfT National Transport Survey: mode by region statistics Use of data sources like Strava Metro and travel surveys as supplementary evidence.	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	To be agreed with TE partners	TE
	H2			Percentage of adults walking for travel at least three days per week Percentage of adults cycling for travel at least three days per week Percentage of children walking for travel at least 3 days per week			

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
			Percentage of children cycling for travel at least 3 days per week				
Safety	S1	Reduction in transport crime	Crime incident rates: In rail stations or on trains In bus stations or on buses	British Transport Police rail crime dataset Bus crime statistics (source to be confirmed with police /bus operators) Incident records from rail and bus operators	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required))	British Transport Police Police Rail and bus operators	TE
	S2	Zero KSIs by 2050 – regional ambition	Number of KSI road traffic collisions	Department for Transport (DfT) road accidents and safety datasets	Annually/Dependent on Transport Strategy and SIP update schedule (TBC)	DfT	TE
	S3	Reduction in road traffic collisions and incident rates, including within vulnerable groups	Number and rate of road collisions causing personal injury Number and rate of road collisions involving vulnerable group	Department for Transport (DfT) road accidents and safety datasets Vulnerable groups to be agreed with each LTA	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required))	DfT and LTAs	TE
Biodiversity	B1	Minimum 10% biodiversity net gain across all planning consent schemes supported by TE	Biodiversity net gain associated with TE supported schemes	Defra biodiversity metric 3.0 (or updated version) calculation output prepared as part of project level environmental assessment (see SSA-GEN 2)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Local transport authorities NR and national Highways LPAs	TE

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
				Also high level assessment of SIP with scheme GIS information			
				Area of land/ total units to be created where offsite habitats are allocated/ funded or implemented to meet net gain obligations (See SSA- Bio 3)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE, assisted by local transport authorities/ LPAs	TE
	B2	No loss of irreplaceable habitat or loss of condition or area of protected sites	Area of loss or degradation of irreplaceable or protected sites recorded by type	Scheme GIS Information and project information templates completed by responsible authority/sponsor (see SSA-GEN 2)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Local transport authorities National Highways (Scheme sponsors)	TE
	B3	Increase in active travel routes created using part of green infrastructure network such as new footpaths, cycle ways	Added length/area of green infrastructure network across the TE region	Engage with local authorities to establish baseline data and develop Scheme GIS Information and project information templates completed by responsible authority/sponsor (see SSA-GEN 2) County level green infrastructure mapping	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Local authorities/ local transport authorities	TE
	B4	Decrease in nitrogen deposition within European sites or SSSIs with sensitive habitats	No of schemes predicting improvement or reduction in levels of nitrogen deposition for sensitive sites based on	Scheme GIS Information and project information templates completed by responsible authority/sponsor	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Local transport authorities	TE

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
		(Linked with air quality objectives)	qualitative assessment or air quality modelling for proposed schemes.	(see SSA-GEN 2)			
Water	W1	Decrease in number of WFD watercourses in TE area where 'Transport drainage' is a Reason for Not Achieving Good (RNAG)	WFD waterbody environment Agency RNAG datasets Engage with partners to identify data sources for regional analysis	Environment Agency (EA)	TBC Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Environment Agency	TE
	W2	No net increase in flood risk vulnerability to transport network or communities	Loss of floodplain from SIP schemes Change to strategic transport network considered vulnerable to flood events	Project information templates completed by responsible authority/sponsor (see SSA-GEN 2)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Local transport authorities/local authorities	TE
Air	A1	Reduction in concentrations of transport related air pollutants monitored by EHOs within the TE region	NO _x , PM _{2.5} , PM ₁₀ , SO _x and CO from Automatic Urban and Rural Network monitoring (AURN) and from EHOs	Defra UK Air Information Resource datasets and Local EHO data	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Defra	TE
	A2	Reduce to zero the number of AQMAs where transport is identified as the primary source of pollutant emissions	Number of AQMAs where transport emissions identified as primary source of pollutant emissions	Defra UK Air Information Resource datasets Local authority Air Quality Annual Status Reports	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Local authorities	TE

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
	A3	Net improvement to air quality	Indicator to be agreed for example - number (approx.) of people benefiting from improved air quality vs affected by reduced air quality	Engage with partners to develop a methodology to capture impacts of transport related schemes Project level environmental assessments - scheme GIS information and project information templates completed by responsible authority/sponsor (see SSA-GEN 2)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Local transport authorities NR National Highways	TE
Noise	N1	Reduction in population exposed to road and rail noise emissions	Population exposed to noise levels above SOAEL	Defra Noise Exposure data Project level information on noise impacts (see SSA-GEN 2)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Defra	TE
	N2	Reduction in number of road and rail NIAs	Number of NIAs within Transport East region	Defra strategic noise mapping	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Local authorities	TBC
Climate	C1	Reduce carbon emissions from transport to net zero by 2040	Predicted carbon emissions for the SIP implementation	Transport East's developing trajectory assessment which will inform methodology for monitoring - a carbon analysis toolkit is to be developed and this will include developing a carbon budget for the region	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required). Monitoring frequency to be determined following	TE	TE

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
					development of carbon toolkit.		
	C2	Proportion of the transport network/fuels in the TE region to be powered offshore wind and renewables	Proportion of public EV chargers powered by renewable sources	Establish data sources for regional renewable energy level Establish methodology for estimating EV charging use	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE	TE
	C3	Modal shift of containerised freight from road to rail	Proportion of containerised freight transported by rail	Current & future number of containers on rail	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE	TE
	C4	Increase patronage on public transport	Numbers using public transport by type	DfT data on public Transport use.	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE	TE
	C5	Reduction construction carbon including embodied carbon emissions associated with infrastructure construction for SIP interventions	Commitment to use PAS 2080 for infrastructure carbon management (or equivalent schemes) This does not cover vehicle lifecycle analysis	Scheme information on approach to be taken for carbon management - project information templates completed by responsible authority/sponsor (see SSA-GEN 2)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE and partners	TE

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
Landscape	L1	No significant adverse effects on statutory and non-statutory landscape designations	Number of schemes within protected or valuable landscape areas	Indicators to be developed based on agreement with partners Scheme GIS information and project information templates completed by responsible authority/sponsor (see SSA-Gen 2 and SSA-Gen 4) Regional mapping of proposed schemes against baseline informatio	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE and partners	TBC
Heritage	H1	No significant adverse effects on cultural heritage assets	Significant effects on designated and undesignated heritage assets	Indicator to be developed and agreed with partners Scheme GIS information and project information templates completed by responsible authority/sponsor (see SSA-GEN 2 and SSA-Gen 4)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE and partners	TE
Soils/geology	SG1	No loss of peat and wetland soils and high value agricultural land.	Area of best and most versatile (BMV) agricultural land lost Area of wetland soils lost	Scheme GIS information and project information templates completed by responsible authority/sponsor (see SSA-GEN 2)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE and partners	TE

ISA objective	ID	Target	Indicator	Source	Frequency of data analysis/reporting	Responsibility	
						Information collation	Reporting
				Regional mapping of proposed schemes against baseline information.			
Material assets	M1	Existing road, rail and active travel infrastructure reused or recycled	Commitment to apply waste hierarchy and to PAS 2080 for reducing infrastructure carbon	Project information templates completed by responsible authority/sponsor (see SSA-GEN 2)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE and partners	TE
	M2	Use of brownfield land over greenfield land where	Land take from brownfield land and greenfield for interventions proposed the strategy (Indicator to be confirmed)	Scheme GIS information and project information templates completed by responsible authority/sponsor (see SSA-GEN 2) (Also Regional Mapping - from natural capital land use analysis)	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	TE and partners	TE
Natural capital	NC1	Environmental net gain	Natural Capital loss/gain compared to baseline information Ecosystem services loss/gain compared to baseline information	(see SSA-GEN 2 and B1 and 2) Analysis at regional level based on information on schemes and regional mapping. There are a range of methodologies ¹⁴ and tools available and being used so a consistent approach would need be agreed.	Update schedule for Transport Strategy - 5 years and SIP- 2 years (or sooner if required)	Develop approach with partners Local transport authorities/ Local planning authorities	TE

6 Next steps

6.1 Consultation and next steps

The ISA report was updated following an 8 week consultation (ending 30th January 2022) and takes account of comments on the ISA report of the draft Strategy and SIP and also amendments made as part of finalising the Strategy and SIP. The ISA has been split into two volumes: Transport Strategy ISA Volume 1 (this document) and the SIP ISA Volume 2 to support planned regular updates to the SIP.

The ISA Post Adoption Statement has been prepared to summarise how the ISA and consultation process has influenced the finalisation of the strategy and this statement. The final Habitats Regulations Assessment covering screening and appropriate assessment stages for the both the Transport Strategy and the SIP as separate reports will also be published. These reports will be published with the final Transport East Transport Strategy and SIP.

The final Transport Strategy and SIP, ISA reports and HRA reports are all provided at the following link:

www.transporteast.org.uk/strategy/transport-strategy/

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